

GEOMETRİ

Geometry

GENİŞLETİLMİŞ
YENİ BASKI

REVISED
NEW EDITION



PUZA
YAYINLARI

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AÇILAR ANGLES

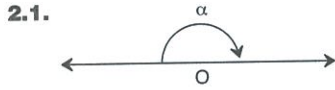


TANIMLAR|Definitions

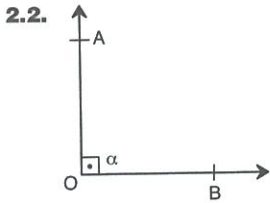
1.  AB doğrusu (*straight*)

 [AB ışını (*ray*)

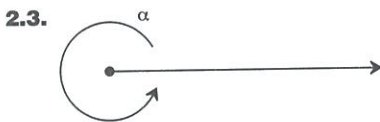
 [AB] doğru parçası
(*line segment*)

2. AÇI ÇEŞİTLERİ (*Types of Angles*)

Doğru Açı
Straight Angle
 $\Rightarrow \alpha = 180^\circ$



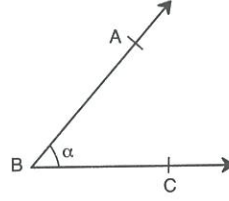
Dik Açı
Right Angle
[OA $\perp$ [OB
 $\Rightarrow \alpha = 90^\circ$



Tüm Açı
Prigon
 $\Rightarrow \alpha = 360^\circ$

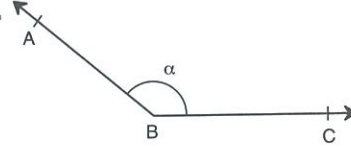
PUZA YAYINLARI

2.4.



Dar Açı
Acute Angle
 $0^\circ < \alpha < 90^\circ$

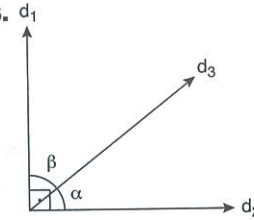
2.5.



Geniş Açı
Obtuse Angle
 $90^\circ < \alpha < 180^\circ$

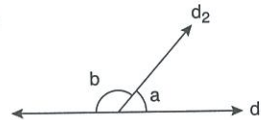
PUZA YAYINLARI

2.6.



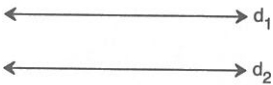
Tümler Açı
(*Complementary Angles*)
 $d_1 \perp d_2$
 $\alpha + \beta = 90^\circ$

2.7.

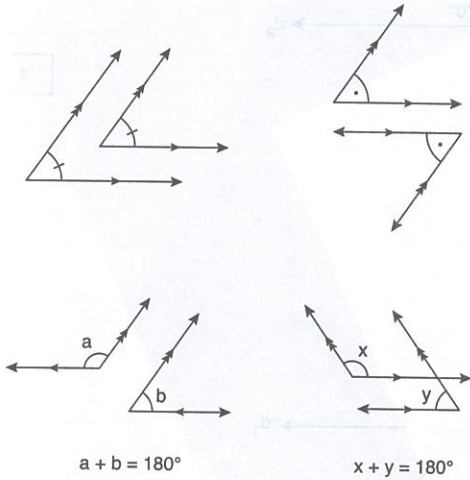


Bütünler Açı
(*Supplementary Angles*)
 $a + b = 180^\circ$

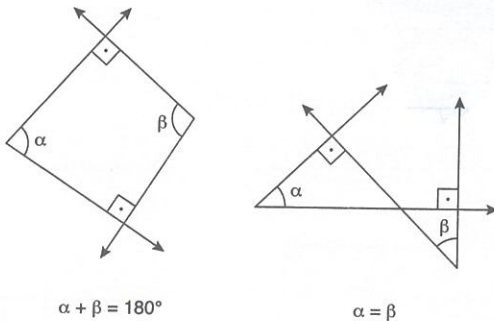


3.  $d_1 \cap d_2 = \emptyset$
 $d_1 \parallel d_2$ Paralel
 Parallel

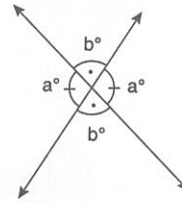
4. Paralel doğrular eş veya bütünlerdir.
 Parallel lines are equal or supplementary angles.

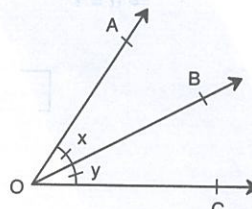


5. Dik doğrular eş veya bütünlerdir.
 Perpendicular lines are equal or supplementary angles.

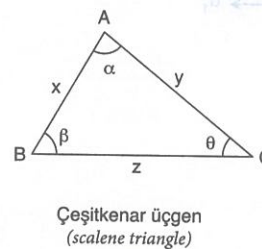
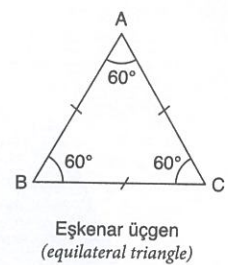
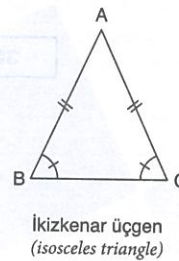


6. Ters Açılar (Vertically Opposite Angles)



7.  [OB açıortay
 [OB bisector
 $\Rightarrow x = y$

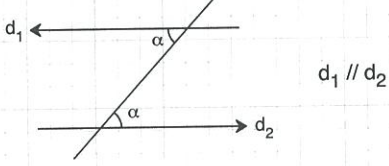
8. ÜÇGEN ÇEŞİTLER
 Types of Triangles



$x \neq y \neq z$
 $\alpha \neq \beta \neq \theta$

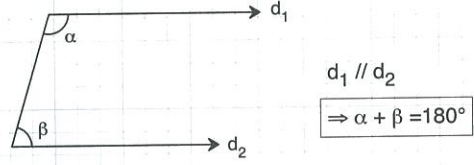


ÖZELLİK|Property 1



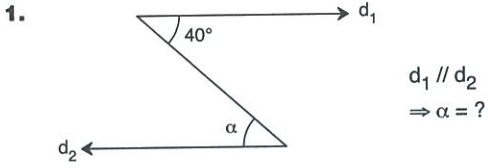
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ÖZELLİK|Property 2

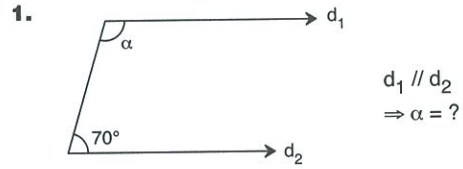


PUZA YAYINLARI

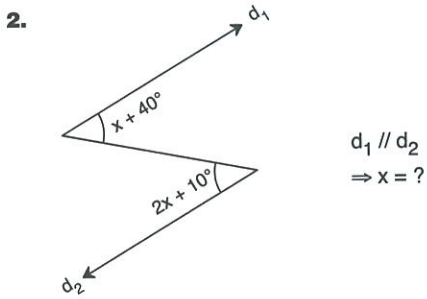
PUZA YAYINLARI



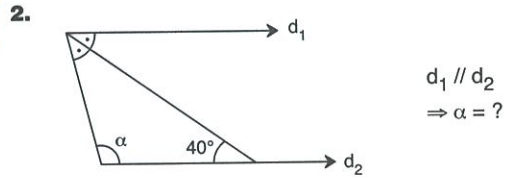
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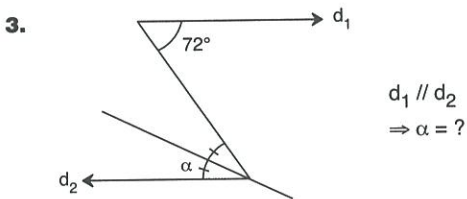
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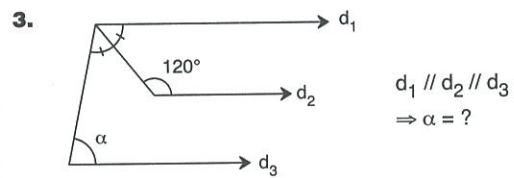
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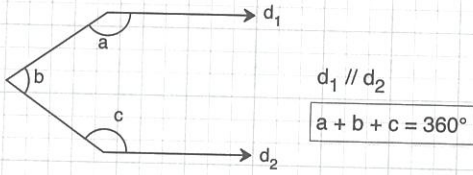
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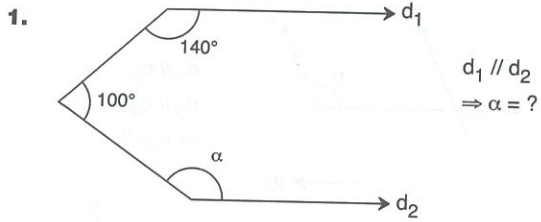
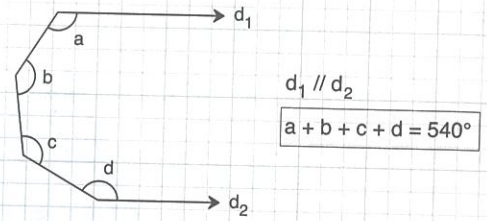
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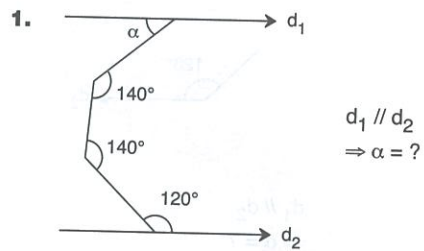
ÖZELLİK|Property 3



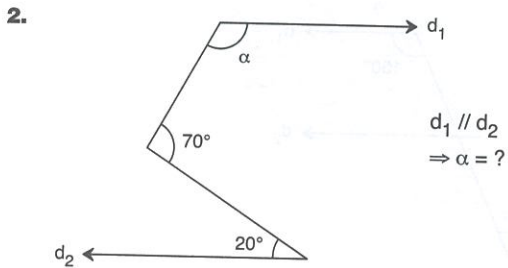
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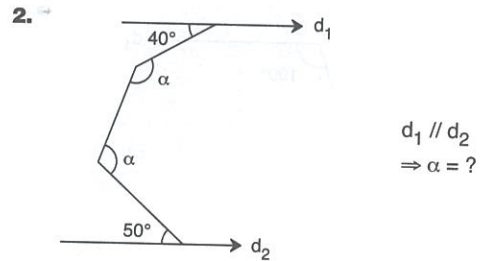
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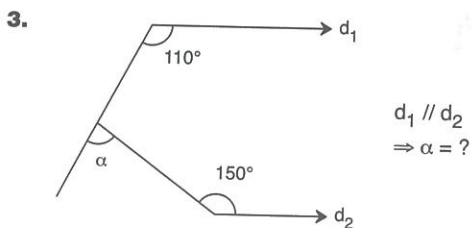
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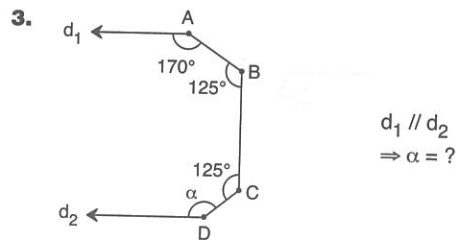
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135



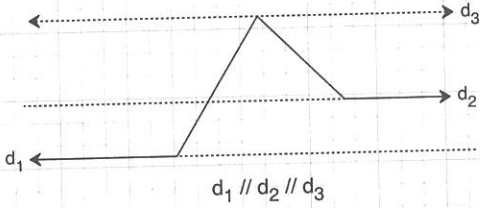
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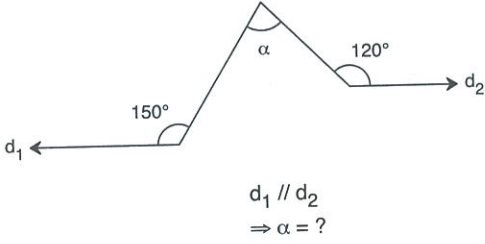
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ÖZELLİK|Property 5

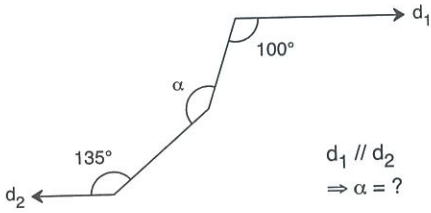


1.



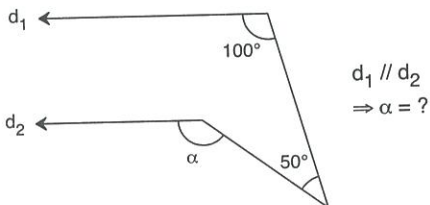
90

2.



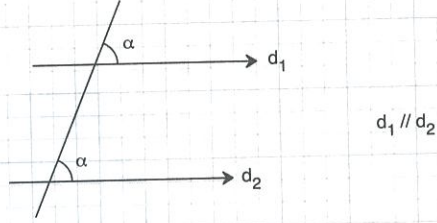
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3.

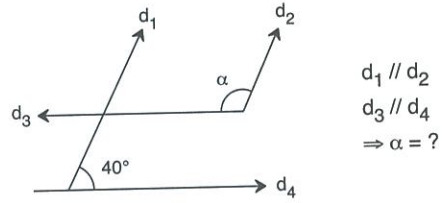


150

ÖZELLİK|Property 6

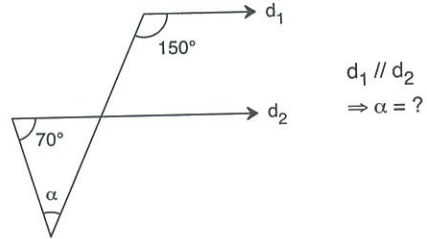


1.



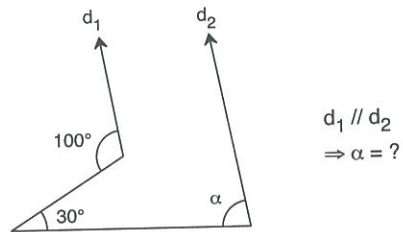
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2.



80

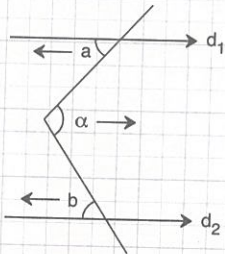
3.



70

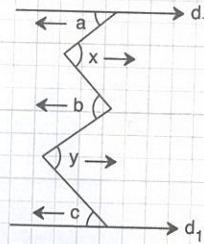


ÖZELLİK|Property 7



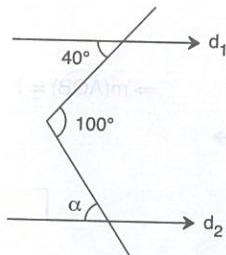
$$d_1 \parallel d_2 \\ \Rightarrow \alpha = a + b$$

ÖZELLİK|Property 8



$$d_1 \parallel d_2 \\ a + b + c = x + y$$

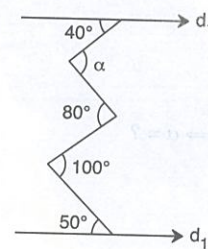
1.



$$d_1 \parallel d_2 \\ \Rightarrow \alpha = ?$$

60

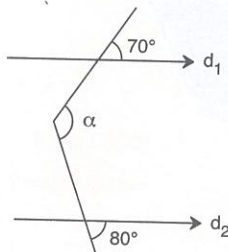
1.



$$d_1 \parallel d_2 \\ \Rightarrow \alpha = ?$$

70

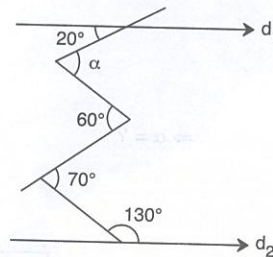
2.



$$d_1 \parallel d_2 \\ \Rightarrow \alpha = ?$$

150

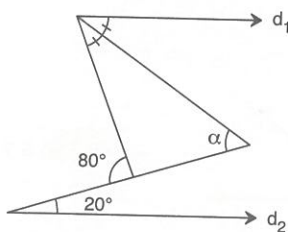
2.



$$d_1 \parallel d_2 \\ \Rightarrow \alpha = ?$$

60

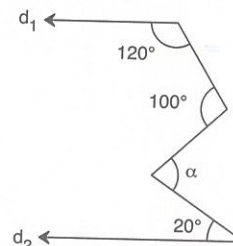
3.



$$d_1 \parallel d_2 \\ \Rightarrow \alpha = ?$$

50

3.

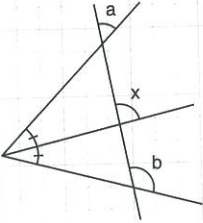


$$d_1 \parallel d_2 \\ \Rightarrow \alpha = ?$$

60

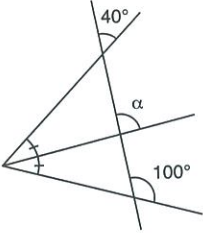


ÖZELLİK|Property 9



$$x = \frac{a+b}{2}$$

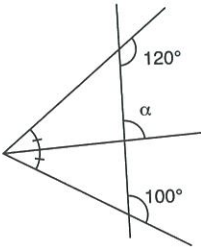
1.



$$\Rightarrow \alpha = ?$$

70

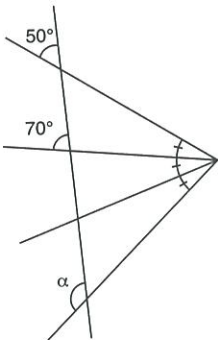
2.



$$\Rightarrow \alpha = ?$$

80

3.



$$\Rightarrow \alpha = ?$$

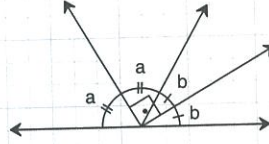
110

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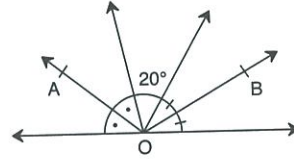
ÖZELLİK|Property 10



$$2a + 2b = 180^\circ$$

$$a + b = 90^\circ$$

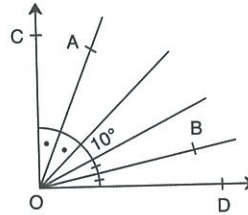
1.



$$\Rightarrow m(\widehat{AOB}) = ?$$

100

2.

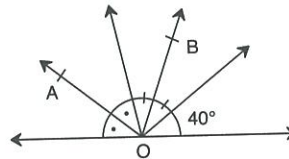


$$[CO] \perp [OD]$$

$$\Rightarrow m(\widehat{AOB}) = ?$$

50

3.



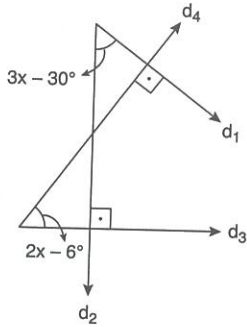
$$\Rightarrow m(\widehat{AOB}) = ?$$

70



ÖRNEK SORU TÜRLERİ | EXAMPLARY QUESTION TYPES

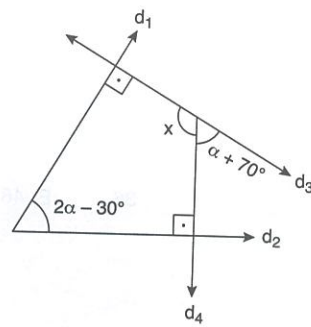
1.



$\Rightarrow x = ?$

24

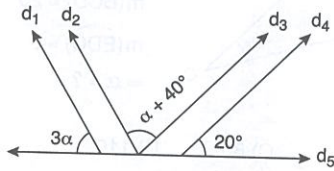
5.



$\Rightarrow x = ?$

10

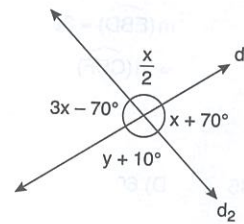
2.



$d_1 \parallel d_2$
 $d_3 \parallel d_4$
 $\Rightarrow \alpha = ?$

30

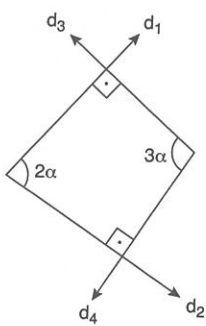
6.



$\Rightarrow y = ?$

25

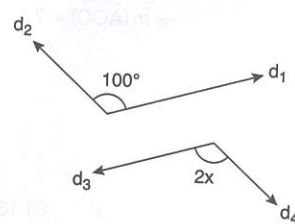
3.



$\Rightarrow \alpha = ?$

36

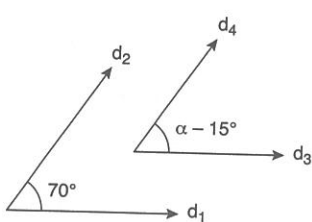
7.



$d_1 \parallel d_3$
 $d_2 \parallel d_4$
 $\Rightarrow x = ?$

50

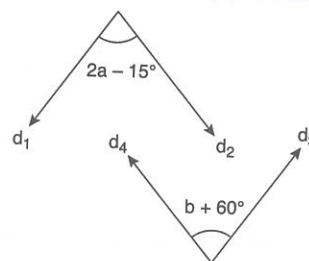
4.



$d_1 \parallel d_3$
 $d_2 \parallel d_4$
 $\Rightarrow \alpha = ?$

85

8.

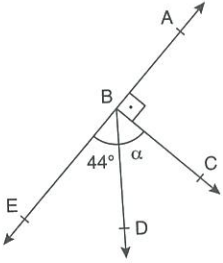


$d_1 \parallel d_3$
 $d_2 \parallel d_4$
 $a + b = 45^\circ$
 $\Rightarrow a - b = ?$

35



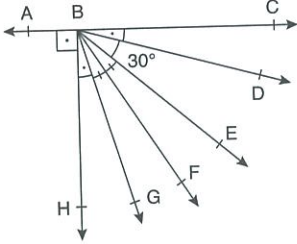
1.



$AE \perp [BC$
 $m(\widehat{EBD}) = 44^\circ$
 $m(\widehat{CBD}) = \alpha$
 $\Rightarrow \alpha = ?$

- A) 20 B) 22 C) 24 D) 36 E) 46

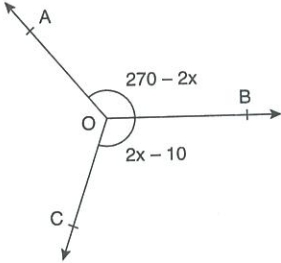
2.



$AC \perp [BH$
 $m(\widehat{CBD}) = m(\widehat{HBG})$
 $m(\widehat{GBF}) = m(\widehat{FBE})$
 $m(\widehat{EBD}) = 30^\circ$
 $\Rightarrow m(\widehat{CBF}) = ?$

- A) 15 B) 30 C) 45 D) 60 E) 75

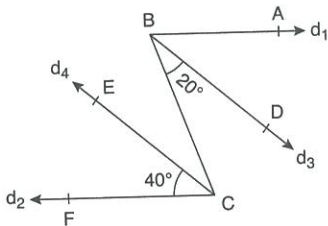
3.



$m(\widehat{AOB}) = 270 - 2x$
 $m(\widehat{BOC}) = 2x - 10$
 $\Rightarrow m(\widehat{AOC}) = ?$

- A) 90 B) 100 C) 110 D) 120 E) 130

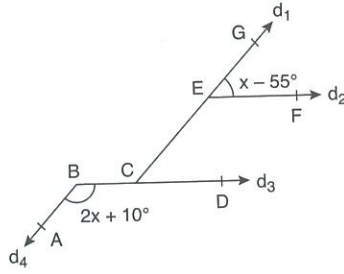
4.



$d_1 \parallel d_2$
 $d_3 \parallel d_4$
 $m(\widehat{DBC}) = 20^\circ$
 $m(\widehat{ECF}) = 40^\circ$
 $\Rightarrow m(\widehat{ABC}) = ?$

- A) 30 B) 40 C) 60 D) 70 E) 80

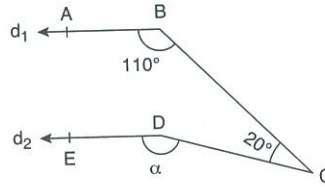
5.



$d_1 \parallel d_4$
 $d_2 \parallel d_3$
 $m(\widehat{GEF}) = x - 55^\circ$
 $m(\widehat{ABC}) = 2x + 10^\circ$
 $\Rightarrow x = ?$

- A) 15 B) 45 C) 60 D) 75 E) 85

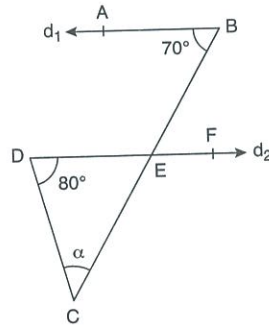
6.



$d_1 \parallel d_2$
 $m(\widehat{ABC}) = 110^\circ$
 $m(\widehat{BCD}) = 20^\circ$
 $m(\widehat{EDC}) = \alpha$
 $\Rightarrow \alpha = ?$

- A) 50 B) 70 C) 80 D) 110 E) 130

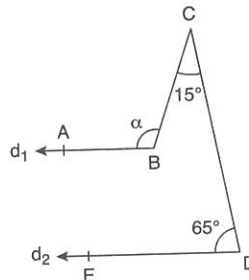
7.



$d_1 \parallel d_2$
 $m(\widehat{ABC}) = 70^\circ$
 $m(\widehat{EDC}) = 80^\circ$
 $m(\widehat{BCD}) = \alpha$
 $\Rightarrow \alpha = ?$

- A) 30 B) 40 C) 45 D) 50 E) 55

8.



$d_1 \parallel d_2$
 $m(\widehat{BCD}) = 15^\circ$
 $m(\widehat{EDC}) = 65^\circ$
 $m(\widehat{ABC}) = \alpha$
 $\Rightarrow \alpha = ?$

- A) 70 B) 80 C) 100 D) 110 E) 120

The diagram shows a broken line segment with vertices G, B, C, D, A, F, and E. The line is composed of segments GB, BC, CD, DA, AF, and FE. The angle at vertex B is 70° , and the angle at vertex C is 175° . The angle at vertex D is labeled α . The line is labeled d_1 and d_2 .

$$\begin{aligned} d_1 // d_2 \\ \widehat{m(\text{BCD})} &= 175^\circ \\ \widehat{m(\text{GBC})} &= 70^\circ \\ \widehat{m(\text{CDF})} &= \alpha \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 85 B) 95 C) 100 D) 104 E) 105

$d_1 \parallel d_2$
 $m(\widehat{ABC}) = 110^\circ$
 $m(\widehat{BCD}) = 70^\circ$
 $m(\widehat{DEF}) = 60^\circ$
 $m(\widehat{EFG}) = 140^\circ$
 $m(\widehat{CDE}) = \alpha$
 $\Rightarrow \alpha = ?$

- A) 10 B) 20 C) 30 D) 40 E) 50

$$\begin{aligned}d_1 &\parallel d_2 \\ m(\widehat{ABC}) &= 10x \\ m(\widehat{BCD}) &= 12x \\ m(\widehat{CDE}) &= 14x \\ \Rightarrow m(\widehat{CDE}) &= ?\end{aligned}$$

- A) 30 B) 70 C) 80 D) 110 E) 140

$$\begin{aligned}d_1 // d_2 // d_3 \\ m(\widehat{ABC}) &= 100^\circ \\ m(\widehat{CDE}) &= 110^\circ \\ m(\widehat{BCD}) &= m(\widehat{DCF}) \\ m(\widehat{CFG}) &= \alpha \\ \Rightarrow \alpha &= ?\end{aligned}$$

- A) 110 B) 120 C) 130 D) 140 E) 150

$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 50^\circ \\ m(\widehat{GEF}) &= 110^\circ \\ m(\widehat{GDA}) &= \alpha \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 20 B) 30 C) 40 D) 50 E) 60

$$\begin{aligned} d_1 &\parallel d_2 \\ m(\widehat{ABF}) &= m(\widehat{FBC}) \\ m(\widehat{FDE}) &= m(\widehat{CDF}) \\ m(\widehat{BFD}) &= 150^\circ \\ m(\widehat{BCD}) &= \alpha \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 60 B) 70 C) 100 D) 110 E) 130

$$\begin{aligned} d_1 // d_2 \\ \widehat{m(ABC)} &= 140 + x \\ \widehat{m(BCD)} &= 3x \\ \Rightarrow x &= ? \end{aligned}$$

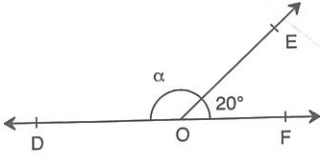
- A) 5 B) 10 C) 11 D) 12 E) 13

$$\begin{aligned}d_1 &\parallel d_2 \\ m(\widehat{ACD}) &= 80^\circ \\ m(\widehat{CDB}) &= m(\widehat{BDE}) \\ m(\widehat{ABD}) &= ?\end{aligned}$$

- A) 50 B) 70 C) 100 D) 130 E) 150



1.

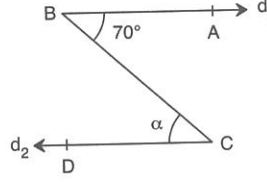


$$m(\widehat{EOF}) = 20^\circ \\ \Rightarrow m(\widehat{DOE}) = \alpha = ?$$

- A) 20 B) 70 C) 120 D) 140 E) 160

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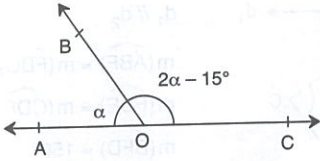
5.



$$d_1 // d_2 \\ m(\widehat{ABC}) = 70^\circ \\ \Rightarrow m(\widehat{BCD}) = \alpha = ?$$

- A) 20 B) 30 C) 70 D) 100 E) 110

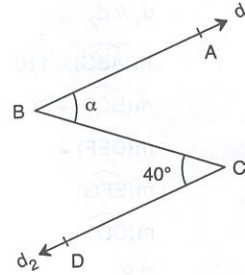
2.



$$m(\widehat{AOB}) = \alpha \\ m(\widehat{BOC}) = 2\alpha - 15^\circ \\ \Rightarrow \alpha = ?$$

- A) 50 B) 55 C) 60 D) 65 E) 75

6.

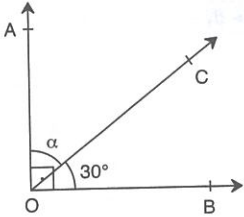


$$d_1 // d_2 \\ m(\widehat{BCD}) = 40^\circ \\ \Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 20 B) 40 C) 50 D) 60 E) 140

PUZA YAYINLARI

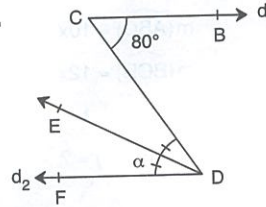
3.



$$[OA \perp [OB \\ m(\widehat{COB}) = 30^\circ \\ \Rightarrow m(\widehat{AOC}) = \alpha = ?$$

- A) 20 B) 30 C) 50 D) 60 E) 150

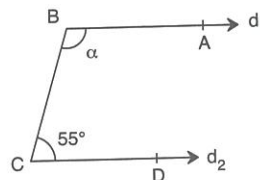
7.



$$d_1 // d_2 \\ m(\widehat{BCD}) = 80^\circ \\ \Rightarrow m(\widehat{CDE}) = m(\widehat{EDF}) = \alpha = ?$$

- A) 5 B) 10 C) 40 D) 50 E) 100

8.

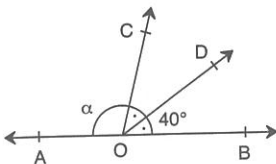


$$d_1 // d_2 \\ m(\widehat{BCD}) = 55^\circ \\ \Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 125 B) 115 C) 75 D) 60 E) 55

PUZA YAYINLARI

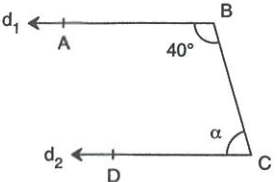
4.

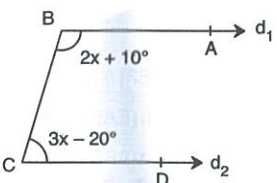


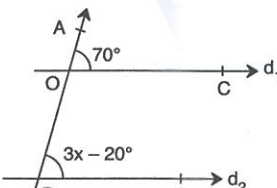
$$m(\widehat{COD}) = m(\widehat{DOB}) = 40^\circ \\ \Rightarrow m(\widehat{AOC}) = \alpha = ?$$

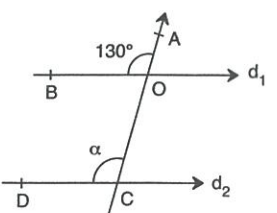
- A) 40 B) 80 C) 90 D) 100 E) 140

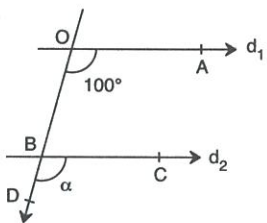


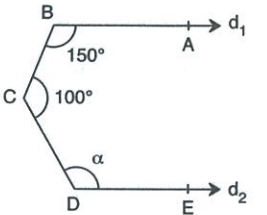
9. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 40^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$
- A) 40 B) 50 C) 90 D) 130 E) 140

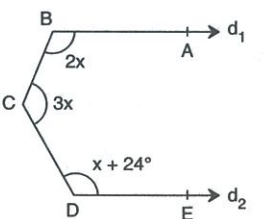
10. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 2x + 10^\circ$
 $m(\widehat{BCD}) = 3x - 20^\circ$
 $\Rightarrow x = ?$
- A) 30 B) 34 C) 38 D) 40 E) 42

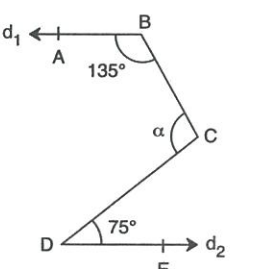
11. 
- $d_1 // d_2$
 $m(\widehat{AOC}) = 70^\circ$
 $m(\widehat{ABD}) = 3x - 20^\circ$
 $\Rightarrow x = ?$
- A) 30 B) 70 C) 80 D) 110 E) 140

12. 
- $d_1 // d_2$
 $m(\widehat{AOB}) = 130^\circ$
 $\Rightarrow m(\widehat{ACD}) = \alpha = ?$
- A) 130 B) 110 C) 100 D) 50 E) 40

13. 
- $d_1 // d_2$
 $m(\widehat{AOD}) = 100^\circ$
 $\Rightarrow m(\widehat{DBC}) = \alpha = ?$
- A) 110 B) 100 C) 80 D) 70 E) 50

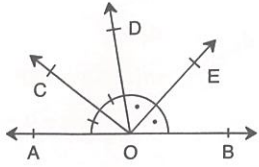
14. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 150^\circ$
 $m(\widehat{BCD}) = 100^\circ$
 $\Rightarrow m(\widehat{CDE}) = \alpha = ?$
- A) 60 B) 70 C) 100 D) 110 E) 130

15. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 2x$
 $m(\widehat{CDE}) = x + 24^\circ$
 $\Rightarrow m(\widehat{BCD}) = 3x = ?$
- A) 56 B) 60 C) 108 D) 168 E) 170

16. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 135^\circ$
 $m(\widehat{CDE}) = 75^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$
- A) 75 B) 80 C) 105 D) 120 E) 135



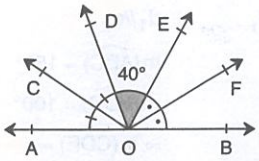
1.



A) 30 B) 60 C) 90 D) 120 E) 150

$$\begin{aligned} m(\widehat{AOC}) &= m(\widehat{COD}) \\ m(\widehat{DOE}) &= m(\widehat{EOB}) \\ \Rightarrow m(\widehat{COE}) &= ? \end{aligned}$$

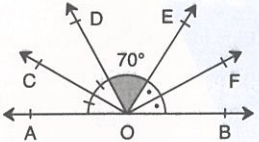
2.



A) 50 B) 60 C) 100 D) 110 E) 130

$$\begin{aligned} m(\widehat{AOC}) &= m(\widehat{COD}) \\ m(\widehat{DOE}) &= 40^\circ \\ m(\widehat{EOF}) &= m(\widehat{FOB}) \\ \Rightarrow m(\widehat{COF}) &= ? \end{aligned}$$

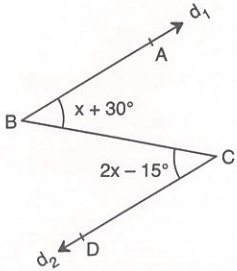
3.



A) 80 B) 115 C) 125 D) 135 E) 140

$$\begin{aligned} m(\widehat{AOC}) &= m(\widehat{COD}) \\ m(\widehat{DOE}) &= 70^\circ \\ m(\widehat{EOF}) &= m(\widehat{FOB}) \\ \Rightarrow m(\widehat{COF}) &= ? \end{aligned}$$

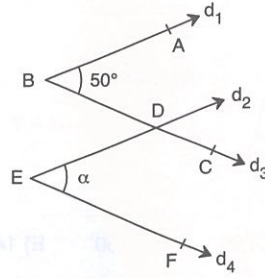
4.



A) 35 B) 45 C) 50 D) 55 E) 60

$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= x + 30^\circ \\ m(\widehat{BCD}) &= 2x - 15^\circ \\ \Rightarrow x &= ? \end{aligned}$$

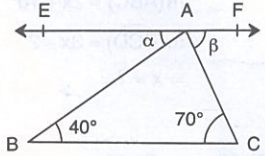
5.



A) 20 B) 30 C) 40 D) 50 E) 70

$$\begin{aligned} d_1 // d_2 \\ d_3 // d_4 \\ m(\widehat{ABC}) &= 50^\circ \\ \Rightarrow m(\widehat{DEF}) &= \alpha = ? \end{aligned}$$

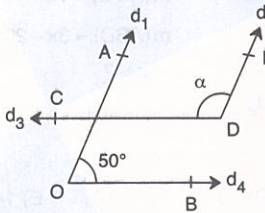
6.



A) 30 B) 40 C) 50 D) 60 E) 70

$$\begin{aligned} [EF] // [BC] \\ m(\widehat{EAB}) &= \alpha \\ m(\widehat{ABC}) &= 40^\circ \\ m(\widehat{FAC}) &= \beta \\ m(\widehat{ACB}) &= 70^\circ \\ \Rightarrow \beta - \alpha &= ? \end{aligned}$$

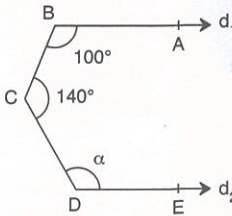
7.



A) 130 B) 100 C) 60 D) 50 E) 40

$$\begin{aligned} d_1 // d_2 \\ d_3 // d_4 \\ m(\widehat{AOB}) &= 50^\circ \\ \Rightarrow m(\widehat{EDC}) &= \alpha = ? \end{aligned}$$

8.

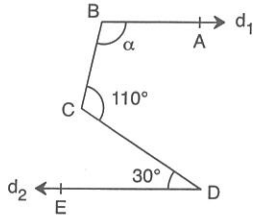


A) 100 B) 110 C) 120 D) 130 E) 140

$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 100^\circ \\ m(\widehat{BCD}) &= 140^\circ \\ \Rightarrow m(\widehat{CDE}) &= \alpha = ? \end{aligned}$$



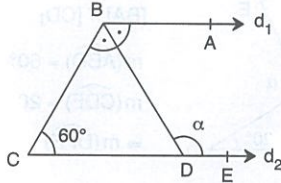
9.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{BCD}) = 110^\circ \\ m(\widehat{CDE}) = 30^\circ \\ \Rightarrow m(\widehat{ABC}) = \alpha = ? \end{aligned}$$

- A) 90 B) 100 C) 120 D) 130 E) 140

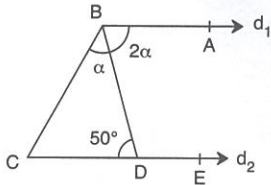
10.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABD}) = m(\widehat{CDB}) \\ m(\widehat{BCD}) = 60^\circ \\ \Rightarrow m(\widehat{BDE}) = \alpha = ? \end{aligned}$$

- A) 100 B) 110 C) 120 D) 130 E) 140

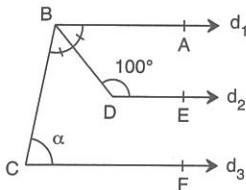
11.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABD}) = 2 \cdot m(\widehat{CBD}) \\ m(\widehat{BDC}) = 50^\circ \\ \Rightarrow m(\widehat{BCD}) = ? \end{aligned}$$

- A) 30 B) 50 C) 75 D) 105 E) 115

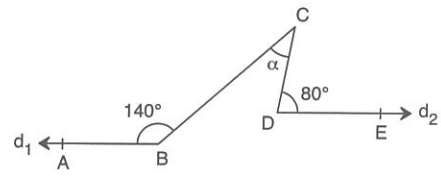
12.



$$\begin{aligned} d_1 // d_2 // d_3 \\ m(\widehat{ABD}) = m(\widehat{DBC}) \\ m(\widehat{BDE}) = 100^\circ \\ \Rightarrow m(\widehat{BCF}) = \alpha = ? \end{aligned}$$

- A) 10 B) 20 C) 30 D) 40 E) 50

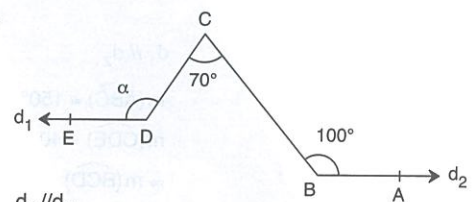
13.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) = 140^\circ \\ m(\widehat{CDE}) = 80^\circ \\ \Rightarrow m(\widehat{BCD}) = \alpha = ? \end{aligned}$$

- A) 30 B) 40 C) 50 D) 60 E) 70

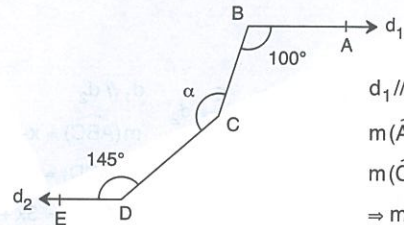
14.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) = 100^\circ \\ m(\widehat{BCD}) = 70^\circ \\ \Rightarrow m(\widehat{CDE}) = \alpha = ? \end{aligned}$$

- A) 150 B) 120 C) 110 D) 100 E) 90

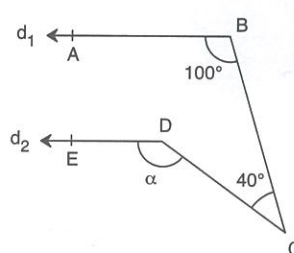
15.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) = 100^\circ \\ m(\widehat{CDE}) = 145^\circ \\ \Rightarrow m(\widehat{BCD}) = \alpha = ? \end{aligned}$$

- A) 155 B) 145 C) 135 D) 125 E) 115

16.

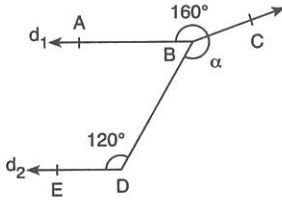


$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) = 100^\circ \\ m(\widehat{BCD}) = 40^\circ \\ \Rightarrow m(\widehat{EDC}) = \alpha = ? \end{aligned}$$

- A) 40 B) 70 C) 100 D) 130 E) 140



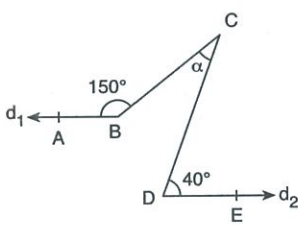
1.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 160^\circ \\ m(\widehat{EDB}) &= 120^\circ \\ \Rightarrow m(\widehat{DBC}) &= \alpha = ? \end{aligned}$$

- A) 100 B) 110 C) 120 D) 140 E) 150

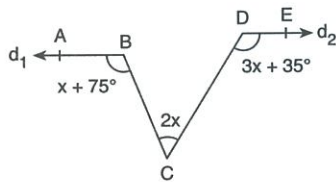
2.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 150^\circ \\ m(\widehat{CDE}) &= 40^\circ \\ \Rightarrow m(\widehat{BCD}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 20 C) 30 D) 40 E) 50

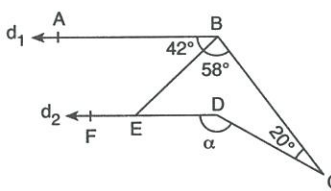
3.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= x + 75^\circ \\ m(\widehat{BCD}) &= 2x \\ m(\widehat{CDE}) &= 3x + 35^\circ \\ \Rightarrow x &= ? \end{aligned}$$

- A) 20 B) 25 C) 30 D) 35 E) 40

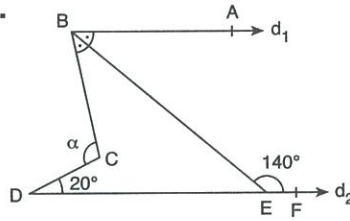
4.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABE}) &= 42^\circ \\ m(\widehat{EBC}) &= 58^\circ \\ m(\widehat{BCD}) &= 20^\circ \\ \Rightarrow m(\widehat{FDC}) &= \alpha = ? \end{aligned}$$

- A) 130 B) 124 C) 120 D) 116 E) 110

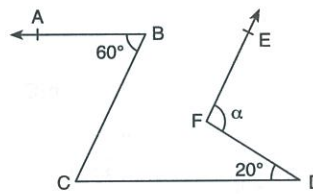
5.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABE}) &= m(\widehat{CBE}) \\ m(\widehat{CDF}) &= 20^\circ \\ m(\widehat{BEF}) &= 140^\circ \\ \Rightarrow m(\widehat{BCD}) &= \alpha = ? \end{aligned}$$

- A) 70 B) 80 C) 85 D) 90 E) 100

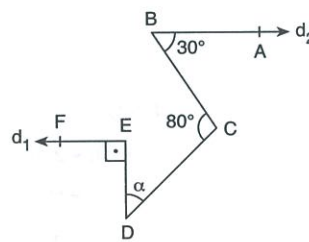
6.



$$\begin{aligned} [BC] // [FE] \\ [BA] // [CD] \\ m(\widehat{ABC}) &= 60^\circ \\ m(\widehat{CDF}) &= 20^\circ \\ \Rightarrow m(\widehat{DFE}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 80 D) 100 E) 120

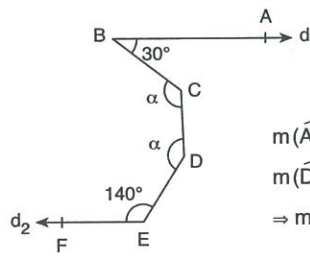
7.



$$\begin{aligned} d_1 // d_2 \\ [DE] \perp [EF] \\ m(\widehat{ABC}) &= 30^\circ \\ m(\widehat{BCD}) &= 80^\circ \\ \Rightarrow m(\widehat{CDE}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 40 C) 50 D) 60 E) 70

8.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 30^\circ \\ m(\widehat{DEF}) &= 140^\circ \\ \Rightarrow m(\widehat{BCD}) &= m(\widehat{CDE}) = \alpha = ? \end{aligned}$$

- A) 130 B) 125 C) 120 D) 115 E) 110



9. $d_1 \parallel d_2 \parallel d_3$
 $m(\widehat{DCE}) = 72^\circ$
 $m(\widehat{EFK}) = 38^\circ$
 $\Rightarrow m(\widehat{ABE}) = \alpha = ?$
- A) 12 B) 15 C) 17 D) 19 E) 21

10. $d_1 \parallel d_2$
 $m(\widehat{ABC}) = 60^\circ$
 $m(\widehat{BCD}) = 10^\circ$
 $m(\widehat{CDE}) = 100^\circ$
 $\Rightarrow m(\widehat{DEF}) = \alpha = ?$
- A) 40 B) 50 C) 60 D) 70 E) 80

11. $d_1 \parallel d_2 \parallel d_3$
 $m(\widehat{EDC}) = 100^\circ$
 $m(\widehat{ABC}) = 120^\circ$
 $m(\widehat{BCF}) = m(\widehat{FCD})$
 $\Rightarrow m(\widehat{KFC}) = \alpha = ?$
- A) 60 B) 80 C) 100 D) 120 E) 140

12. $d_1 \parallel d_2$
 $m(\widehat{ABC}) = 30^\circ$
 $m(\widehat{BCD}) = 70^\circ$
 $m(\widehat{CDE}) = 270^\circ$
 $\Rightarrow m(\widehat{DEF}) = \alpha = ?$
- A) 120 B) 130 C) 145 D) 165 E) 170

13. $d_1 \parallel d_2 \parallel d_3$
 $m(\widehat{BCD}) = 128^\circ$
 $m(\widehat{DFK}) = 150^\circ$
 $m(\widehat{CDF}) = x$
 $m(\widehat{CDE}) = 2x$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$
- A) 28 B) 32 C) 38 D) 40 E) 42

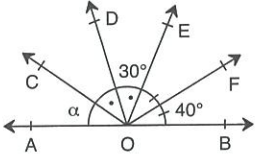
14. $d_1 \parallel d_2$
 $m(\widehat{ABC}) = 30^\circ$
 $m(\widehat{BCD}) = 120^\circ$
 $m(\widehat{CDE}) = 20^\circ$
 $\Rightarrow m(\widehat{DEF}) = \alpha = ?$
- A) 100 B) 110 C) 120 D) 130 E) 140

15. $d_1 \parallel d_2$
 $[EF] \perp [FD]$
 $m(\widehat{ABC}) = 50^\circ$
 $m(\widehat{FED}) = 70^\circ$
 $m(\widehat{CDF}) = m(\widehat{FDK})$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$
- A) 90 B) 80 C) 70 D) 60 E) 50

16. $d_1 \parallel d_2$
 $m(\widehat{BCD}) = 60^\circ$
 $m(\widehat{CBD}) = m(\widehat{DBA})$
 $m(\widehat{EDC}) = m(\widehat{CDB})$
 $\Rightarrow m(\widehat{CBL}) = \alpha = ?$
- A) 20 B) 40 C) 50 D) 60 E) 80



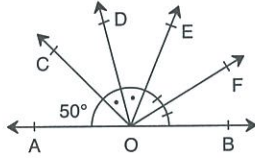
1.



$$\begin{aligned} m(\widehat{COD}) &= m(\widehat{DOE}) = 30^\circ \\ m(\widehat{EOF}) &= m(\widehat{FOB}) = 40^\circ \\ \Rightarrow m(\widehat{AOC}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 55 D) 60 E) 70

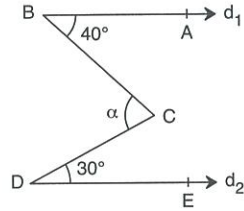
2.



$$\begin{aligned} m(\widehat{AOC}) &= 50^\circ \\ m(\widehat{COD}) &= m(\widehat{DOE}) \\ m(\widehat{EOF}) &= m(\widehat{FOD}) \\ \Rightarrow m(\widehat{DOF}) &= ? \end{aligned}$$

- A) 50 B) 60 C) 65 D) 70 E) 90

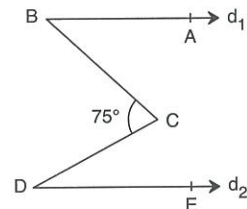
3.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 40^\circ \\ m(\widehat{CDE}) &= 30^\circ \\ \Rightarrow m(\widehat{BCD}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 40 C) 50 D) 70 E) 110

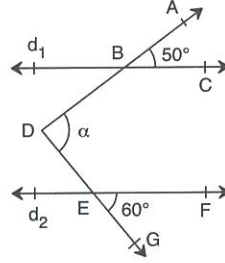
4.



$$\begin{aligned} d_1 // d_2 \\ 2m(\widehat{ABC}) &= 3m(\widehat{CDE}) \\ m(\widehat{BCD}) &= 75^\circ \\ \Rightarrow m(\widehat{CDE}) &= ? \end{aligned}$$

- A) 15 B) 30 C) 45 D) 50 E) 55

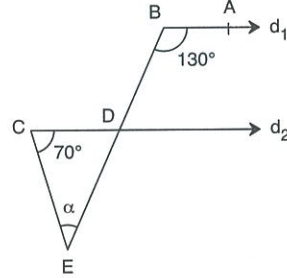
5.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 50^\circ \\ m(\widehat{FEG}) &= 60^\circ \\ \Rightarrow m(\widehat{ADG}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 55 C) 60 D) 100 E) 110

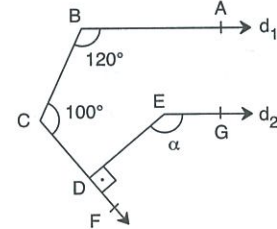
6.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABE}) &= 130^\circ \\ m(\widehat{DCE}) &= 70^\circ \\ \Rightarrow m(\widehat{CEB}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 60 C) 70 D) 80 E) 90

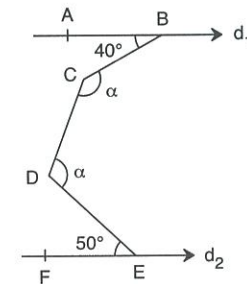
7.



$$\begin{aligned} d_1 // d_2 \\ [ED] \perp [CF] \\ m(\widehat{ABC}) &= 120^\circ \\ m(\widehat{BCF}) &= 100^\circ \\ \Rightarrow m(\widehat{DEG}) &= \alpha = ? \end{aligned}$$

- A) 130 B) 100 C) 60 D) 50 E) 40

8.

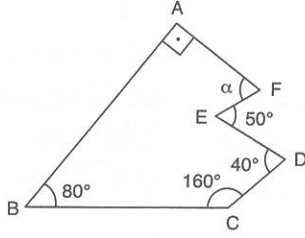


$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 40^\circ \\ m(\widehat{DEF}) &= 50^\circ \\ \Rightarrow m(\widehat{BCD}) &= m(\widehat{CDE}) = \alpha = ? \end{aligned}$$

- A) 115 B) 125 C) 135 D) 145 E) 150



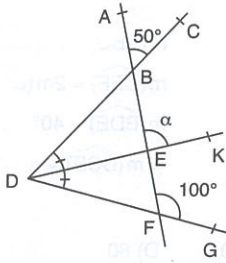
9.



$$\begin{aligned} m(\widehat{EDC}) &= 40^\circ \\ m(\widehat{ABC}) &= 80^\circ \\ m(\widehat{FED}) &= 50^\circ \\ m(\widehat{BCD}) &= 160^\circ \\ [FA] &\perp [AB] \\ \Rightarrow m(\widehat{AFE}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 60 D) 70 E) 80

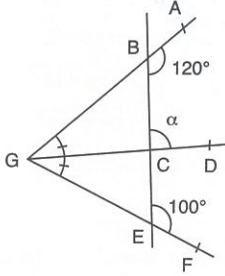
10.



$$\begin{aligned} m(\widehat{ABC}) &= 50^\circ \\ m(\widehat{AFG}) &= 100^\circ \\ m(\widehat{CDK}) &= m(\widehat{KDG}) \\ \Rightarrow m(\widehat{AEK}) &= \alpha = ? \end{aligned}$$

- A) 60 B) 70 C) 75 D) 80 E) 85

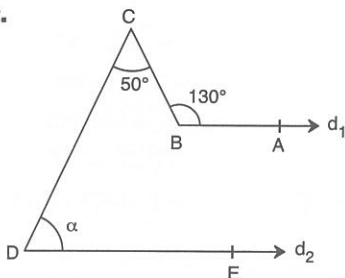
11.



$$\begin{aligned} m(\widehat{ABE}) &= 120^\circ \\ m(\widehat{BEF}) &= 100^\circ \\ m(\widehat{AGD}) &= m(\widehat{DGF}) \\ \Rightarrow m(\widehat{BCD}) &= \alpha = ? \end{aligned}$$

- A) 110 B) 100 C) 80 D) 60 E) 50

12.

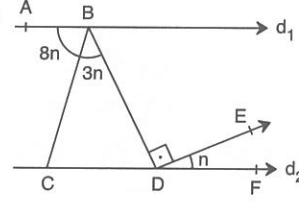


$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= 130^\circ \\ m(\widehat{BCD}) &= 50^\circ \\ \Rightarrow m(\widehat{CDE}) &= \alpha = ? \end{aligned}$$

- A) 130 B) 100 C) 90 D) 80 E) 70

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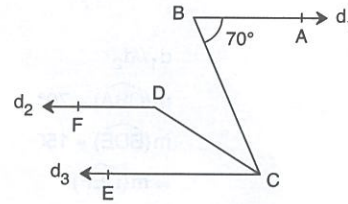
13.



$$\begin{aligned} d_1 // d_2 \\ [BD] &\perp [DE] \\ m(\widehat{EDF}) &= n \\ m(\widehat{ABC}) &= 8n \\ m(\widehat{BCD}) &= 3n \\ \Rightarrow n &= ? \end{aligned}$$

- A) 9 B) 20 C) 25 D) 30 E) 35

14.

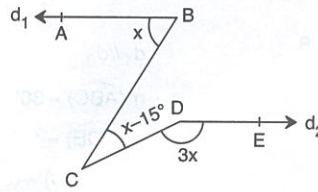


$$\begin{aligned} d_1 // d_2 // d_3 \\ 4m(\widehat{BCD}) &= 3m(\widehat{DCE}) \\ m(\widehat{ABC}) &= 70^\circ \\ \Rightarrow m(\widehat{CDF}) &= \alpha = ? \end{aligned}$$

- A) 130 B) 140 C) 150 D) 160 E) 170

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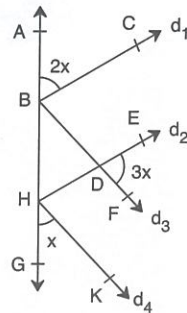
15.



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= x \\ m(\widehat{BCD}) &= x - 15^\circ \\ m(\widehat{CDE}) &= 3x \\ \Rightarrow x &= ? \end{aligned}$$

- A) 45 B) 50 C) 55 D) 60 E) 65

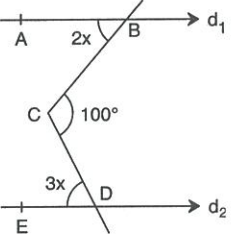
16.

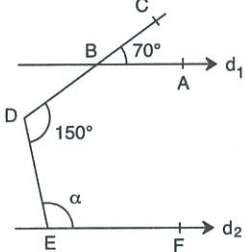


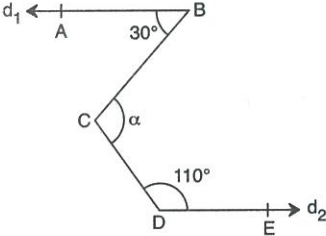
$$\begin{aligned} d_1 // d_2 \\ d_3 // d_4 \\ m(\widehat{ABC}) &= 2x \\ m(\widehat{EDF}) &= 3x \\ \Rightarrow m(\widehat{GHK}) &= x = ? \end{aligned}$$

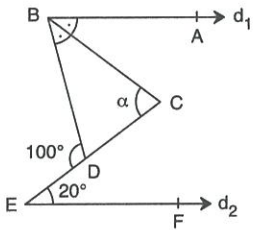
- A) 20 B) 30 C) 40 D) 50 E) 60



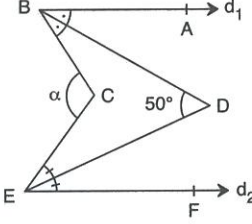
1. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 2x$
 $m(\widehat{CDE}) = 3x$
 $m(\widehat{BCD}) = 100^\circ$
 $\Rightarrow x = ?$
- A) 10 B) 15 C) 20 D) 25 E) 30

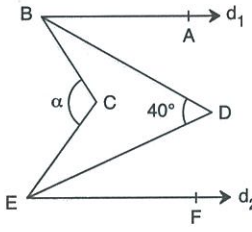
2. 
- $d_1 // d_2$
 $m(\widehat{CBA}) = 70^\circ$
 $m(\widehat{BDE}) = 150^\circ$
 $\Rightarrow m(\widehat{DEF}) = \alpha = ?$
- A) 40 B) 60 C) 80 D) 100 E) 110

3. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 30^\circ$
 $m(\widehat{CDE}) = 110^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$
- A) 140 B) 130 C) 120 D) 110 E) 100

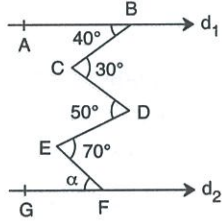
4. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = m(\widehat{CBD})$
 $m(\widehat{BDE}) = 100^\circ$
 $m(\widehat{CEF}) = 20^\circ$
 $\Rightarrow m(\widehat{BCE}) = \alpha = ?$
- A) 90 B) 80 C) 70 D) 60 E) 50

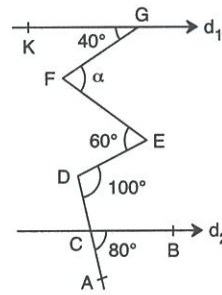
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5. 
- $d_1 // d_2$
 $m(\widehat{ABD}) = m(\widehat{CBD})$
 $m(\widehat{CED}) = m(\widehat{DEF})$
 $m(\widehat{BDE}) = 50^\circ$
 $\Rightarrow m(\widehat{BCE}) = \alpha = ?$
- A) 25 B) 50 C) 75 D) 90 E) 100

6. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 2m(\widehat{CBD})$
 $m(\widehat{CEF}) = 2m(\widehat{DEC})$
 $m(\widehat{BDE}) = 40^\circ$
 $\Rightarrow m(\widehat{BCE}) = \alpha = ?$
- A) 20 B) 40 C) 60 D) 80 E) 120

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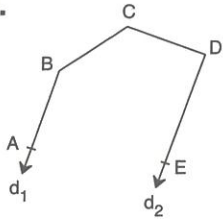
7. 
- $d_1 // d_2$
 $m(\widehat{ABC}) = 40^\circ$
 $m(\widehat{BCD}) = 30^\circ$
 $m(\widehat{CDE}) = 50^\circ$
 $m(\widehat{DEF}) = 70^\circ$
 $\Rightarrow m(\widehat{EFG}) = \alpha = ?$
- A) 10 B) 20 C) 30 D) 40 E) 50

8. 
- $d_1 // d_2$
 $m(\widehat{KGF}) = 40^\circ$
 $m(\widehat{FED}) = 60^\circ$
 $m(\widehat{EDC}) = 100^\circ$
 $m(\widehat{BCA}) = 80^\circ$
 $\Rightarrow m(\widehat{GFE}) = \alpha = ?$
- A) 50 B) 60 C) 70 D) 80 E) 90

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9.



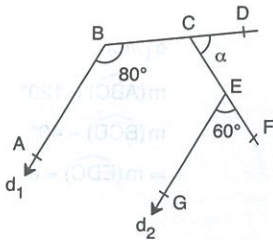
$$d_1 // d_2$$

$$3m(\widehat{ABC}) = 4m(\widehat{BCD}) = 6m(\widehat{CDE})$$

$$\Rightarrow m(\widehat{BCD}) = ?$$

- A) 40 B) 80 C) 120 D) 160 E) 200

10.



$$d_1 // d_2$$

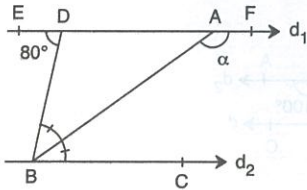
$$m(\widehat{ABD}) = 80^\circ$$

$$m(\widehat{FEG}) = 60^\circ$$

$$\Rightarrow m(\widehat{DCF}) = \alpha = ?$$

- A) 35 B) 30 C) 25 D) 20 E) 10

11.



$$d_1 // d_2$$

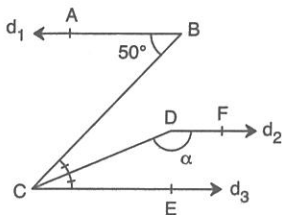
$$m(\widehat{EDB}) = 80^\circ$$

$$m(\widehat{DBA}) = m(\widehat{ABC})$$

$$\Rightarrow m(\widehat{FAB}) = \alpha = ?$$

- A) 100 B) 110 C) 120 D) 130 E) 140

12.



$$d_1 // d_2 // d_3$$

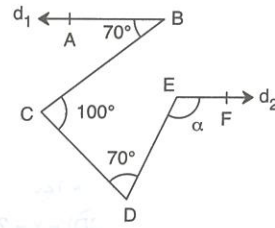
$$m(\widehat{ABC}) = 50^\circ$$

$$m(\widehat{BCD}) = m(\widehat{DCE})$$

$$\Rightarrow m(\widehat{CDF}) = \alpha = ?$$

- A) 130 B) 145 C) 155 D) 165 E) 175

13.



$$d_1 // d_2$$

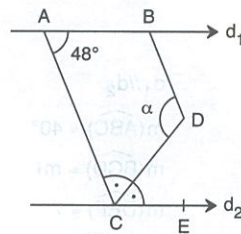
$$m(\widehat{ABC}) = m(\widehat{CDE}) = 70^\circ$$

$$m(\widehat{BCD}) = 100^\circ$$

$$\Rightarrow m(\widehat{DEF}) = \alpha = ?$$

- A) 100 B) 110 C) 120 D) 130 E) 140

14.



$$d_1 // d_2$$

$$[AC] // [BD]$$

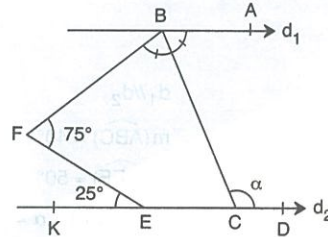
$$m(\widehat{BAC}) = 48^\circ$$

$$m(\widehat{ACD}) = m(\widehat{DCE})$$

$$\Rightarrow m(\widehat{BDC}) = \alpha = ?$$

- A) 48 B) 66 C) 98 D) 104 E) 114

15.



$$d_1 // d_2$$

$$m(\widehat{FEK}) = 25^\circ$$

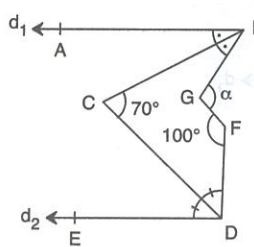
$$m(\widehat{BFE}) = 75^\circ$$

$$m(\widehat{FBC}) = m(\widehat{CBA})$$

$$\Rightarrow m(\widehat{BCD}) = \alpha = ?$$

- A) 50 B) 60 C) 105 D) 115 E) 125

16.



$$d_1 // d_2$$

$$m(\widehat{ABC}) = m(\widehat{CBG})$$

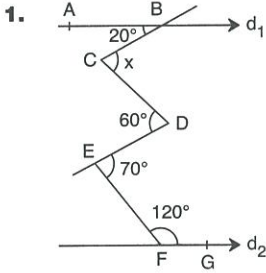
$$m(\widehat{FDC}) = m(\widehat{CDE})$$

$$m(\widehat{GFD}) = 100^\circ$$

$$m(\widehat{BCD}) = 70^\circ$$

$$\Rightarrow m(\widehat{BGF}) = \alpha = ?$$

- A) 30 B) 35 C) 45 D) 55 E) 60



- A) 60 B) 70 C) 80 D) 100 E) 110

$$d_1 // d_2$$

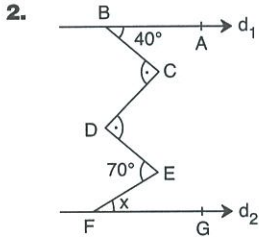
$$m(\widehat{ABC}) = 20^\circ$$

$$m(\widehat{CDE}) = 60^\circ$$

$$m(\widehat{DEF}) = 70^\circ$$

$$m(\widehat{EFG}) = 120^\circ$$

$$\Rightarrow m(\widehat{BCD}) = x = ?$$



- A) 20 B) 30 C) 40 D) 70 E) 110

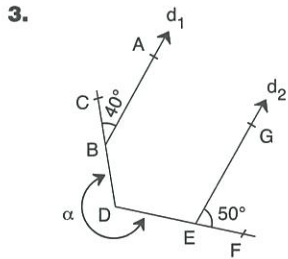
$$d_1 // d_2$$

$$m(\widehat{ABC}) = 40^\circ$$

$$m(\widehat{BCD}) = m(\widehat{CDE})$$

$$m(\widehat{DEF}) = 70^\circ$$

$$\Rightarrow m(\widehat{EFG}) = x = ?$$



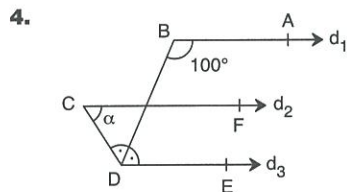
- A) 90 B) 180 C) 240 D) 270 E) 290

$$d_1 // d_2$$

$$m(\widehat{ABC}) = 40^\circ$$

$$m(\widehat{GEF}) = 50^\circ$$

$$\Rightarrow m(\widehat{CDF}) = \alpha = ?$$



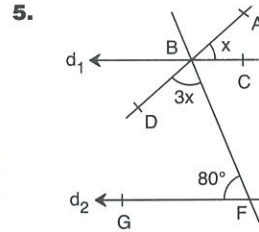
- A) 110 B) 90 C) 70 D) 60 E) 20

$$d_1 // d_2 // d_3$$

$$m(\widehat{ABD}) = 100^\circ$$

$$m(\widehat{CDB}) = m(\widehat{BDE})$$

$$\Rightarrow m(\widehat{FCD}) = \alpha = ?$$



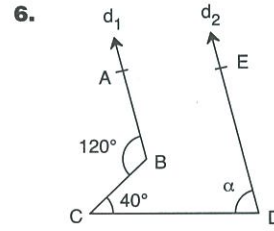
- A) 25 B) 20 C) 18 D) 15 E) 10

$$d_1 // d_2$$

$$m(\widehat{DBF}) = 3m(\widehat{ABC})$$

$$m(\widehat{BFG}) = 80^\circ$$

$$\Rightarrow m(\widehat{ABC}) = x = ?$$



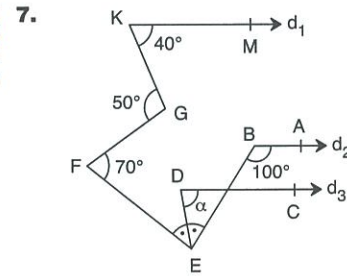
- A) 60 B) 70 C) 80 D) 90 E) 110

$$d_1 // d_2$$

$$m(\widehat{ABC}) = 120^\circ$$

$$m(\widehat{BCD}) = 40^\circ$$

$$\Rightarrow m(\widehat{EDC}) = \alpha = ?$$



- A) 90 B) 80 C) 70 D) 60 E) 50

$$d_1 // d_2 // d_3$$

$$m(\widehat{MKG}) = 40^\circ$$

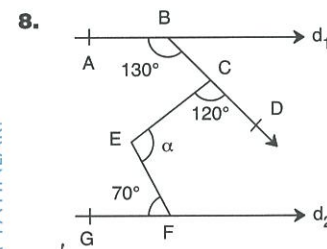
$$m(\widehat{KGF}) = 50^\circ$$

$$m(\widehat{GFE}) = 70^\circ$$

$$m(\widehat{FED}) = m(\widehat{DEB})$$

$$m(\widehat{ABE}) = 100^\circ$$

$$\Rightarrow m(\widehat{EDC}) = \alpha = ?$$



- A) 90 B) 80 C) 70 D) 60 E) 50

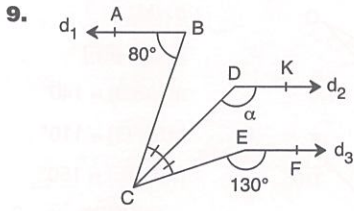
$$d_1 // d_2$$

$$m(\widehat{ABD}) = 130^\circ$$

$$m(\widehat{DCE}) = 120^\circ$$

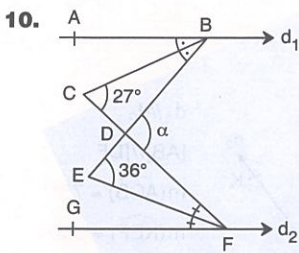
$$m(\widehat{EFG}) = 70^\circ$$

$$\Rightarrow m(\widehat{CEF}) = \alpha = ?$$



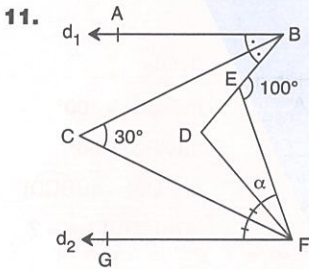
$$\begin{aligned} d_1 // d_2 // d_3 \\ m(\widehat{ABC}) &= 80^\circ \\ m(\widehat{CEF}) &= 130^\circ \\ m(\widehat{BCD}) &= m(\widehat{DCE}) \\ \Rightarrow m(\widehat{CDK}) &= \alpha = ? \end{aligned}$$

- A) 105 B) 110 C) 115 D) 120 E) 125



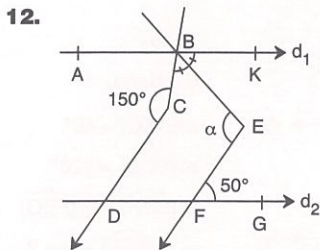
$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= m(\widehat{CBE}) \\ m(\widehat{CFE}) &= m(\widehat{EFG}) \\ m(\widehat{BCF}) &= 27^\circ \\ m(\widehat{BEF}) &= 36^\circ \\ \Rightarrow m(\widehat{BDF}) &= \alpha = ? \end{aligned}$$

- A) 38 B) 42 C) 63 D) 72 E) 81



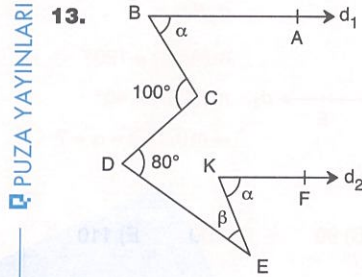
$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABC}) &= m(\widehat{CBD}) \\ m(\widehat{DFC}) &= m(\widehat{CFG}) \\ m(\widehat{BEF}) &= 100^\circ \\ m(\widehat{BCF}) &= 30^\circ \\ \Rightarrow m(\widehat{DFE}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 35 C) 40 D) 45 E) 50



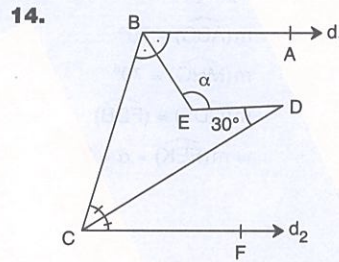
$$\begin{aligned} d_1 // d_2 \\ [CD // EF \\ m(\widehat{BCD}) &= 150^\circ \\ m(\widehat{EFG}) &= 50^\circ \\ m(\widehat{CBE}) &= m(\widehat{EBK}) \\ \Rightarrow m(\widehat{BEF}) &= \alpha = ? \end{aligned}$$

- A) 120 B) 110 C) 100 D) 90 E) 80



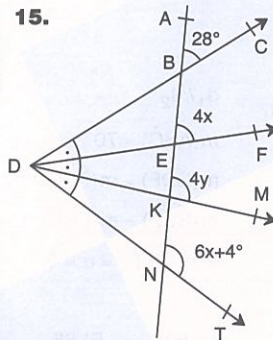
$$\begin{aligned} d_1 // d_2 \\ m(\widehat{BCD}) &= 100^\circ \\ m(\widehat{CDE}) &= 80^\circ \\ m(\widehat{ABC}) &= m(\widehat{EKF}) = \alpha \\ \Rightarrow m(\widehat{DEK}) &= \beta = ? \end{aligned}$$

- A) 20 B) 25 C) 30 D) 35 E) 40



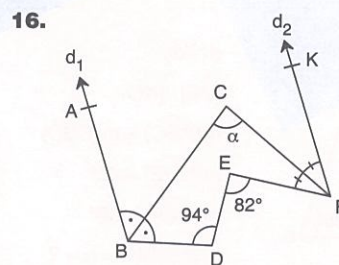
$$\begin{aligned} d_1 // d_2 \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ m(\widehat{BCD}) &= m(\widehat{DCF}) \\ m(\widehat{EDC}) &= 30^\circ \\ \Rightarrow m(\widehat{BED}) &= \alpha = ? \end{aligned}$$

- A) 90 B) 100 C) 110 D) 120 E) 130



$$\begin{aligned} m(\widehat{CDF}) &= m(\widehat{FDM}) = m(\widehat{MDT}) \\ m(\widehat{ABC}) &= 28^\circ \\ m(\widehat{AEF}) &= 4x \\ m(\widehat{AKM}) &= 4y \\ m(\widehat{ANT}) &= 6x + 4^\circ \\ \Rightarrow y &= ? \end{aligned}$$

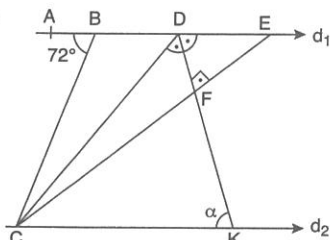
- A) 10 B) 11 C) 12 D) 13 E) 14



$$\begin{aligned} d_1 // d_2 \\ m(\widehat{BDE}) &= 94^\circ \\ m(\widehat{DEF}) &= 82^\circ \\ m(\widehat{ABC}) &= m(\widehat{CBD}) \\ m(\widehat{KFC}) &= m(\widehat{CFE}) \\ \Rightarrow m(\widehat{BCF}) &= \alpha = ? \end{aligned}$$

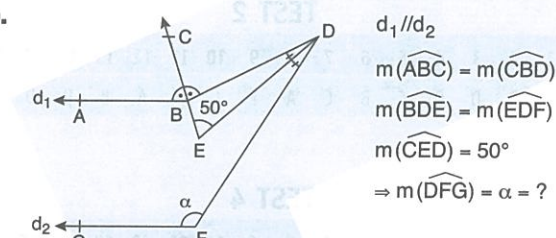
- A) 80 B) 82 C) 84 D) 86 E) 90



9. 

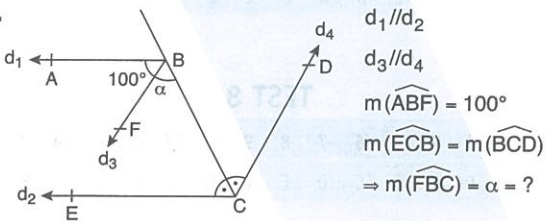
$d_1 // d_2$
 $m(\widehat{CDK}) = m(\widehat{KDE})$
 $[DF] \perp [CE]$
 $m(\widehat{ABC}) = 72^\circ$
 $m(\widehat{BCD}) = 2m(\widehat{DCE})$
 $\Rightarrow m(\widehat{DKC}) = \alpha = ?$

A) 68 B) 70 C) 72 D) 74 E) 76

10. 

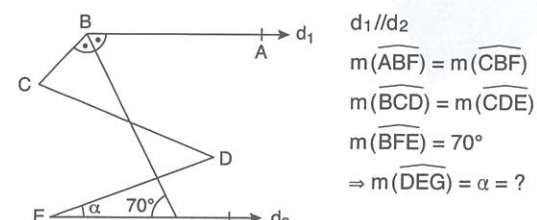
$d_1 // d_2$
 $m(\widehat{ABC}) = m(\widehat{CBD})$
 $m(\widehat{BDE}) = m(\widehat{EDF})$
 $m(\widehat{CED}) = 50^\circ$
 $\Rightarrow m(\widehat{DFG}) = \alpha = ?$

A) 70 B) 80 C) 90 D) 100 E) 110

11. 

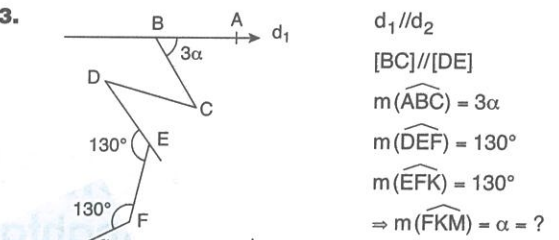
$d_1 // d_2$
 $d_3 // d_4$
 $m(\widehat{ABF}) = 100^\circ$
 $m(\widehat{ECB}) = m(\widehat{BCD})$
 $\Rightarrow m(\widehat{FBC}) = \alpha = ?$

A) 40 B) 45 C) 50 D) 55 E) 60

12. 

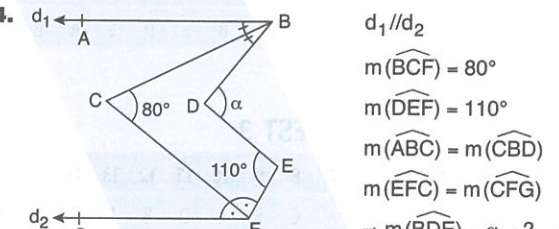
$d_1 // d_2$
 $m(\widehat{ABF}) = m(\widehat{CBF})$
 $m(\widehat{BCD}) = m(\widehat{CDE})$
 $m(\widehat{BFE}) = 70^\circ$
 $\Rightarrow m(\widehat{DEG}) = \alpha = ?$

A) 15 B) 25 C) 30 D) 35 E) 40

13. 

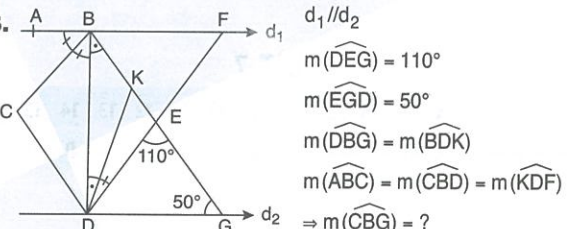
$d_1 // d_2$
 $[BC] // [DE]$
 $m(\widehat{ABC}) = 3\alpha$
 $m(\widehat{DEF}) = 130^\circ$
 $m(\widehat{EFK}) = 130^\circ$
 $\Rightarrow m(\widehat{FKM}) = \alpha = ?$

A) 10 B) 20 C) 30 D) 40 E) 50

14. 

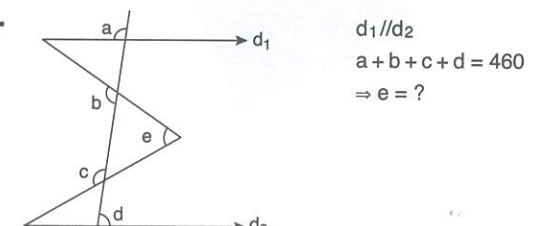
$d_1 // d_2$
 $m(\widehat{BCF}) = 80^\circ$
 $m(\widehat{DEF}) = 110^\circ$
 $m(\widehat{ABC}) = m(\widehat{CBD})$
 $m(\widehat{EFC}) = m(\widehat{CFG})$
 $\Rightarrow m(\widehat{BDE}) = \alpha = ?$

A) 60 B) 70 C) 80 D) 90 E) 100

15. 

$d_1 // d_2$
 $m(\widehat{DEG}) = 110^\circ$
 $m(\widehat{EGD}) = 50^\circ$
 $m(\widehat{DBG}) = m(\widehat{BDK})$
 $m(\widehat{ABC}) = m(\widehat{CBD}) = m(\widehat{KDF})$
 $\Rightarrow m(\widehat{CBG}) = ?$

A) 90 B) 80 C) 70 D) 60 E) 50

16. 

$d_1 // d_2$
 $a + b + c + d = 460$
 $\Rightarrow e = ?$

A) 100 B) 90 C) 80 D) 70 E) 60



AÇILAR ANGLES

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	D	B	C	D	E	A	B	E	B	E	D	E	A	B	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	D	D	D	C	B	C	A	E	C	A	A	B	D	D	D

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	C	B	D	A	A	C	B	C	D	B	B	A	C	E

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	A	D	C	E	C	B	B	C	B	C	B	A	B	A	A

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	C	D	B	E	B	A	C	A	C	C	D	A	B	C	B

TEST 6

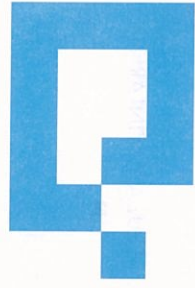
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	E	D	E	D	A	D	C	D	E	C	A	E	D	E

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	B	D	E	A	C	B	B	C	B	C	C	A	D	D	C

TEST 8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	C	A	B	C	D	E	C	D	A	E	B	D	B	A

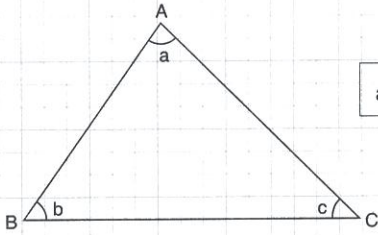


ÜÇGENDE AÇILAR

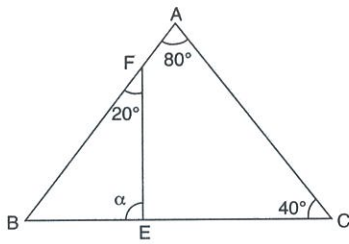
ANGLES OF TRIANGLE



ÖZELLİK|Property 1



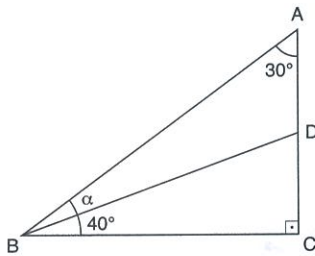
1.



$\Rightarrow \alpha = ?$

100

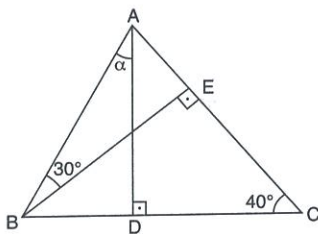
2.



$\Rightarrow \alpha = ?$

20

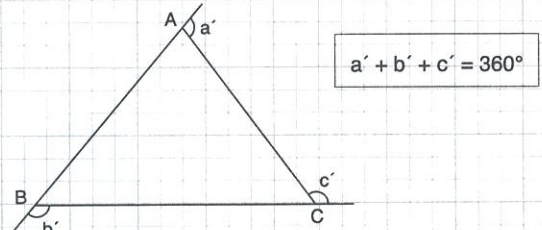
3.



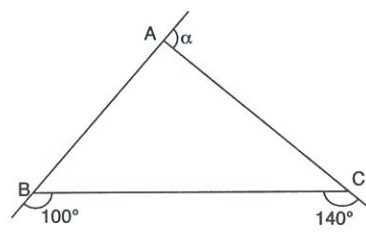
$\Rightarrow \alpha = ?$

10

ÖZELLİK|Property 2



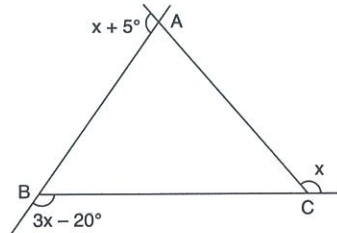
1.



$\Rightarrow \alpha = ?$

120

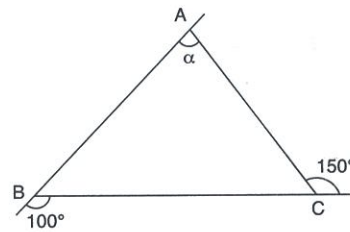
2.



$\Rightarrow x = ?$

75

3.

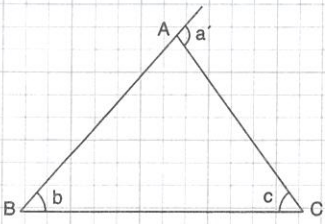


$\Rightarrow \alpha = ?$

70

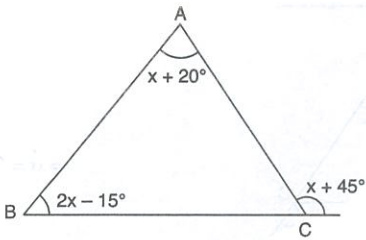


ÖZELLİK|Property 3



$$a' = b + c$$

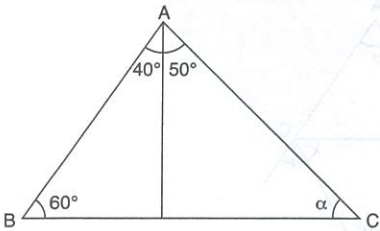
1.



$$\Rightarrow x = ?$$

20

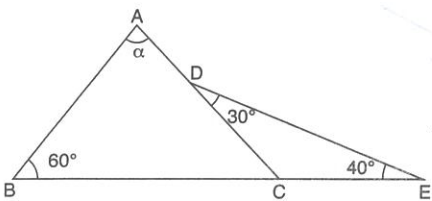
2.



$$\Rightarrow \alpha = ?$$

30

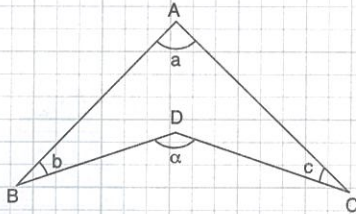
3.



$$\Rightarrow \alpha = ?$$

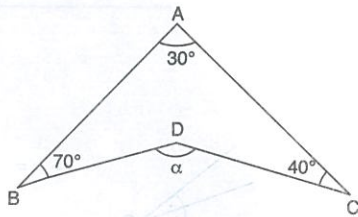
50

ÖZELLİK|Property 4



$$\alpha = a + b + c$$

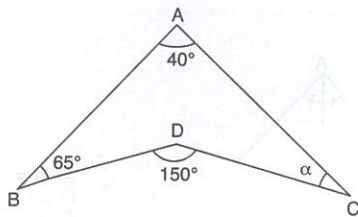
1.



$$\Rightarrow \alpha = ?$$

140

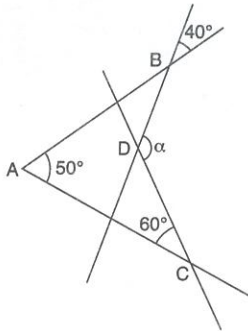
2.



$$\Rightarrow \alpha = ?$$

45

3.



$$\Rightarrow \alpha = ?$$

150

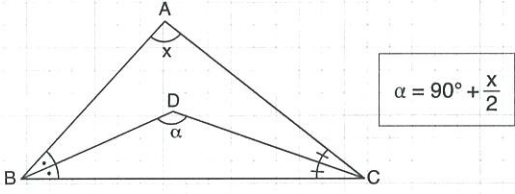
PUZA YAYINLARI

PUZA YAYINLARI

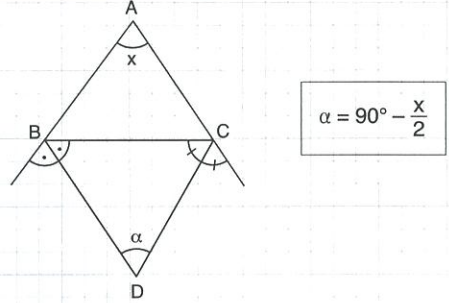
PUZA YAYINLARI



ÖZELLİK|Property 5



ÖZELLİK|Property 6



1.

$\Rightarrow \alpha = ?$

120

1.

$\Rightarrow \alpha = ?$

50

2.

$\Rightarrow \alpha = ?$

70

2.

$\Rightarrow \alpha = ?$

40

3.

$\Rightarrow \alpha = ?$

50

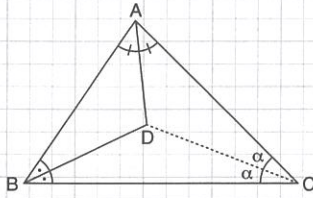
3.

$\Rightarrow \alpha = ?$

60



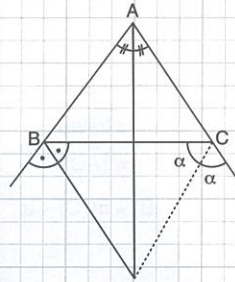
ÖZELLİK|Property 7



Üçgenin iç açıortayları, üçgenin iç bölgesinde bir noktada kesişir.

The interior angle bisectors are intersected at a point inside of the triangle.

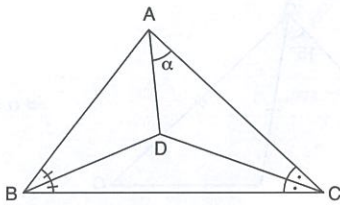
ÖZELLİK|Property 8



Bir üçgende iki açının dış açıortayları ile diğer açının iç açıortayı üçgenin dışında bir noktada kesişir.

The exterior angle bisectors of two angle and interior angle bisector of the other angle intersected at a point outside of the triangle.

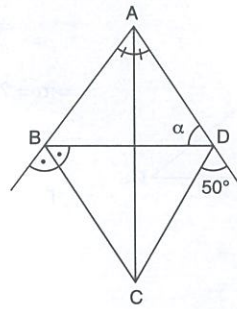
1.



$$m(\widehat{BAC}) = 70^\circ \\ \Rightarrow \alpha = ?$$

35

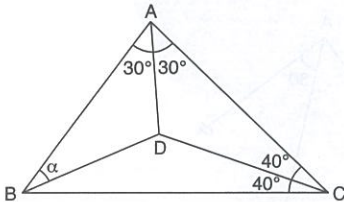
1.



$$\Rightarrow \alpha = ?$$

80

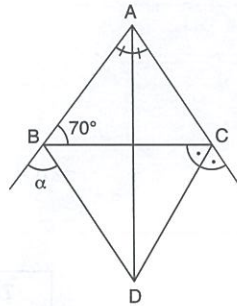
2.



$$\Rightarrow \alpha = ?$$

20

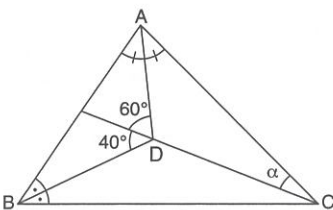
2.



$$\Rightarrow \alpha = ?$$

55

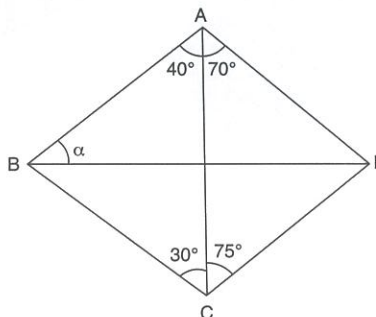
3.



$$\Rightarrow \alpha = ?$$

10

3.

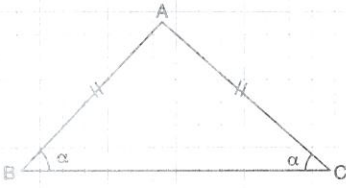


$$\Rightarrow \alpha = ?$$

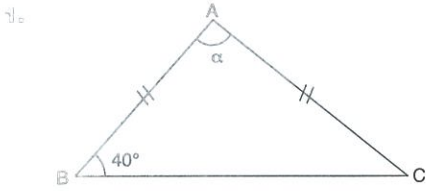
55



ÖZELLİK|Property 9

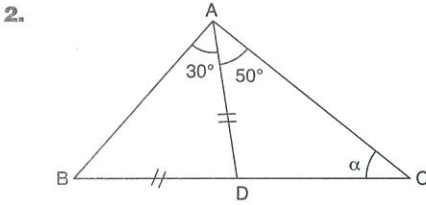


İkizkenar üçgen
Isosceles triangle
 $|AB| = |AC|$
 $m(\widehat{B}) = m(\widehat{C}) = \alpha$



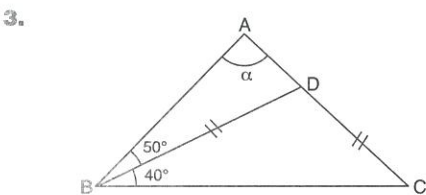
$\Rightarrow \alpha = ?$

100



$\Rightarrow \alpha = ?$

70

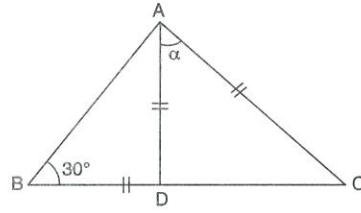


$\Rightarrow \alpha = ?$

50

PUZA YAYINLARI

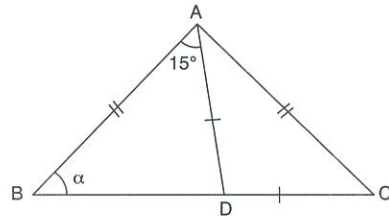
4.



$\Rightarrow \alpha = ?$

60

5.

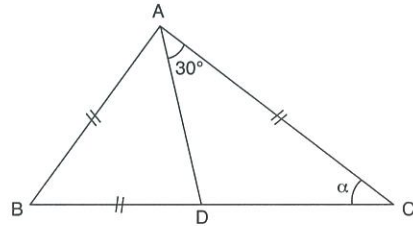


$\Rightarrow \alpha = ?$

55

PUZA YAYINLARI

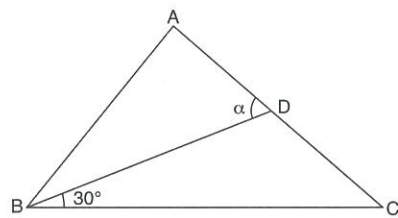
6.



$\Rightarrow \alpha = ?$

40

7.

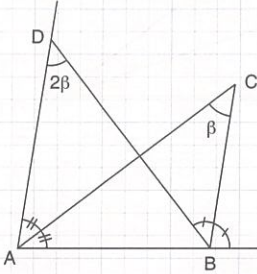


$|AB| = |AC|$
 $|AD| = |BD|$
 $\Rightarrow \alpha = ?$

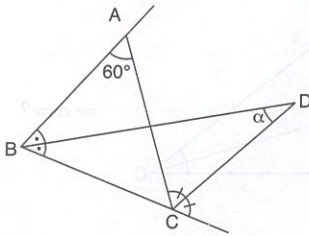
100



ÖZELLİK|Property 10



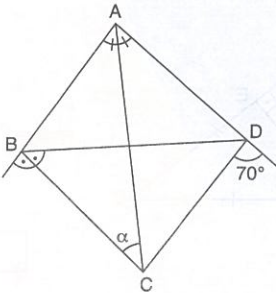
1.



$$\Rightarrow \alpha = ?$$

30

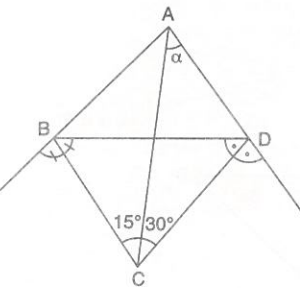
2.



$$\Rightarrow \alpha = ?$$

20

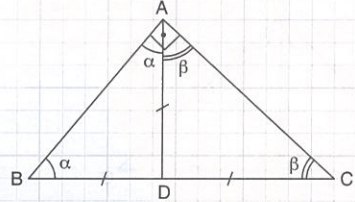
3.



$$\Rightarrow \alpha = ?$$

45

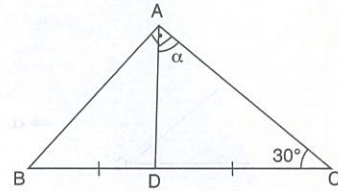
ÖZELLİK|Property 11



$$2\alpha + 2\beta = 180^\circ$$

$$\alpha + \beta = 90^\circ$$

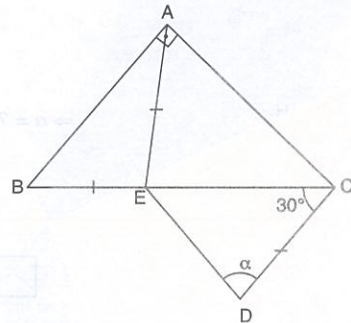
1.



$$\Rightarrow \alpha = ?$$

30

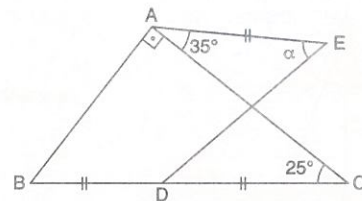
2.



$$\Rightarrow \alpha = ?$$

75

3.

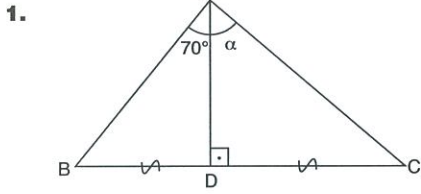
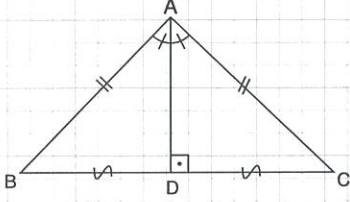


$$\Rightarrow \alpha = ?$$

60

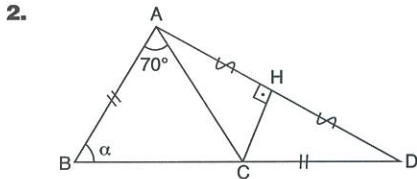


ÖZELLİK|Property 12



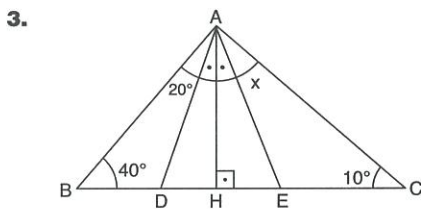
$$\Rightarrow \alpha = ?$$

70



$$\Rightarrow \alpha = ?$$

55

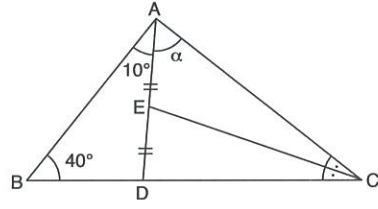


$$\Rightarrow x = ?$$

50

PUZA YAYINLARI

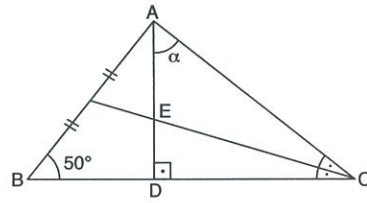
4.



$$\Rightarrow \alpha = ?$$

50

5.

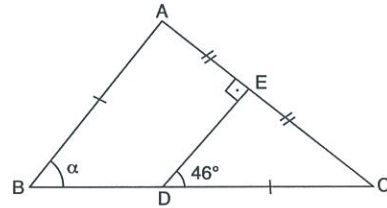


$$\Rightarrow \alpha = ?$$

10

PUZA YAYINLARI

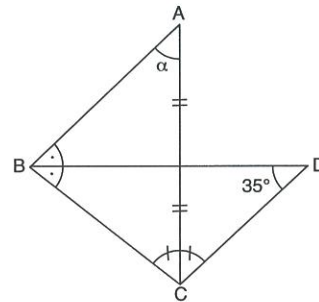
6.



$$\Rightarrow \alpha = ?$$

88

7.



$$\Rightarrow \alpha = ?$$

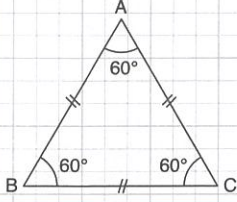
55

PUZA YAYINLARI

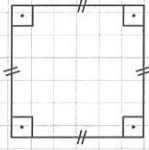


ÖZELLİK|Property 13

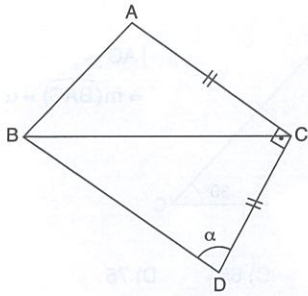
Eşkenar üçgen
Equilateral triangle



Kare
Square



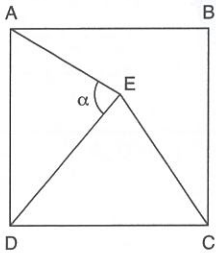
1.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow \alpha = ?$

75

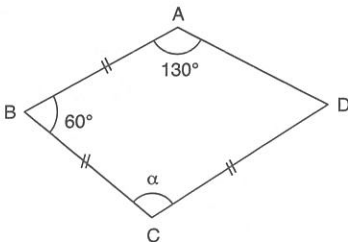
2.



ABCD kare
ABCD Square
EDC eşkenar üçgen
EDC equilateral triangle
 $\Rightarrow \alpha = ?$

75

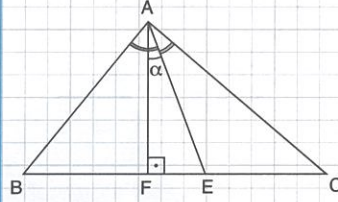
3.



$\Rightarrow \alpha = ?$

100

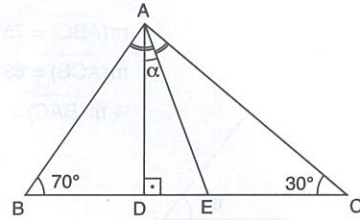
ÖZELLİK|Property 14



$$m(\widehat{BAE}) = m(\widehat{EAC})$$

$$\Rightarrow \alpha = \frac{m(\widehat{B}) - m(\widehat{C})}{2}$$

1.

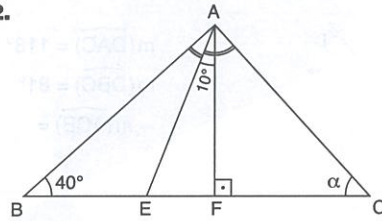


$$m(\widehat{BAE}) = m(\widehat{EAC})$$

$$\Rightarrow \alpha = ?$$

20

2.

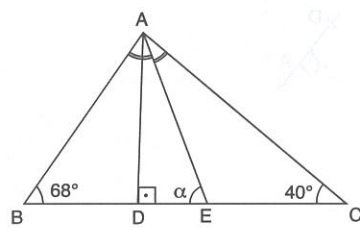


$$m(\widehat{BAE}) = m(\widehat{EAC})$$

$$\Rightarrow \alpha = ?$$

60

3.



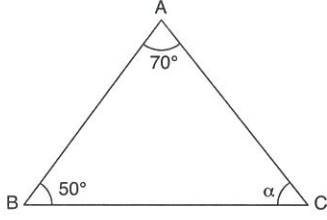
$$m(\widehat{BAE}) = m(\widehat{EAC})$$

$$\Rightarrow \alpha = ?$$

76



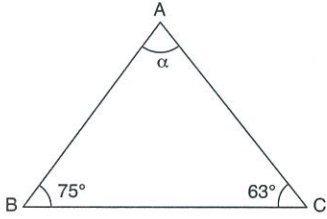
1.



$$\begin{aligned} m(\widehat{BAC}) &= 70^\circ \\ m(\widehat{ABC}) &= 50^\circ \\ \Rightarrow m(\widehat{ACB}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 60 D) 70 E) 80

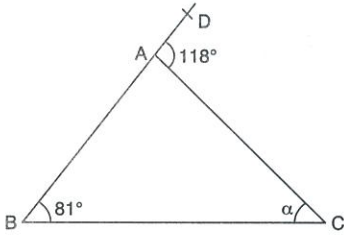
2.



$$\begin{aligned} m(\widehat{ABC}) &= 75^\circ \\ m(\widehat{ACB}) &= 63^\circ \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 32 B) 42 C) 48 D) 52 E) 58

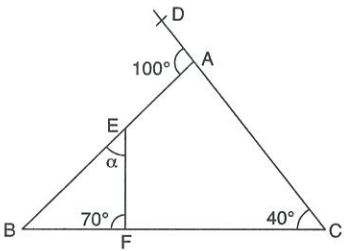
3.



$$\begin{aligned} m(\widehat{DAC}) &= 118^\circ \\ m(\widehat{DBC}) &= 81^\circ \\ \Rightarrow m(\widehat{ACB}) &= \alpha = ? \end{aligned}$$

- A) 37 B) 43 C) 47 D) 53 E) 57

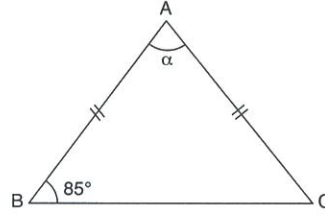
4.



$$\begin{aligned} m(\widehat{DAB}) &= 100^\circ \\ m(\widehat{DCB}) &= 40^\circ \\ m(\widehat{EFB}) &= 70^\circ \\ \Rightarrow m(\widehat{BEF}) &= \alpha = ? \end{aligned}$$

- A) 35 B) 40 C) 45 D) 50 E) 60

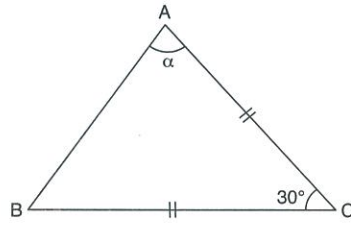
5.



$$\begin{aligned} |AB| &= |AC| \\ m(\widehat{ABC}) &= 85^\circ \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 20 C) 30 D) 75 E) 85

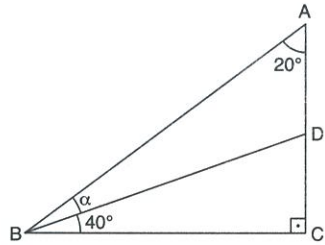
6.



$$\begin{aligned} m(\widehat{ACB}) &= 30^\circ \\ |AC| &= |BC| \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 45 C) 65 D) 75 E) 85

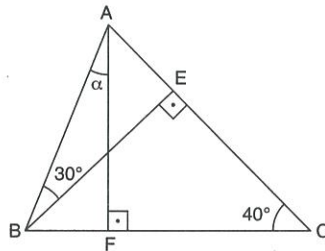
7.



$$\begin{aligned} m(\widehat{BAC}) &= 20^\circ \\ m(\widehat{DBC}) &= 40^\circ \\ [AC] &\perp [BC] \\ \Rightarrow m(\widehat{ABD}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 30 C) 40 D) 45 E) 55

8.

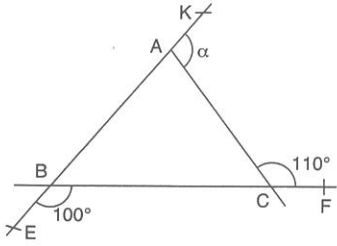


$$\begin{aligned} m(\widehat{ABE}) &= 30^\circ \\ m(\widehat{ACB}) &= 40^\circ \\ [BE] &\perp [AC] \\ [AF] &\perp [BC] \\ \Rightarrow m(\widehat{BAF}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 20 C) 30 D) 40 E) 50



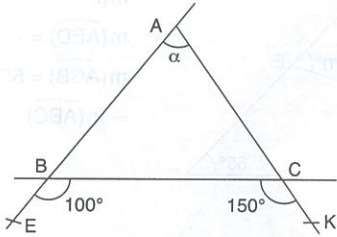
9.



$$\begin{aligned} m(\widehat{ACF}) &= 110^\circ \\ m(\widehat{EBF}) &= 100^\circ \\ \Rightarrow m(\widehat{KAC}) &= \alpha = ? \end{aligned}$$

- A) 100 B) 110 C) 120 D) 130 E) 150

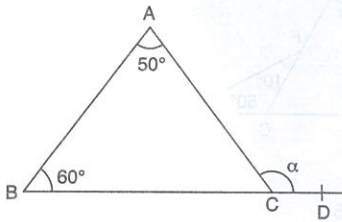
10.



$$\begin{aligned} m(\widehat{EBC}) &= 100^\circ \\ m(\widehat{BCK}) &= 150^\circ \\ \Rightarrow m(\widehat{EAK}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 60 C) 70 D) 80 E) 90

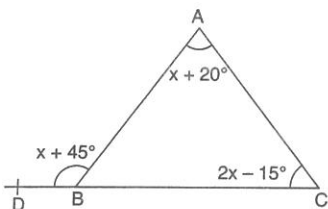
11.



$$\begin{aligned} m(\widehat{ABD}) &= 60^\circ \\ m(\widehat{BAC}) &= 50^\circ \\ \Rightarrow m(\widehat{ACD}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 60 C) 90 D) 100 E) 110

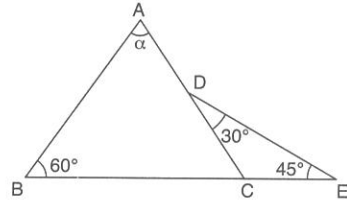
12.



$$\begin{aligned} m(\widehat{BAC}) &= x + 20^\circ \\ m(\widehat{ACD}) &= 2x - 15^\circ \\ m(\widehat{ABD}) &= x + 45^\circ \\ \Rightarrow m(\widehat{ABC}) &= ? \end{aligned}$$

- A) 20 B) 45 C) 65 D) 115 E) 125

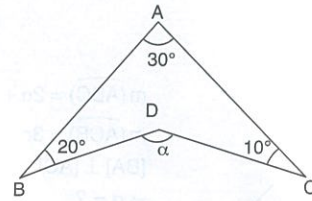
13.



$$\begin{aligned} m(\widehat{ABE}) &= 60^\circ \\ m(\widehat{CDE}) &= 30^\circ \\ m(\widehat{DEB}) &= 45^\circ \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 35 B) 40 C) 45 D) 50 E) 55

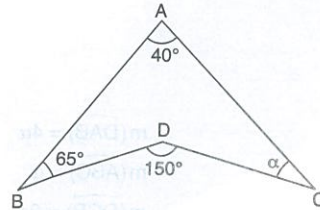
14.



$$\begin{aligned} m(\widehat{BAC}) &= 30^\circ \\ m(\widehat{ABD}) &= 20^\circ \\ m(\widehat{ACD}) &= 10^\circ \\ \Rightarrow m(\widehat{BDC}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 20 C) 30 D) 50 E) 60

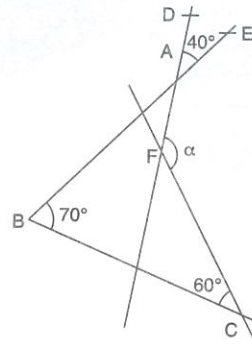
15.



$$\begin{aligned} m(\widehat{BAC}) &= 40^\circ \\ m(\widehat{ABD}) &= 65^\circ \\ m(\widehat{BDC}) &= 150^\circ \\ \Rightarrow m(\widehat{ACD}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 45 C) 50 D) 55 E) 65

16.

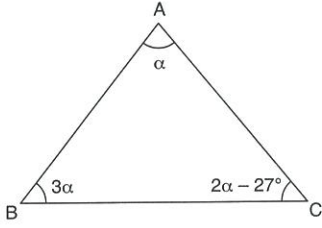


$$\begin{aligned} m(\widehat{DAE}) &= 40^\circ \\ m(\widehat{ABC}) &= 70^\circ \\ m(\widehat{BCF}) &= 60^\circ \\ \Rightarrow m(\widehat{DFC}) &= \alpha = ? \end{aligned}$$

- A) 70 B) 130 C) 140 D) 170 E) 180



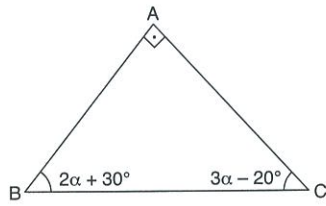
1.



$$\begin{aligned} m(\widehat{BAC}) &= \alpha \\ m(\widehat{ABC}) &= 3\alpha \\ m(\widehat{ACB}) &= 2\alpha - 27^\circ \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 30 B) 32,5 C) 34,5 D) 36,5 E) 40

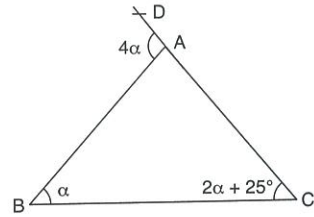
2.



$$\begin{aligned} m(\widehat{ABC}) &= 2\alpha + 30^\circ \\ m(\widehat{ACB}) &= 3\alpha - 20^\circ \\ [BA] \perp [AC] \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 15 B) 16 C) 20 D) 22 E) 25

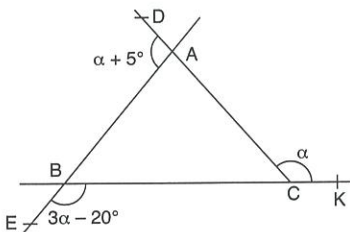
3.



$$\begin{aligned} m(\widehat{DAB}) &= 4\alpha \\ m(\widehat{ABC}) &= \alpha \\ m(\widehat{DCB}) &= 2\alpha + 25^\circ \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 5 B) $\frac{25}{3}$ C) $\frac{25}{2}$ D) 25 E) 50

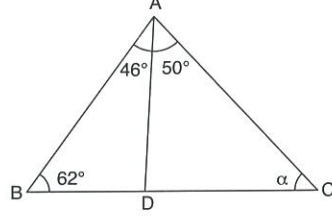
4.



$$\begin{aligned} m(\widehat{DAE}) &= \alpha + 5^\circ \\ m(\widehat{EBK}) &= 3\alpha - 20^\circ \\ \Rightarrow m(\widehat{DCK}) &= \alpha = ? \end{aligned}$$

- A) 69 B) 72 C) 75 D) 78 E) 81

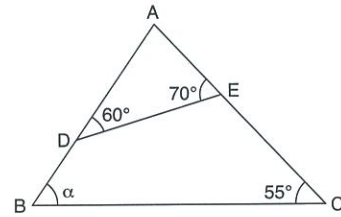
5.



$$\begin{aligned} m(\widehat{ABC}) &= 62^\circ \\ m(\widehat{BAD}) &= 46^\circ \\ m(\widehat{DAC}) &= 50^\circ \\ \Rightarrow m(\widehat{ACB}) &= \alpha = ? \end{aligned}$$

- A) 12 B) 22 C) 28 D) 32 E) 38

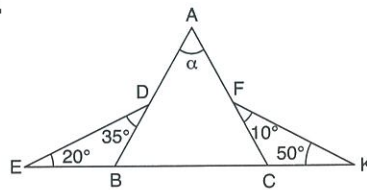
6.



$$\begin{aligned} m(\widehat{ADE}) &= 60^\circ \\ m(\widehat{AED}) &= 70^\circ \\ m(\widehat{ACB}) &= 55^\circ \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 55 B) 60 C) 65 D) 70 E) 75

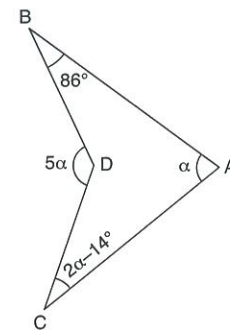
7.



$$\begin{aligned} m(\widehat{EDB}) &= 35^\circ \\ m(\widehat{DEK}) &= 20^\circ \\ m(\widehat{CFK}) &= 10^\circ \\ m(\widehat{FKE}) &= 50^\circ \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 45 B) 55 C) 65 D) 75 E) 85

8.

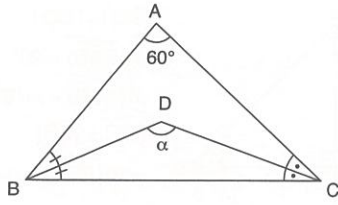


$$\begin{aligned} m(\widehat{ABD}) &= 86^\circ \\ m(\widehat{ACD}) &= 2\alpha - 14^\circ \\ m(\widehat{BDC}) &= 5\alpha \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 26 B) 30 C) 32 D) 36 E) 42



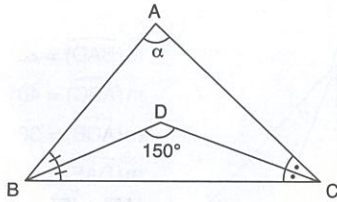
9.



$$\begin{aligned} m(\widehat{BAC}) &= 60^\circ \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ \Rightarrow m(\widehat{BDC}) &= \alpha = ? \end{aligned}$$

- A) 90 B) 100 C) 120 D) 130 E) 150

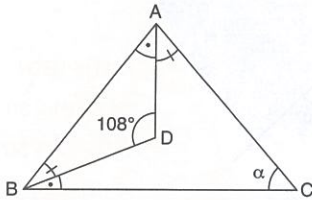
10.



$$\begin{aligned} m(\widehat{BDC}) &= 150^\circ \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 60 B) 90 C) 100 D) 120 E) 150

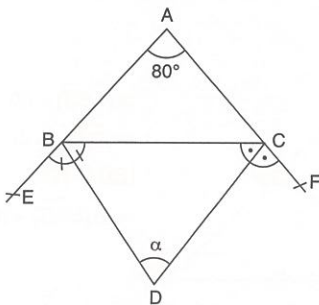
11.



$$\begin{aligned} m(\widehat{ADB}) &= 108^\circ \\ m(\widehat{CAD}) &= m(\widehat{ABD}) \\ m(\widehat{DAB}) &= m(\widehat{DBC}) \\ \Rightarrow m(\widehat{ACB}) &= \alpha = ? \end{aligned}$$

- A) 18 B) 36 C) 72 D) 100 E) 108

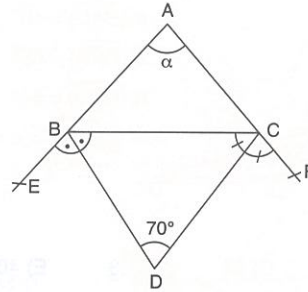
12.



$$\begin{aligned} m(\widehat{EAF}) &= 80^\circ \\ m(\widehat{EBD}) &= m(\widehat{DBC}) \\ m(\widehat{BCD}) &= m(\widehat{DCF}) \\ \Rightarrow m(\widehat{BDC}) &= \alpha = ? \end{aligned}$$

- A) 130 B) 80 C) 70 D) 50 E) 40

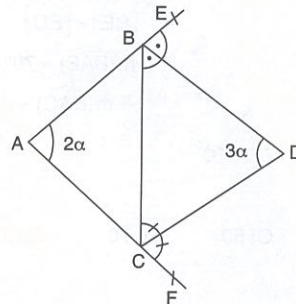
13.



$$\begin{aligned} m(\widehat{BDC}) &= 70^\circ \\ m(\widehat{EBD}) &= m(\widehat{DBC}) \\ m(\widehat{BCD}) &= m(\widehat{DCF}) \\ \Rightarrow m(\widehat{EAF}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 30 C) 40 D) 50 E) 70

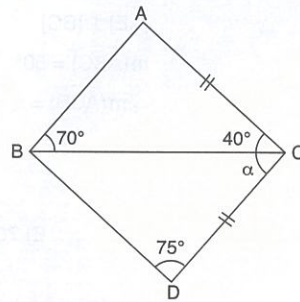
14.



$$\begin{aligned} 3m(\widehat{EAF}) &= 2m(\widehat{BDC}) \\ m(\widehat{CBD}) &= m(\widehat{DBE}) \\ m(\widehat{BCD}) &= m(\widehat{DCF}) \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) $\frac{45}{4}$ B) $\frac{45}{2}$ C) 45 D) 55 E) 60

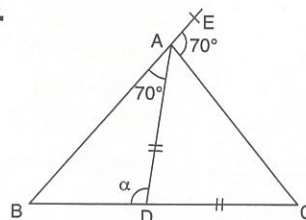
15.



$$\begin{aligned} |AC| &= |DC| \\ m(\widehat{ABC}) &= 70^\circ \\ m(\widehat{ACB}) &= 40^\circ \\ m(\widehat{BDC}) &= 75^\circ \\ \Rightarrow m(\widehat{BCD}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 30 C) 40 D) 50 E) 75

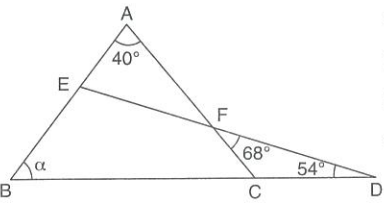
16.

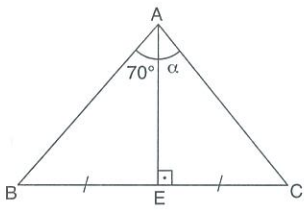


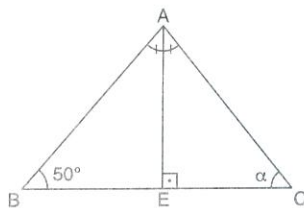
$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{EAC}) = 70^\circ \\ |AD| &= |DC| \\ \Rightarrow m(\widehat{ADB}) &= \alpha = ? \end{aligned}$$

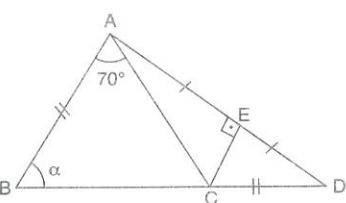
- A) 40 B) 70 C) 80 D) 90 E) 100



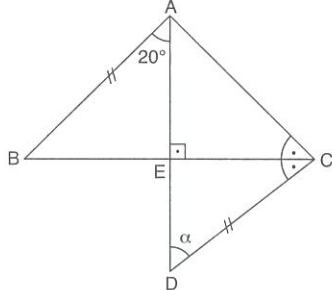
1.  $m(\widehat{BAC}) = 40^\circ$
 $m(\widehat{CFD}) = 68^\circ$
 $m(\widehat{EDB}) = 54^\circ$
 $\Rightarrow m(\widehat{ABD}) = \alpha = ?$
- A) 18 B) 28 C) 34 D) 38 E) 40

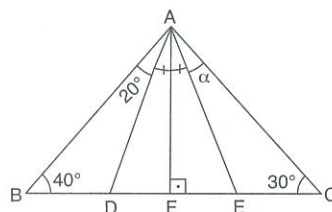
2.  $[AE] \perp [BC]$
 $|BE| = |EC|$
 $m(\widehat{BAE}) = 70^\circ$
 $\Rightarrow m(\widehat{EAC}) = \alpha = ?$
- A) 20 B) 40 C) 50 D) 70 E) 80

3.  $m(\widehat{BAE}) = m(\widehat{EAC})$
 $[AE] \perp [BC]$
 $m(\widehat{ABC}) = 50^\circ$
 $\Rightarrow m(\widehat{ACB}) = \alpha = ?$
- A) 20 B) 40 C) 50 D) 60 E) 70

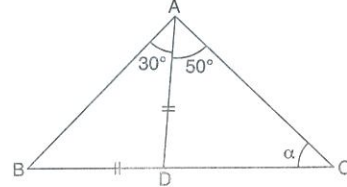
4.  $[CE] \perp [AD]$
 $m(\widehat{BAC}) = 70^\circ$
 $|AB| = |CD|$
 $|AE| = |ED|$
 $\Rightarrow m(\widehat{ABD}) = \alpha = ?$
- A) 45 B) 55 C) 65 D) 70 E) 80

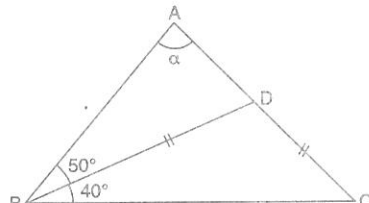
PUZA YAYINLARI

5.  $|AB| = |CD|$
 $m(\widehat{BAD}) = 20^\circ$
 $m(\widehat{ACB}) = m(\widehat{BCD})$
 $[AE] \perp [BC]$
 $\Rightarrow m(\widehat{ADC}) = \alpha = ?$
- A) 20 B) 30 C) 40 D) 50 E) 70

6.  $m(\widehat{BAD}) = 20^\circ$
 $m(\widehat{ABC}) = 40^\circ$
 $m(\widehat{ACB}) = 30^\circ$
 $m(\widehat{DAF}) = m(\widehat{FAE})$
 $[AF] \perp [BC]$
 $\Rightarrow m(\widehat{EAC}) = \alpha = ?$
- A) 20 B) 30 C) 40 D) 50 E) 60

PUZA YAYINLARI

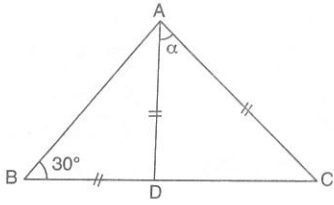
7.  $|AD| = |BD|$
 $m(\widehat{BAD}) = 30^\circ$
 $m(\widehat{DAC}) = 50^\circ$
 $\Rightarrow m(\widehat{ACB}) = \alpha = ?$
- A) 30 B) 50 C) 60 D) 70 E) 80

8.  $m(\widehat{ABD}) = 50^\circ$
 $m(\widehat{DBC}) = 40^\circ$
 $|BD| = |DC|$
 $\Rightarrow m(\widehat{BAC}) = \alpha = ?$
- A) 40 B) 50 C) 60 D) 80 E) 90

PUZA YAYINLARI



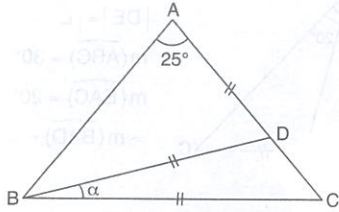
9.



$$\begin{aligned} m(\widehat{ABC}) &= 30^\circ \\ |BD| &= |AD| = |AC| \\ \Rightarrow m(\widehat{DAC}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 45 C) 60 D) 75 E) 90

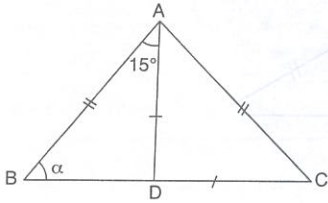
10.



$$\begin{aligned} |AD| &= |BD| = |BC| \\ m(\widehat{BAC}) &= 25^\circ \\ \Rightarrow m(\widehat{DBC}) &= \alpha = ? \end{aligned}$$

- A) 25 B) 50 C) 60 D) 70 E) 80

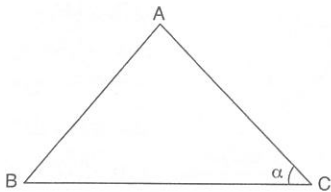
11.



$$\begin{aligned} m(\widehat{BAD}) &= 15^\circ \\ |AB| &= |AC| \\ |AD| &= |DC| \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 45 B) 55 C) 60 D) 65 E) 75

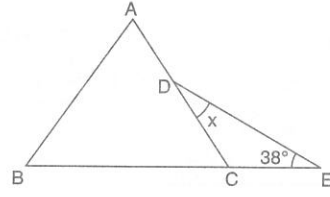
12.



$$\begin{aligned} \text{ABC eşkenar üçgen} \\ \text{ABC equilateral triangle} \\ \Rightarrow m(\widehat{ACB}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 45 C) 60 D) 90 E) 120

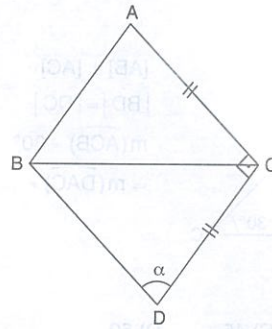
13.



$$\begin{aligned} \text{ABC eşkenar üçgen} \\ \text{ABC equilateral triangle} \\ m(\widehat{BED}) &= 38^\circ \\ \Rightarrow m(\widehat{CDE}) &= x = ? \end{aligned}$$

- A) 58 B) 52 C) 28 D) 22 E) 18

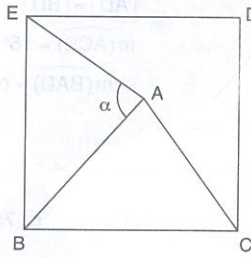
14.



$$\begin{aligned} \text{ABC eşkenar üçgen} \\ \text{ABC equilateral triangle} \\ |AC| &= |CD| \\ [AC] &\perp [DC] \\ \Rightarrow m(\widehat{BDC}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 45 C) 60 D) 70 E) 75

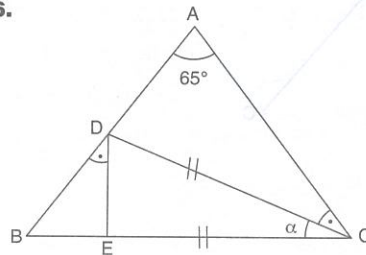
15.



$$\begin{aligned} \text{ABC eşkenar üçgen} \\ \text{ABC equilateral triangle} \\ \text{BCDE kare} \\ \text{BCDE square} \\ \Rightarrow m(\widehat{EAB}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 45 C) 60 D) 70 E) 75

16.

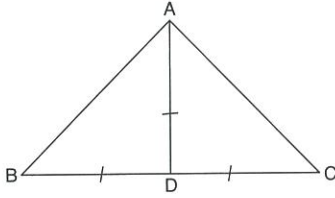


$$\begin{aligned} m(\widehat{BAC}) &= 65^\circ \\ m(\widehat{ACD}) &= m(\widehat{BDE}) \\ |DC| &= |EC| \\ \Rightarrow m(\widehat{DCB}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 60 D) 65 E) 75



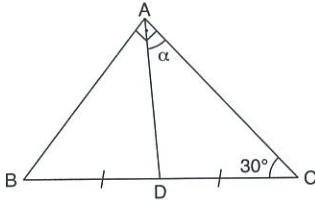
1.



$$|AD| = |BD| = |DC| \\ \Rightarrow m(\widehat{BAC}) = ?$$

- A) 30 B) 45 C) 60 D) 90 E) 120

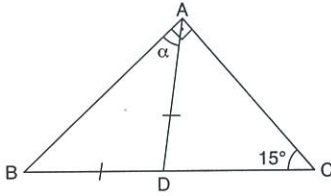
2.



$$[AB] \perp [AC] \\ |BD| = |DC| \\ m(\widehat{ACB}) = 30^\circ \\ \Rightarrow m(\widehat{DAC}) = \alpha = ?$$

- A) 15 B) 30 C) 45 D) 60 E) 75

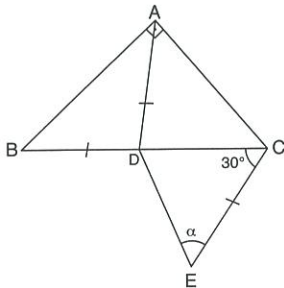
3.



$$[AB] \perp [AC] \\ |AD| = |BD| \\ m(\widehat{ACB}) = 15^\circ \\ \Rightarrow m(\widehat{BAD}) = \alpha = ?$$

- A) 15 B) 30 C) 45 D) 65 E) 75

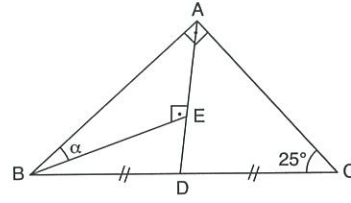
4.



$$[AB] \perp [AC] \\ |AD| = |BD| = |EC| \\ m(\widehat{BCE}) = 30^\circ \\ \Rightarrow m(\widehat{DEC}) = \alpha = ?$$

- A) 15 B) 30 C) 60 D) 75 E) 90

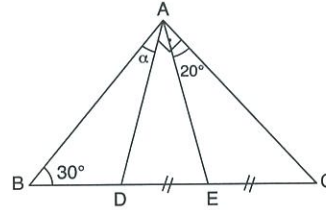
5.



$$[AB] \perp [AC] \\ [AD] \perp [BE] \\ |BD| = |DC| \\ m(\widehat{ACB}) = 25^\circ \\ \Rightarrow m(\widehat{ABE}) = \alpha = ?$$

- A) 25 B) 35 C) 45 D) 65 E) 75

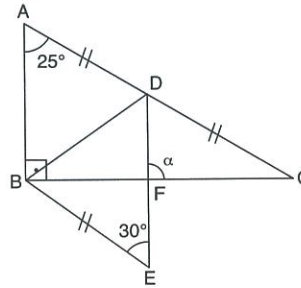
6.



$$[AD] \perp [AC] \\ |DE| = |EC| \\ m(\widehat{ACB}) = 30^\circ \\ m(\widehat{EAC}) = 20^\circ \\ \Rightarrow m(\widehat{BAD}) = \alpha = ?$$

- A) 20 B) 30 C) 40 D) 50 E) 60

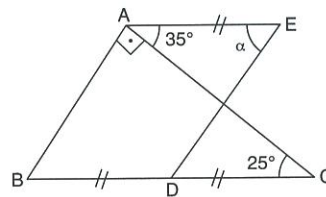
7.



$$[AB] \perp [BC] \\ |AD| = |DC| = |BE| \\ m(\widehat{BAC}) = 25^\circ \\ m(\widehat{BED}) = 30^\circ \\ \Rightarrow m(\widehat{DFC}) = \alpha = ?$$

- A) 45 B) 55 C) 90 D) 95 E) 120

8.

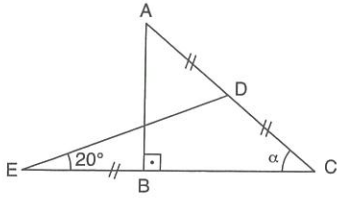


$$[AB] \perp [AC] \\ |AE| = |BD| = |DC| \\ m(\widehat{EAC}) = 35^\circ \\ m(\widehat{ACB}) = 25^\circ \\ \Rightarrow m(\widehat{AED}) = \alpha = ?$$

- A) 25 B) 35 C) 50 D) 60 E) 70



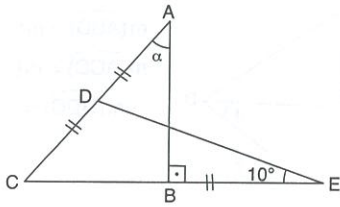
9.



$[AB] \perp [EC]$
 $|AD| = |DC| = |EB|$
 $m(\widehat{DEC}) = 20^\circ$
 $\Rightarrow m(\widehat{ECA}) = \alpha = ?$

- A) 10 B) 20 C) 40 D) 50 E) 70

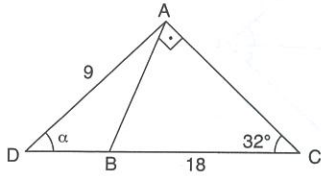
10.



$[AB] \perp [EC]$
 $|AD| = |DC| = |BE|$
 $m(\widehat{DEC}) = 10^\circ$
 $\Rightarrow m(\widehat{BAC}) = \alpha = ?$

- A) 5 B) 10 C) 20 D) 70 E) 80

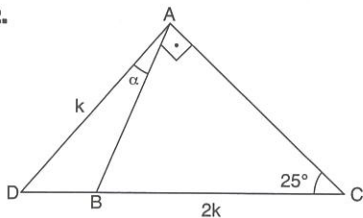
11.



$[AB] \perp [AC]$
 $2|AD| = |BC| = 18$ br
 $m(\widehat{ACD}) = 32^\circ$
 $\Rightarrow m(\widehat{ADC}) = \alpha = ?$

- A) 16 B) 32 C) 58 D) 64 E) 74

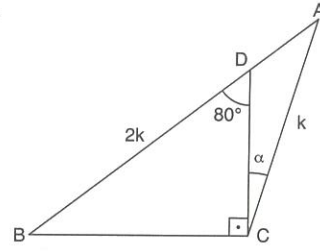
12.



$[AB] \perp [AC]$
 $2|AD| = |BC|$
 $m(\widehat{ACB}) = 25^\circ$
 $\Rightarrow m(\widehat{DAB}) = \alpha = ?$

- A) 15 B) 20 C) 25 D) 40 E) 50

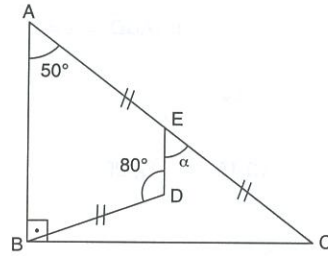
13.



B, D, A doğrusal
 B, D, A linear
 $[BC] \perp [DC]$
 $2|AC| = |BD|$
 $m(\widehat{BDC}) = 80^\circ$
 $\Rightarrow m(\widehat{ACD}) = \alpha = ?$

- A) 20 B) 30 C) 40 D) 50 E) 60

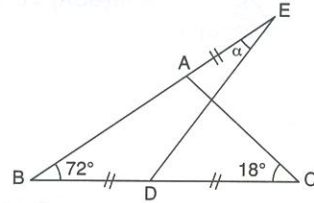
14.



$[AB] \perp [BC]$
 $|AE| = |EC| = |BD|$
 $m(\widehat{BAC}) = 50^\circ$
 $m(\widehat{BDE}) = 80^\circ$
 $\Rightarrow m(\widehat{DEC}) = \alpha = ?$

- A) 20 B) 30 C) 35 D) 40 E) 50

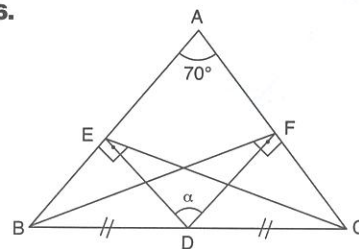
15.



$m(\widehat{EBC}) = 72^\circ$
 $m(\widehat{ACB}) = 18^\circ$
 $|BD| = |DC| = |AE|$
 $\Rightarrow m(\widehat{BED}) = \alpha = ?$

- A) 18 B) 32 C) 36 D) 44 E) 72

16.

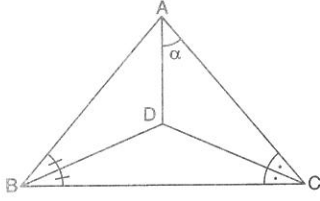


$[BA] \perp [EC]$
 $[BF] \perp [AC]$
 $|BD| = |DC|$
 $m(\widehat{BAC}) = 70^\circ$
 $\Rightarrow m(\widehat{EDF}) = \alpha = ?$

- A) 20 B) 40 C) 50 D) 70 E) 100



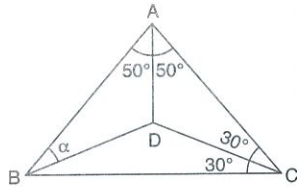
1.



$$\begin{aligned} m(\widehat{BAC}) &= 80^\circ \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{BCD}) &= m(\widehat{DCA}) \\ \Rightarrow m(\widehat{DAC}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 25 C) 30 D) 35 E) 40

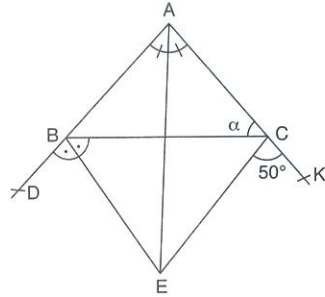
2.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) = 50^\circ \\ m(\widehat{ACD}) &= m(\widehat{DCB}) = 30^\circ \\ \Rightarrow m(\widehat{ABD}) &= \alpha = ? \end{aligned}$$

- A) 5 B) 10 C) 15 D) 20 E) 30

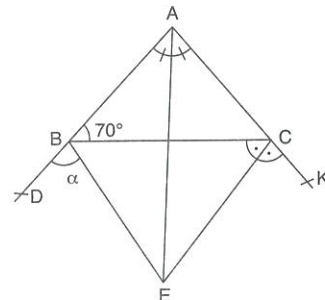
3.



$$\begin{aligned} m(\widehat{DAE}) &= m(\widehat{EAK}) \\ m(\widehat{DBE}) &= m(\widehat{EBC}) \\ m(\widehat{ECK}) &= 50^\circ \\ \Rightarrow m(\widehat{BCA}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 70 D) 80 E) 90

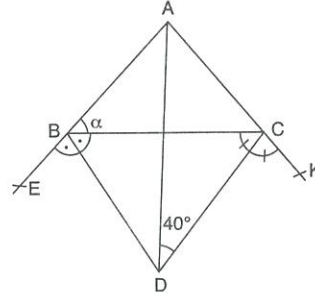
4.



$$\begin{aligned} m(\widehat{DAE}) &= m(\widehat{EAK}) \\ m(\widehat{BCE}) &= m(\widehat{ECK}) \\ m(\widehat{ABC}) &= 70^\circ \\ \Rightarrow m(\widehat{DBE}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 55 D) 60 E) 65

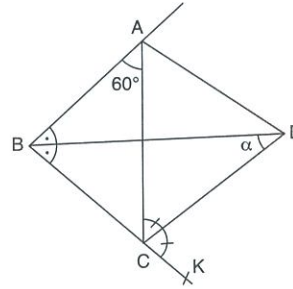
5.



$$\begin{aligned} m(\widehat{EBD}) &= m(\widehat{DBC}) \\ m(\widehat{BCD}) &= m(\widehat{DCK}) \\ m(\widehat{ADC}) &= 40^\circ \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 40 C) 50 D) 80 E) 100

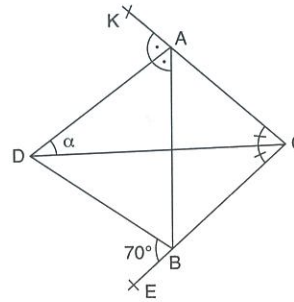
6.



$$\begin{aligned} m(\widehat{BAC}) &= 60^\circ \\ m(\widehat{ABD}) &= m(\widehat{DBK}) \\ m(\widehat{ACD}) &= m(\widehat{DCK}) \\ \Rightarrow m(\widehat{BDC}) &= \alpha = ? \end{aligned}$$

- A) 120 B) 60 C) 45 D) 30 E) 15

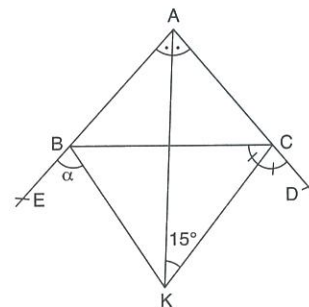
7.



$$\begin{aligned} m(\widehat{KAD}) &= m(\widehat{DAB}) \\ m(\widehat{KCD}) &= m(\widehat{DCE}) \\ m(\widehat{DBE}) &= 70^\circ \\ \Rightarrow m(\widehat{ADC}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 20 C) 40 D) 55 E) 110

8.

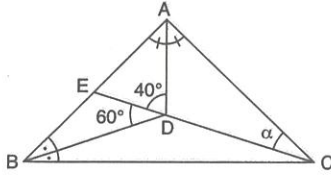


$$\begin{aligned} m(\widehat{EAK}) &= m(\widehat{KAD}) \\ m(\widehat{BCK}) &= m(\widehat{KCE}) \\ m(\widehat{AKC}) &= 15^\circ \\ \Rightarrow m(\widehat{EBK}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 45 C) 60 D) 75 E) 150



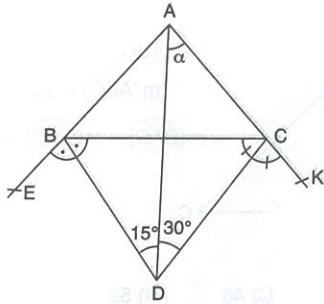
9.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ADE}) &= 40^\circ \\ m(\widehat{EDB}) &= 60^\circ \\ \Rightarrow m(\widehat{ACE}) &= \alpha = ? \end{aligned}$$

- A) 5 B) 10 C) 15 D) 20 E) 25

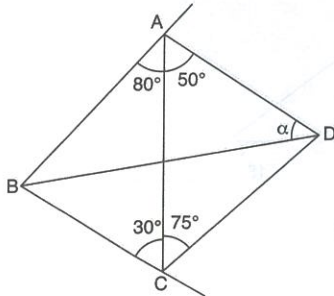
10.



$$\begin{aligned} m(\widehat{EBD}) &= m(\widehat{DBC}) \\ m(\widehat{BCD}) &= m(\widehat{DCK}) \\ m(\widehat{BDA}) &= 15^\circ \\ m(\widehat{ADC}) &= 30^\circ \\ \Rightarrow m(\widehat{DAK}) &= \alpha = ? \end{aligned}$$

- A) 35 B) 40 C) 45 D) 50 E) 55

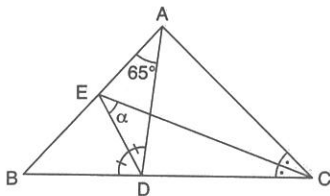
11.



$$\begin{aligned} m(\widehat{BAC}) &= 80^\circ \\ m(\widehat{CAD}) &= 50^\circ \\ m(\widehat{BCA}) &= 30^\circ \\ m(\widehat{ACD}) &= 75^\circ \\ \Rightarrow m(\widehat{ADB}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 15 C) 30 D) 40 E) 50

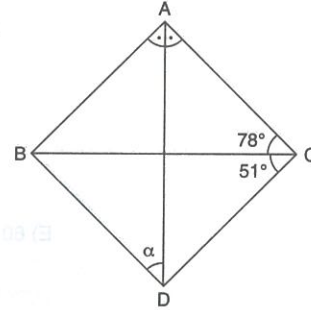
12.



$$\begin{aligned} m(\widehat{ACE}) &= m(\widehat{ECB}) \\ m(\widehat{ADE}) &= m(\widehat{EDB}) \\ m(\widehat{BAD}) &= 65^\circ \\ \Rightarrow m(\widehat{DEC}) &= \alpha = ? \end{aligned}$$

- A) 130 B) 65 C) 50 D) 25 E) 20

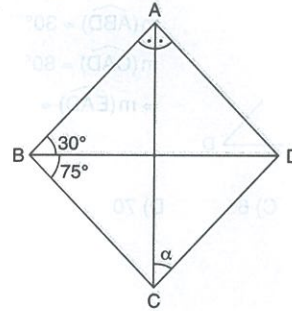
13.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{BCA}) &= 78^\circ \\ m(\widehat{BCD}) &= 51^\circ \\ \Rightarrow m(\widehat{BDA}) &= \alpha = ? \end{aligned}$$

- A) 28 B) 39 C) 56 D) 78 E) 90

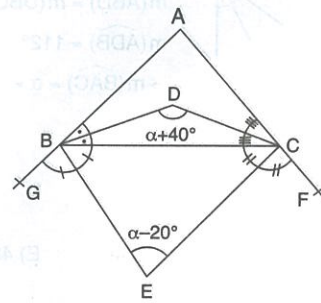
14.



$$\begin{aligned} m(\widehat{BAC}) &= m(\widehat{CAD}) \\ m(\widehat{ABD}) &= 30^\circ \\ m(\widehat{DBC}) &= 75^\circ \\ \Rightarrow m(\widehat{ACD}) &= \alpha = ? \end{aligned}$$

- A) 150 B) 75 C) 60 D) 30 E) 15

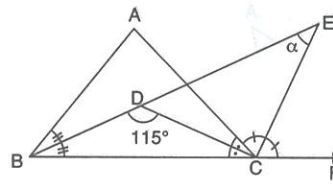
15.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ m(\widehat{CBE}) &= m(\widehat{EBG}) \\ m(\widehat{BCE}) &= m(\widehat{ECF}) \\ m(\widehat{BDC}) &= \alpha + 40^\circ \\ m(\widehat{BEC}) &= \alpha - 20^\circ \\ \Rightarrow m(\widehat{GAF}) &= ? \end{aligned}$$

- A) 30 B) 45 C) 60 D) 80 E) 90

16.

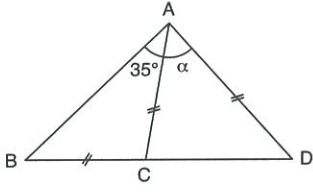


$$\begin{aligned} m(\widehat{BDC}) &= 115^\circ \\ m(\widehat{ABE}) &= m(\widehat{EBF}) \\ m(\widehat{BCD}) &= m(\widehat{DCA}) \\ m(\widehat{ACE}) &= m(\widehat{ECF}) \\ \Rightarrow m(\widehat{BEC}) &= \alpha = ? \end{aligned}$$

- A) 15 B) 25 C) 30 D) 35 E) 40



1.



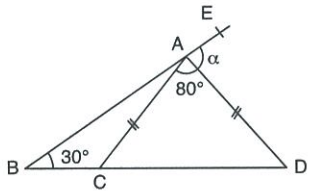
$$|BC| = |CA| = |AD|$$

$$m(\widehat{BAC}) = 35^\circ$$

$$\Rightarrow m(\widehat{CAD}) = \alpha = ?$$

- A) 40 B) 45 C) 50 D) 55 E) 60

2.



$$|CA| = |AD|$$

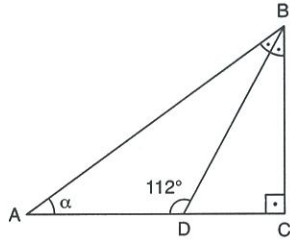
$$m(\widehat{ABD}) = 30^\circ$$

$$m(\widehat{CAD}) = 80^\circ$$

$$\Rightarrow m(\widehat{EAD}) = \alpha = ?$$

- A) 55 B) 60 C) 65 D) 70 E) 80

3.



$$[BC] \perp [AC]$$

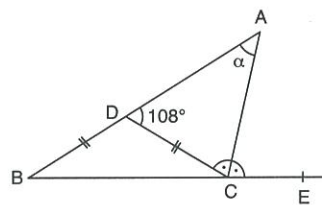
$$m(\widehat{ABD}) = m(\widehat{DBC})$$

$$m(\widehat{ADB}) = 112^\circ$$

$$\Rightarrow m(\widehat{BAC}) = \alpha = ?$$

- A) 30 B) 38 C) 42 D) 46 E) 48

4.



$$|BD| = |DC|$$

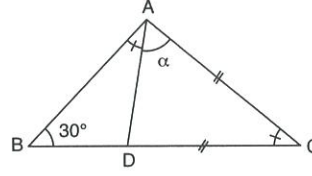
$$m(\widehat{ADC}) = 108^\circ$$

$$m(\widehat{DCA}) = m(\widehat{ACE})$$

$$\Rightarrow m(\widehat{BAC}) = \alpha = ?$$

- A) 9 B) 18 C) 19 D) 20 E) 24

5.



$$|AC| = |DC|$$

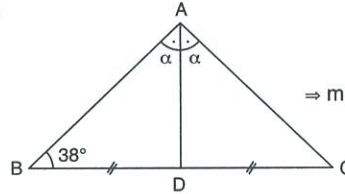
$$m(\widehat{ABC}) = 30^\circ$$

$$m(\widehat{BAD}) = m(\widehat{BCA})$$

$$\Rightarrow m(\widehat{DAC}) = \alpha = ?$$

- A) 110 B) 100 C) 80 D) 70 E) 60

6.



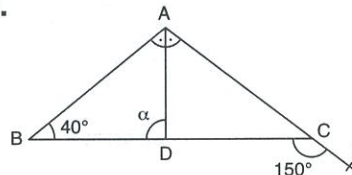
$$|BD| = |DC|$$

$$m(\widehat{ABC}) = 38^\circ$$

$$\Rightarrow m(\widehat{BAD}) = m(\widehat{DAC}) = \alpha = ?$$

- A) 32 B) 48 C) 46 D) 52 E) 90

7.



$$m(\widehat{ABC}) = 40^\circ$$

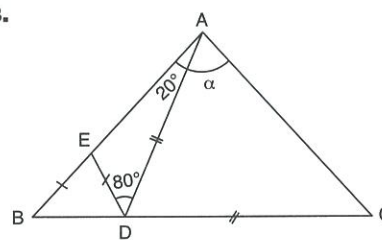
$$m(\widehat{BCE}) = 150^\circ$$

$$m(\widehat{BAD}) = m(\widehat{DAE})$$

$$\Rightarrow m(\widehat{BDA}) = \alpha = ?$$

- A) 60 B) 70 C) 75 D) 80 E) 85

8.



$$|BE| = |ED|$$

$$|AD| = |DC|$$

$$m(\widehat{BAD}) = 20^\circ$$

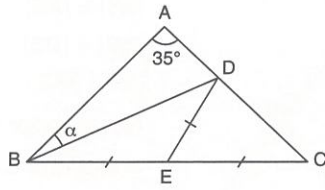
$$m(\widehat{EDA}) = 80^\circ$$

$$\Rightarrow m(\widehat{DAC}) = \alpha = ?$$

- A) 30 B) 40 C) 50 D) 60 E) 70



9.



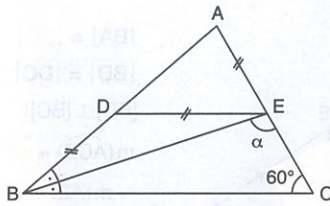
$$|DE| = |BE| = |EC|$$

$$m(\widehat{BAC}) = 35^\circ$$

$$\Rightarrow m(\widehat{ABD}) = \alpha = ?$$

- A) 40 B) 45 C) 50 D) 55 E) 60

10.



$$|DE| = |AE| = |BD|$$

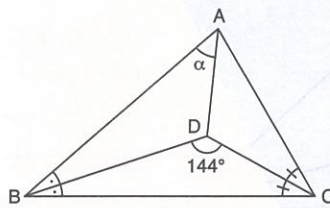
$$m(\widehat{ABE}) = m(\widehat{EBC})$$

$$m(\widehat{BCA}) = 60^\circ$$

$$\Rightarrow m(\widehat{BEC}) = \alpha = ?$$

- A) 90 B) 80 C) 70 D) 60 E) 50

11.



$$m(\widehat{BDC}) = 144^\circ$$

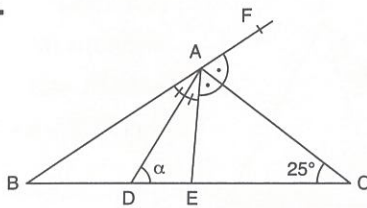
$$m(\widehat{ABD}) = m(\widehat{DBC})$$

$$m(\widehat{BCD}) = m(\widehat{DCA})$$

$$\Rightarrow m(\widehat{BAD}) = \alpha = ?$$

- A) 48 B) 52 C) 54 D) 60 E) 62

12.



$$m(\widehat{ACB}) = 25^\circ$$

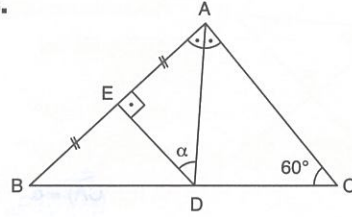
$$m(\widehat{BAD}) = m(\widehat{DAE})$$

$$m(\widehat{FAC}) = m(\widehat{CAE})$$

$$\Rightarrow m(\widehat{ADC}) = \alpha = ?$$

- A) 35 B) 45 C) 50 D) 55 E) 65

13.



$$|AE| = |EB|$$

$$[DE] \perp [AB]$$

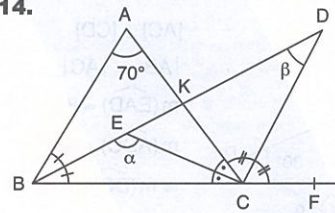
$$m(\widehat{BCA}) = 60^\circ$$

$$m(\widehat{BAD}) = m(\widehat{DAC})$$

$$\Rightarrow m(\widehat{EDA}) = \alpha = ?$$

- A) 60 B) 55 C) 50 D) 45 E) 40

14.



$$[BE], [CE], [CD] \text{ açkırtay}$$

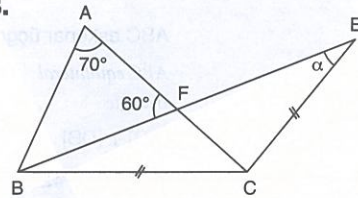
$$[BE], [CE], [CD] \text{ açkırtay}$$

$$m(\widehat{BAC}) = 70^\circ$$

$$\Rightarrow \alpha + \beta = ?$$

- A) 180 B) 175 C) 170 D) 165 E) 160

15.



$$|AB| = |AC|$$

$$|BC| = |CE|$$

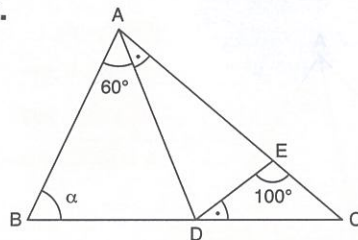
$$m(\widehat{BAC}) = 70^\circ$$

$$m(\widehat{BFA}) = 60^\circ$$

$$\Rightarrow m(\widehat{BEC}) = \alpha = ?$$

- A) 5 B) 10 C) 15 D) 20 E) 25

16.



$$m(\widehat{BAD}) = 60^\circ$$

$$m(\widehat{DEC}) = 100^\circ$$

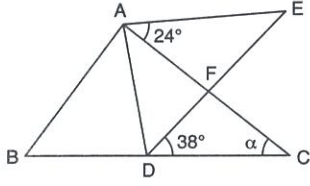
$$m(\widehat{DAC}) = m(\widehat{EDC})$$

$$\Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 30 B) 40 C) 50 D) 60 E) 70



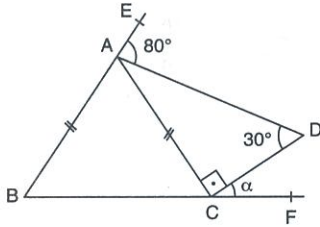
1.



ADE eşkenar üçgen
ADE equilateral
triangle
 $m(\widehat{CAE}) = 24^\circ$
 $m(\widehat{EDC}) = 38^\circ$
 $\Rightarrow m(\widehat{BCA}) = \alpha = ?$

- A) 40 B) 46 C) 48 D) 50 E) 52

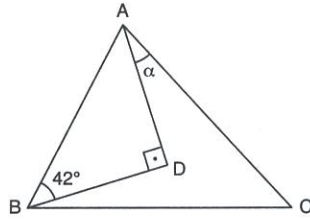
2.



$[AC] \perp [CD]$
 $|AB| = |AC|$
 $m(\widehat{EAD}) = 80^\circ$
 $m(\widehat{ADC}) = 30^\circ$
 $\Rightarrow m(\widehat{DCF}) = \alpha = ?$

- A) 20 B) 25 C) 30 D) 35 E) 40

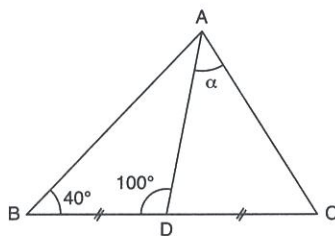
3.



ABC eşkenar üçgen
ABC equilateral
triangle
 $[AD] \perp [DB]$
 $m(\widehat{ABD}) = 42^\circ$
 $\Rightarrow m(\widehat{DAC}) = \alpha = ?$

- A) 12 B) 16 C) 18 D) 20 E) 22

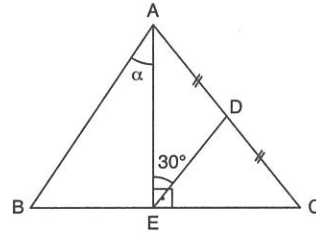
4.



$|BD| = |DC|$
 $m(\widehat{ABC}) = 40^\circ$
 $m(\widehat{ADB}) = 100^\circ$
 $\Rightarrow m(\widehat{DAC}) = \alpha = ?$

- A) 35 B) 50 C) 55 D) 60 E) 70

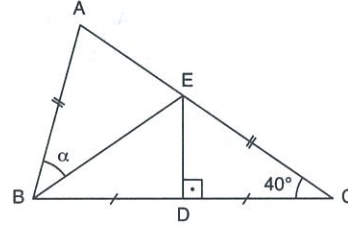
5.



$|AB| = |AC|$
 $|AD| = |DC|$
 $[AE] \perp [BC]$
 $m(\widehat{AED}) = 30^\circ$
 $\Rightarrow m(\widehat{BAE}) = \alpha = ?$

- A) 25 B) 30 C) 35 D) 40 E) 45

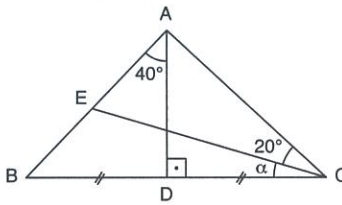
6.



$|BA| = |EC|$
 $|BD| = |DC|$
 $[ED] \perp [BC]$
 $m(\widehat{ACB}) = 40^\circ$
 $\Rightarrow m(\widehat{ABE}) = \alpha = ?$

- A) 20 B) 30 C) 40 D) 50 E) 60

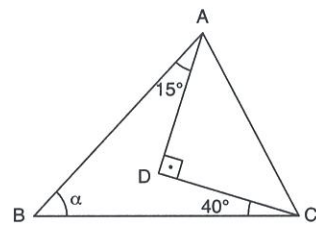
7.



$|BD| = |DC|$
 $[AD] \perp [BC]$
 $m(\widehat{ACE}) = 20^\circ$
 $m(\widehat{BAD}) = 40^\circ$
 $\Rightarrow m(\widehat{ECB}) = \alpha = ?$

- A) 10 B) 15 C) 20 D) 25 E) 30

8.

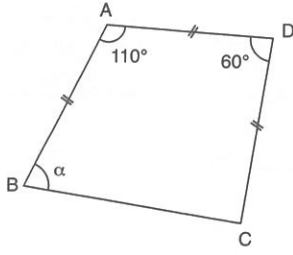


$[AD] \perp [DC]$
 $m(\widehat{BAD}) = 15^\circ$
 $m(\widehat{DCB}) = 40^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 30 B) 35 C) 40 D) 45 E) 60



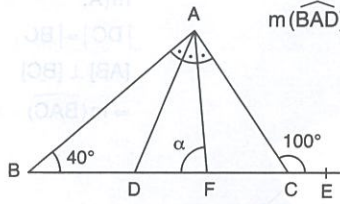
9.



$$\begin{aligned} |BA| &= |AD| = |DC| \\ m(\widehat{ADC}) &= 60^\circ \\ m(\widehat{BAD}) &= 110^\circ \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 45 B) 50 C) 55 D) 60 E) 65

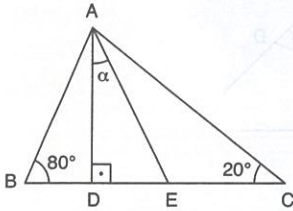
10.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAF}) = m(\widehat{FAC}) \\ m(\widehat{ABE}) &= 40^\circ \\ m(\widehat{ACE}) &= 100^\circ \\ \Rightarrow m(\widehat{AFB}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 60 D) 80 E) 100

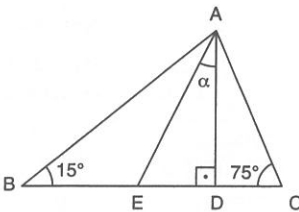
11.



$$\begin{aligned} [AD] &\perp [BC] \\ m(\widehat{ACB}) &= 20^\circ \\ m(\widehat{ABC}) &= 80^\circ \\ m(\widehat{BAE}) &= m(\widehat{EAC}) \\ \Rightarrow m(\widehat{DAE}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 25 C) 30 D) 40 E) 50

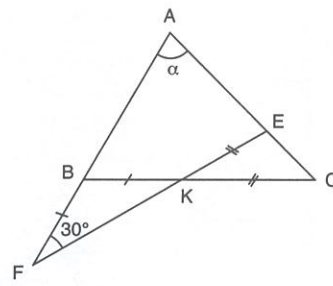
12.



$$\begin{aligned} [AD] &\perp [BC] \\ m(\widehat{ABC}) &= 15^\circ \\ m(\widehat{ACB}) &= 75^\circ \\ m(\widehat{BAE}) &= m(\widehat{EAC}) \\ \Rightarrow m(\widehat{EAD}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 35 C) 40 D) 45 E) 50

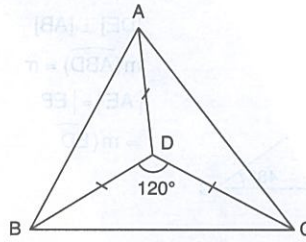
13.



$$\begin{aligned} |KE| &= |KC| \\ |BK| &= |BF| \\ m(\widehat{AFE}) &= 30^\circ \\ \Rightarrow m(\widehat{FAC}) &= \alpha = ? \end{aligned}$$

- A) 45 B) 50 C) 55 D) 60 E) 65

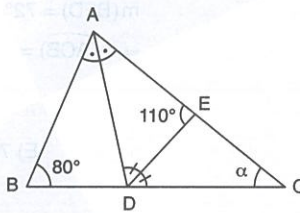
14.



$$\begin{aligned} |AD| &= |BD| = |CD| \\ m(\widehat{BDC}) &= 120^\circ \\ \Rightarrow m(\widehat{BAC}) &= ? \end{aligned}$$

- A) 40 B) 60 C) 80 D) 90 E) 100

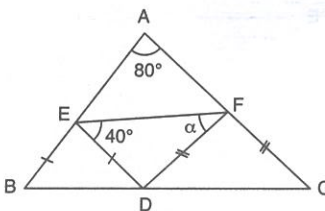
15.



$$\begin{aligned} [AD] \text{ ve } [DE] &\text{ aırtortay} \\ [AD] \text{ and } [DE] &\text{ aırtortay} \\ m(\widehat{ABC}) &= 80^\circ \\ m(\widehat{AED}) &= 110^\circ \\ \Rightarrow m(\widehat{ACB}) &= \alpha = ? \end{aligned}$$

- A) 60 B) 55 C) 50 D) 45 E) 40

16.

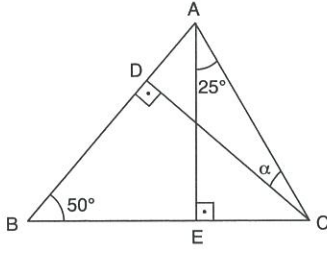


$$\begin{aligned} |BE| &= |ED| \\ |DF| &= |FC| \\ m(\widehat{BAC}) &= 80^\circ \\ m(\widehat{FED}) &= 40^\circ \\ \Rightarrow m(\widehat{EFD}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 60 D) 70 E) 80



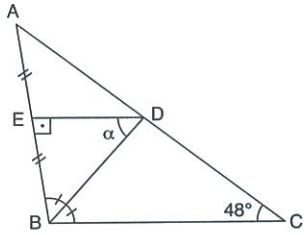
1.



$$\begin{aligned} m(\widehat{EAC}) &= 25^\circ \\ m(\widehat{ABC}) &= 50^\circ \\ [BA] &\perp [DC] \\ [AE] &\perp [BC] \\ \Rightarrow m(\widehat{ACD}) &= \alpha = ? \end{aligned}$$

- A) 25 B) 30 C) 35 D) 40 E) 45

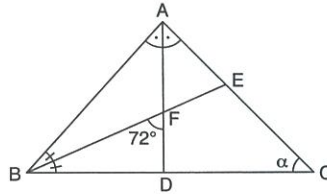
2.



$$\begin{aligned} m(\widehat{ACB}) &= 48^\circ \\ [DE] &\perp [AB] \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ [AE] &= [EB] \\ \Rightarrow m(\widehat{EDB}) &= \alpha = ? \end{aligned}$$

- A) 44 B) 46 C) 48 D) 52 E) 56

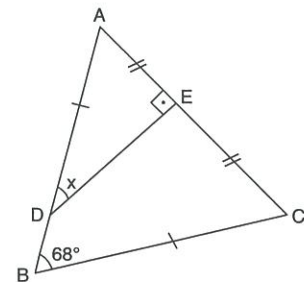
3.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ m(\widehat{BFD}) &= 72^\circ \\ \Rightarrow m(\widehat{ACB}) &= \alpha = ? \end{aligned}$$

- A) 32 B) 36 C) 46 D) 72 E) 78

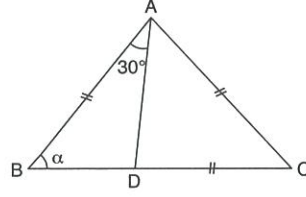
4.



$$\begin{aligned} m(\widehat{ABC}) &= 68^\circ \\ [DE] &\perp [AC] \\ [AE] &= [EC] \\ [AD] &= [BC] \\ \Rightarrow m(\widehat{ADE}) &= x = ? \end{aligned}$$

- A) 44 B) 46 C) 56 D) 66 E) 68

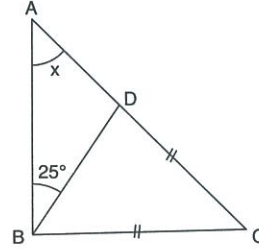
5.



$$\begin{aligned} m(\widehat{BAD}) &= 30^\circ \\ |AC| &= |DC| = |AB| \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 40 C) 60 D) 70 E) 80

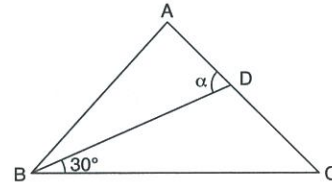
6.



$$\begin{aligned} m(\widehat{ABD}) &= 25^\circ \\ |DC| &= |BC| \\ [AB] &\perp [BC] \\ \Rightarrow m(\widehat{BAC}) &= x = ? \end{aligned}$$

- A) 25 B) 30 C) 35 D) 40 E) 45

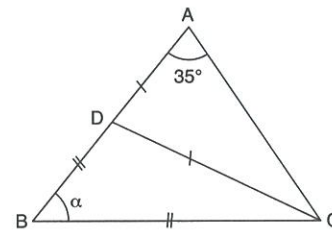
7.



$$\begin{aligned} m(\widehat{DBC}) &= 30^\circ \\ |AB| &= |AC| \\ |AD| &= |BD| \\ \Rightarrow m(\widehat{ADB}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 70 C) 90 D) 100 E) 110

8.

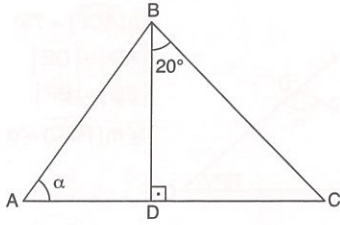


$$\begin{aligned} m(\widehat{BAC}) &= 35^\circ \\ |AD| &= |DC| \\ |BD| &= |BC| \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 40 C) 60 D) 80 E) 100



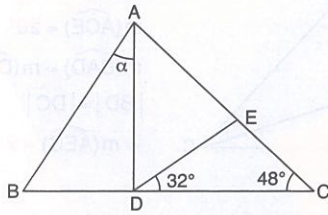
9.



$$\begin{aligned} m(\widehat{DBC}) &= 20^\circ \\ [BD] &\perp [AC] \\ |AB| &= |AC| \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 40 C) 50 D) 60 E) 70

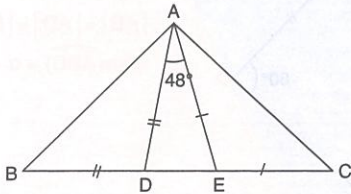
10.



$$\begin{aligned} m(\widehat{EDC}) &= 32^\circ \\ m(\widehat{ACB}) &= 48^\circ \\ |AE| &= |AD| = |AB| \\ \Rightarrow m(\widehat{BAD}) &= \alpha = ? \end{aligned}$$

- A) 44 B) 46 C) 54 D) 64 E) 68

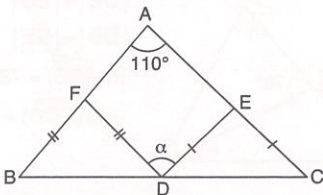
11.



$$\begin{aligned} m(\widehat{DAE}) &= 48^\circ \\ |AD| &= |BD| \\ |AE| &= |EC| \\ \Rightarrow m(\widehat{BAC}) &= ? \end{aligned}$$

- A) 64 B) 66 C) 104 D) 114 E) 124

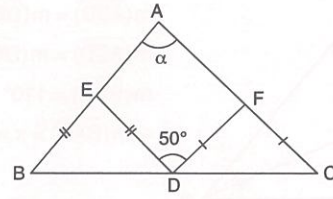
12.



$$\begin{aligned} m(\widehat{BAC}) &= 110^\circ \\ |BF| &= |FD| \\ |DE| &= |EC| \\ \Rightarrow m(\widehat{FDE}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 70 C) 110 D) 120 E) 130

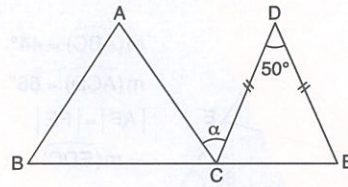
13.



$$\begin{aligned} m(\widehat{EDF}) &= 50^\circ \\ |BE| &= |ED| \\ |DF| &= |FC| \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 80 D) 100 E) 130

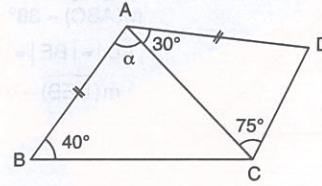
14.



$$\begin{aligned} ABC &\text{ eşkenar üçgen} \\ ABC &\text{ equilateral triangle} \\ m(\widehat{CDE}) &= 50^\circ \\ |DC| &= |DE| \\ \Rightarrow m(\widehat{ACD}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 55 C) 60 D) 65 E) 70

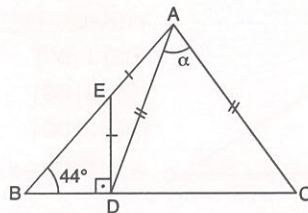
15.



$$\begin{aligned} |AB| &= |AD| \\ m(\widehat{ABC}) &= 40^\circ \\ m(\widehat{CAD}) &= 30^\circ \\ m(\widehat{ACD}) &= 75^\circ \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 80 B) 95 C) 100 D) 110 E) 120

16.

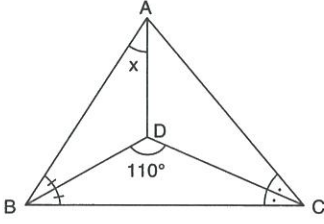


$$\begin{aligned} m(\widehat{ABC}) &= 44^\circ \\ |AE| &= |ED| \\ |AD| &= |AC| \\ [ED] &\perp [BC] \\ \Rightarrow m(\widehat{DAC}) &= \alpha = ? \end{aligned}$$

- A) 23 B) 44 C) 46 D) 48 E) 56



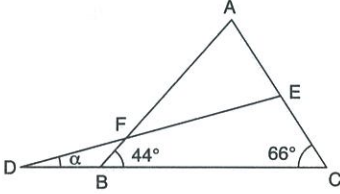
1.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ m(\widehat{BDC}) &= 110^\circ \\ \Rightarrow m(\widehat{BAD}) &= x = ? \end{aligned}$$

- A) 20 B) $\frac{55}{2}$ C) 40 D) 55 E) 70

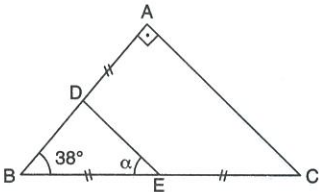
2.



$$\begin{aligned} m(\widehat{ABC}) &= 44^\circ \\ m(\widehat{ACD}) &= 66^\circ \\ |AF| &= |FE| \\ \Rightarrow m(\widehat{EDC}) &= \alpha = ? \end{aligned}$$

- A) 4 B) 8 C) 12 D) 16 E) 20

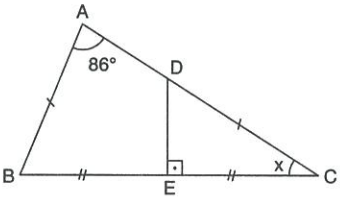
3.



$$\begin{aligned} [AB] &\perp [AC] \\ m(\widehat{ABC}) &= 38^\circ \\ |AD| &= |BE| = |EC| \\ \Rightarrow m(\widehat{DEB}) &= \alpha = ? \end{aligned}$$

- A) 23 B) 28 C) 33 D) 38 E) 43

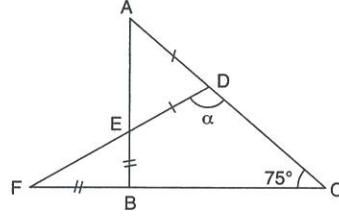
4.



$$\begin{aligned} m(\widehat{BAC}) &= 86^\circ \\ [DE] &\perp [BC] \\ |BE| &= |EC| \\ |AB| &= |DC| \\ \Rightarrow m(\widehat{DCE}) &= x = ? \end{aligned}$$

- A) 43 B) 46 C) 56 D) 66 E) 68

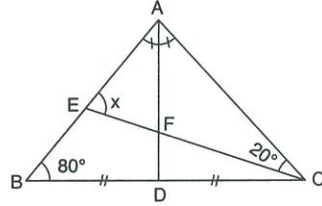
5.



$$\begin{aligned} m(\widehat{ACF}) &= 75^\circ \\ |AD| &= |DE| \\ |EB| &= |BF| \\ \Rightarrow m(\widehat{FDC}) &= \alpha = ? \end{aligned}$$

- A) 65 B) 70 C) 75 D) 80 E) 85

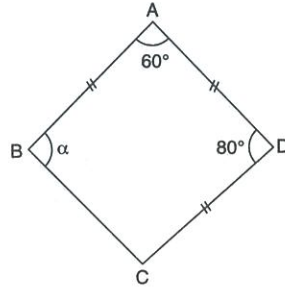
6.



$$\begin{aligned} m(\widehat{ABC}) &= 80^\circ \\ m(\widehat{ACE}) &= 20^\circ \\ m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |BD| &= |DC| \\ \Rightarrow m(\widehat{AEC}) &= x = ? \end{aligned}$$

- A) 90 B) 100 C) 110 D) 120 E) 140

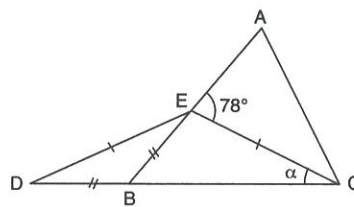
7.



$$\begin{aligned} m(\widehat{BAD}) &= 60^\circ \\ m(\widehat{ADC}) &= 80^\circ \\ |AB| &= |AD| = |DC| \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 60 B) 80 C) 100 D) 130 E) 140

8.

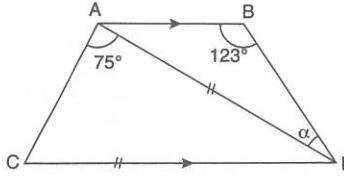


$$\begin{aligned} |DE| &= |EC| \\ |DB| &= |BE| \\ m(\widehat{AEC}) &= 78^\circ \\ \Rightarrow m(\widehat{ECD}) &= \alpha = ? \end{aligned}$$

- A) 22 B) 24 C) 26 D) 28 E) 30



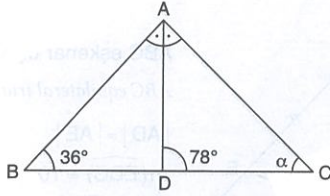
9.



$[AB] \parallel [CD]$
 $m(\widehat{ABD}) = 123^\circ$
 $m(\widehat{CAD}) = 75^\circ$
 $|AD| = |CD|$
 $\Rightarrow m(\widehat{BDA}) = \alpha = ?$

- A) 27 B) 30 C) 33 D) 37 E) 40

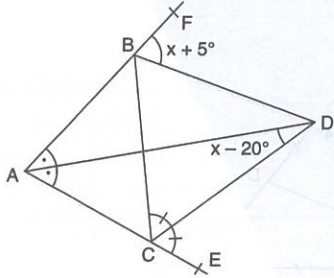
10.



$m(\widehat{ABC}) = 36^\circ$
 $m(\widehat{ADC}) = 78^\circ$
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $\Rightarrow m(\widehat{ACB}) = \alpha = ?$

- A) 36 B) 40 C) 48 D) 60 E) 68

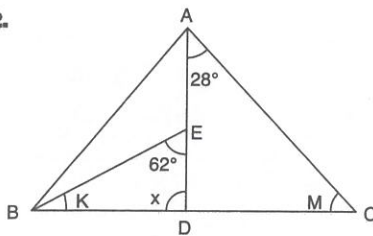
11.



$m(\widehat{DBF}) = x + 5^\circ$
 $m(\widehat{ADC}) = x - 20^\circ$
 $m(\widehat{FAD}) = m(\widehat{DAE})$
 $m(\widehat{BCD}) = m(\widehat{DCE})$
 $\Rightarrow m(\widehat{CBD}) = ?$

- A) 47,5 B) 50 C) 52,5 D) 55 E) 57,5

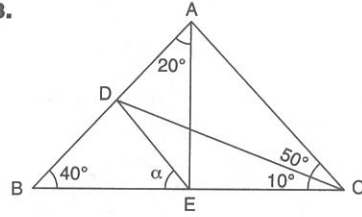
12.



$m(\widehat{DAC}) = 28^\circ$
 $m(\widehat{BED}) = 62^\circ$
 $m(\widehat{EBC}) = K$
 $m(\widehat{ACB}) = M$
 $K - M = 16^\circ$
 $\Rightarrow m(\widehat{ADB}) = x = ?$

- A) 27 B) 37 C) 45 D) 65 E) 68

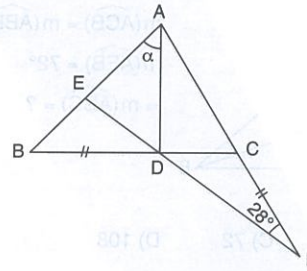
13.



$m(\widehat{BAE}) = 20^\circ$
 $m(\widehat{ABC}) = 40^\circ$
 $m(\widehat{ACD}) = 50^\circ$
 $m(\widehat{DCB}) = 10^\circ$
 $\Rightarrow m(\widehat{DEB}) = \alpha = ?$

- A) 20 B) 30 C) 40 D) 50 E) 60

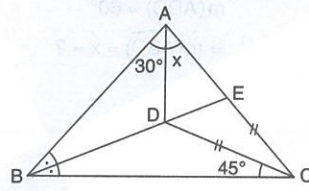
14.



ABC eşkenar üçgen
 ABC equilateral triangle
 $m(\widehat{AFE}) = 28^\circ$
 $|BD| = |CF|$
 $\Rightarrow m(\widehat{BAD}) = \alpha = ?$

- A) 28 B) 32 C) 38 D) 40 E) 48

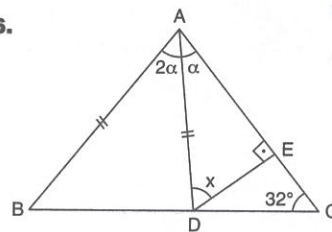
15.



$m(\widehat{BAD}) = 30^\circ$
 $m(\widehat{DCB}) = 45^\circ$
 $|EC| = |DC|$
 $m(\widehat{ABE}) = m(\widehat{EBC})$
 $\Rightarrow m(\widehat{DAE}) = x = ?$

- A) 5 B) 10 C) 15 D) 20 E) 25

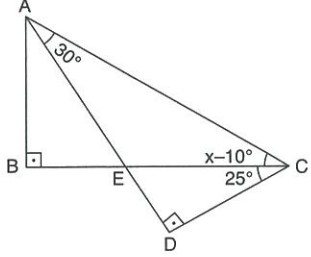
16.



$m(\widehat{BAD}) = 2 \cdot m(\widehat{DAC})$
 $|AB| = |AD|$
 $[DE] \perp [AC]$
 $m(\widehat{ACB}) = 32^\circ$
 $\Rightarrow m(\widehat{ADE}) = x = ?$

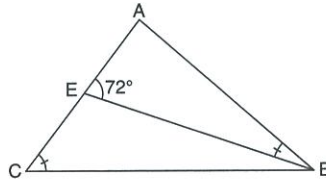
- A) 32 B) 37 C) 61 D) 60 E) 66



1. 

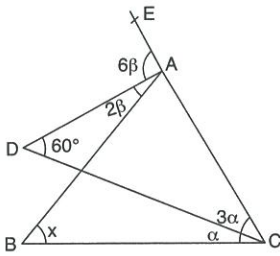
$m(\widehat{DAC}) = 30^\circ$
 $m(\widehat{ACB}) = x - 10^\circ$
 $m(\widehat{BCD}) = 25^\circ$
 $[AB] \perp [BC]$
 $[AD] \perp [DC]$
 $\Rightarrow x = ?$

A) 25 B) 35 C) 45 D) 50 E) 65

2. 

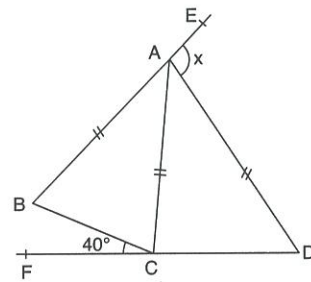
$m(\widehat{ACB}) = m(\widehat{ABE})$
 $m(\widehat{AEB}) = 72^\circ$
 $\Rightarrow m(\widehat{ABC}) = ?$

A) 18 B) 36 C) 72 D) 108 E) 144

3. 

$3m(\widehat{DAB}) = m(\widehat{DAE}) = 6\beta$
 $m(\widehat{ECD}) = 3m(\widehat{DCB}) = 3\alpha$
 $m(\widehat{ADC}) = 60^\circ$
 $\Rightarrow m(\widehat{ABC}) = x = ?$

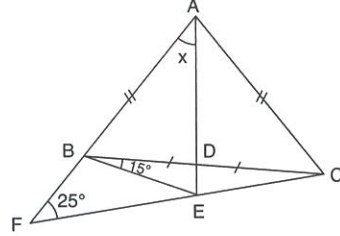
A) 70 B) 80 C) 90 D) 100 E) 110

4. 

$|AB| = |AC| = |AD|$
 $m(\widehat{BCF}) = 40^\circ$
 $\Rightarrow m(\widehat{EAD}) = x = ?$

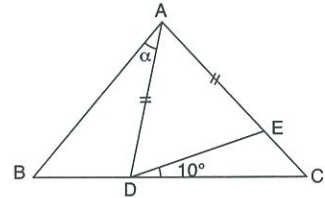
A) 40 B) 60 C) 80 D) 100 E) 120

PUZA YAYINLARI

5. 

$|AB| = |AC|$
 $|BD| = |DC|$
 $m(\widehat{AFC}) = 25^\circ$
 $m(\widehat{EBC}) = 15^\circ$
 $\Rightarrow m(\widehat{FAE}) = x = ?$

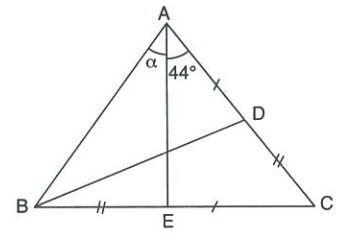
A) 15 B) 25 C) 40 D) 50 E) 60

6. 

ABC eşkenar üçgen
 ABC equilateral triangle
 $|AD| = |AE|$
 $m(\widehat{EDC}) = 10^\circ$
 $\Rightarrow m(\widehat{BAD}) = \alpha = ?$

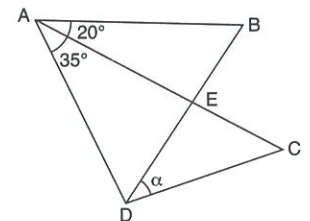
A) 20 B) 30 C) 40 D) 50 E) 60

PUZA YAYINLARI

7. 

$|AD| = |EC| = |AE|$
 $|DC| = |BE|$
 $m(\widehat{EAC}) = 44^\circ$
 $\Rightarrow m(\widehat{BAE}) = \alpha = ?$

A) 12 B) 22 C) 24 D) 28 E) 32

8. 

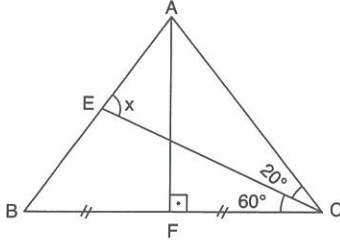
$|BD| = |AD| = |AC|$
 $m(\widehat{CAB}) = 20^\circ$
 $m(\widehat{CAD}) = 35^\circ$
 $\Rightarrow m(\widehat{BDC}) = \alpha = ?$

A) 2,5 B) 3 C) 4 D) 5 E) 7,5

PUZA YAYINLARI



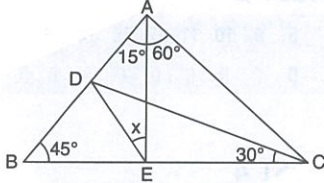
9.



$$\begin{aligned} [AF] &\perp [BC] \\ m(\widehat{ACE}) &= 20^\circ \\ m(\widehat{ECB}) &= 60^\circ \\ |BF| &= |FC| \\ \Rightarrow m(\widehat{AEC}) &= x = ? \end{aligned}$$

- A) 80 B) 100 C) 120 D) 140 E) 160

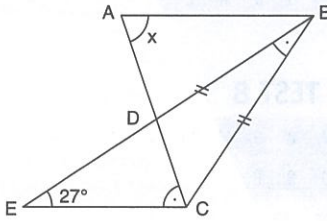
10.



$$\begin{aligned} m(\widehat{BAE}) &= 15^\circ \\ m(\widehat{EAC}) &= 60^\circ \\ m(\widehat{ABC}) &= 45^\circ \\ m(\widehat{DCB}) &= 30^\circ \\ \Rightarrow m(\widehat{DEA}) &= x = ? \end{aligned}$$

- A) 15 B) 20 C) 25 D) 30 E) 35

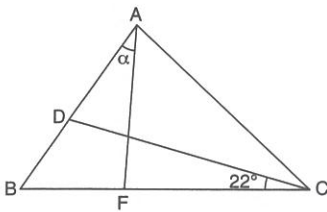
11.



$$\begin{aligned} |AB| &= |AC| \\ |BD| &= |BC| \\ m(\widehat{BEC}) &= 27^\circ \\ m(\widehat{EBC}) &= m(\widehat{ACE}) \\ \Rightarrow m(\widehat{BAC}) &= x = ? \end{aligned}$$

- A) 24 B) 25 C) 27 D) 31 E) 42

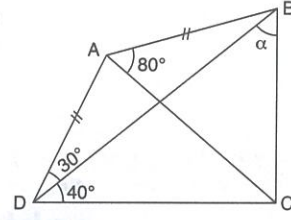
12.



$$\begin{aligned} m(\widehat{DCB}) &= 22^\circ \\ |AC| &= |AF| = |AD| \\ \Rightarrow m(\widehat{BAF}) &= \alpha = ? \end{aligned}$$

- A) 11 B) 22 C) 33 D) 44 E) 55

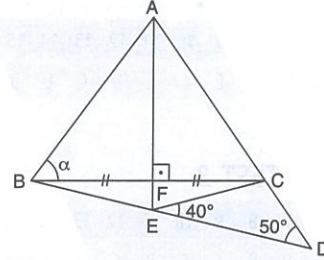
13.



$$\begin{aligned} |AB| &= |AD| \\ m(\widehat{BAC}) &= 80^\circ \\ m(\widehat{ADB}) &= 30^\circ \\ m(\widehat{BDC}) &= 40^\circ \\ \Rightarrow m(\widehat{DBC}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 30 C) 40 D) 50 E) 60

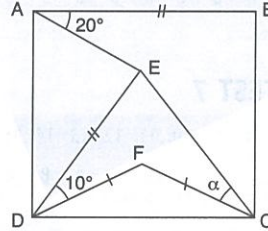
14.



$$\begin{aligned} |BF| &= |FC| \\ [AF] &\perp [BC] \\ m(\widehat{CED}) &= 40^\circ \\ m(\widehat{ADB}) &= 50^\circ \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 40 C) 50 D) 70 E) 80

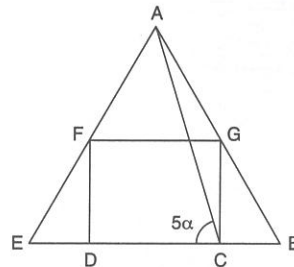
15.



$$\begin{aligned} ABCD &\text{ kare} \\ ABCD &\text{ square} \\ |DF| &= |FC| \\ |AB| &= |DE| \\ m(\widehat{BAE}) &= 20^\circ \\ m(\widehat{EDF}) &= 10^\circ \\ \Rightarrow m(\widehat{ECF}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 25 C) 40 D) 50 E) 80

16.



$$\begin{aligned} AEB &\text{ eşkenar üçgen} \\ AEB &\text{ equilateral triangle} \\ FGCD &\text{ kare} \\ FGCD &\text{ square} \\ m(\widehat{ACE}) &= \alpha \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 9 B) 10 C) 14 D) 15 E) 16



ÜÇGENDE AÇILAR

Yanıt Anahtarı

ANGLES OF TRIANGLE

Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	A	D	A	D	B	A	E	C	E	D	C	E	B	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	D	C	B	E	C	D	C	D	B	D	C	B	B	C

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	C	B	A	B	D	B	C	E	B	C	D	E	E	B

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	E	D	A	C	D	D	C	D	D	A	E	A	C	B

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	B	D	C	D	D	B	D	B	C	B	D	B	E	C	B

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	E	D	A	D	D	E	D	D	A	C	E	C	E	A	B

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	A	A	B	B	A	E	B	E	E	C	A	A	B	A	C

TEST 8

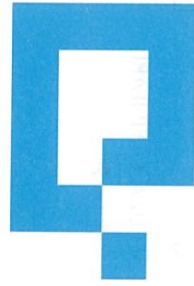
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	B	B	C	B	D	D	B	B	A	D	C	B	B	C	C

TEST 9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	A	C	A	B	E	E	C	A	D	E	D	C	B	C	C

TEST 10

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	B	D	D	A	C	A	D	A	E	D	A	D	B	D

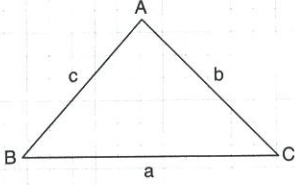


AÇI-KENAR BAĞINTILARI

ANGLE-SIDE RELATIONSHIPS



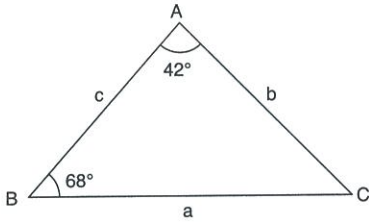
ÖZELLİK|Property 1



$$m(\widehat{A}) > m(\widehat{B}) > m(\widehat{C})$$

$$\Rightarrow a > b > c$$

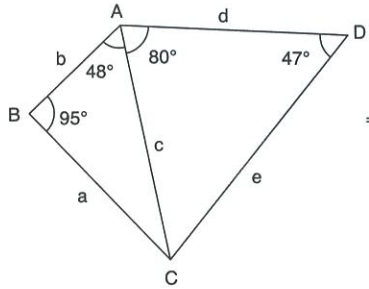
1.



$$\Rightarrow ? < ? < ?$$

$$a < b < c$$

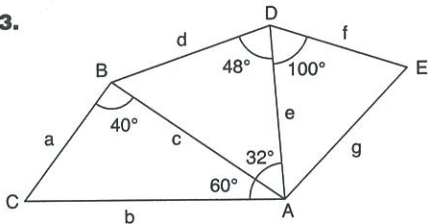
2.



$$\Rightarrow ? < ? < ? < ? < ?$$

$$b < a < c < d < e$$

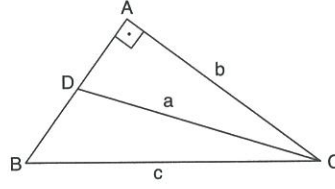
3.



En uzun kenar hangisidir?
Which side is the longest?

g

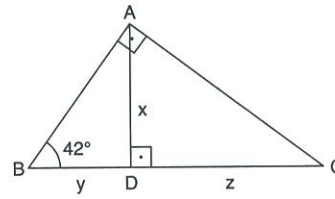
4.



$$\Rightarrow ? > ? > ?$$

$$c > a > b$$

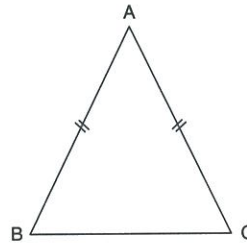
5.



$$\Rightarrow ? > ? > ?$$

$$y > x > z$$

6.



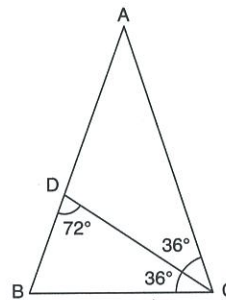
$$m(\widehat{B}) \in \mathbb{Z}$$

$$m(\widehat{A}) < 40^\circ$$

$$\Rightarrow \min(\widehat{B}) = ?$$

71

7.

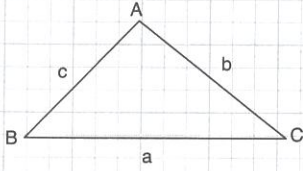


- I. $|AB| = |AC|$
 - II. $|AC| = |BC|$
 - III. $|BD| < |AD|$
 - IV. $|AC| > |BD|$
- Hangileri doğrudur?
Hangileri doğrudur?

I, III, IV

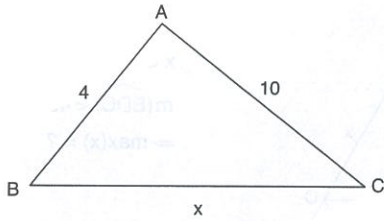


ÖZELLİK|Property 2



$$\begin{cases} |b-c| < a < b+c \\ |a-c| < b < a+c \\ |a-b| < c < a+b \end{cases}$$

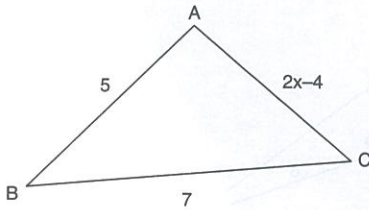
1.



$$\Rightarrow ? < x < ?$$

$$6 < x < 14$$

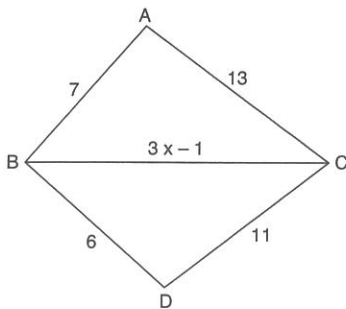
2.



$$\Rightarrow ? < x < ?$$

$$3 < x < 8$$

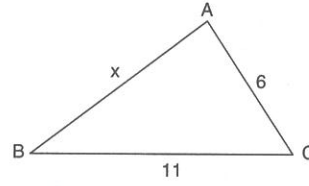
3.



$$\Rightarrow ? < x < ?$$

$$\frac{7}{3} < x < 6$$

4.



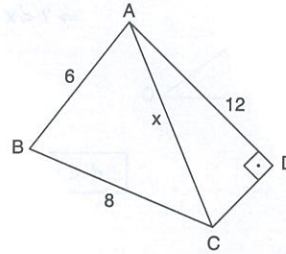
$$x \in \mathbb{N}^+$$

$$m(\widehat{A}) > m(\widehat{C}) > m(\widehat{B})$$

$$\Rightarrow \sum x = ?$$

34

5.

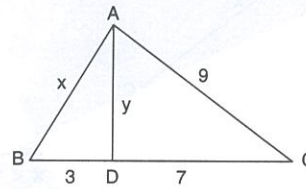


$$x \in \mathbb{N}^+$$

$$\Rightarrow x = ?$$

13

6.



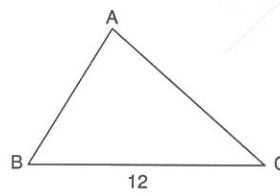
$$y, x \in \mathbb{N}^+$$

$$\min(y) \text{ için (for Min(y))}$$

$$\Rightarrow \max(x) = ?$$

5

7.



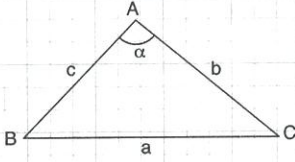
$$\angle(ABC) \in \mathbb{Z}$$

$$\Rightarrow \min(\angle(ABC)) = ?$$

25

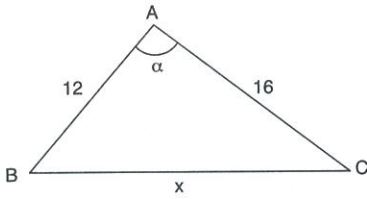


ÖZELLİK|Property 3



$$\begin{aligned}\alpha = 90^\circ &\Rightarrow a^2 = b^2 + c^2 \\ \alpha > 90^\circ &\Rightarrow a^2 > b^2 + c^2 \\ \alpha < 90^\circ &\Rightarrow a^2 < b^2 + c^2\end{aligned}$$

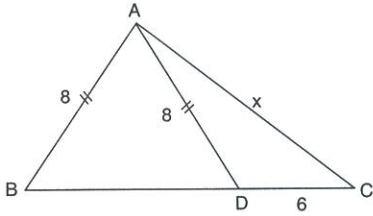
1.



$$\begin{aligned}\alpha < 90^\circ \\ \Rightarrow ? < x < ?\end{aligned}$$

$$4 < x < 20$$

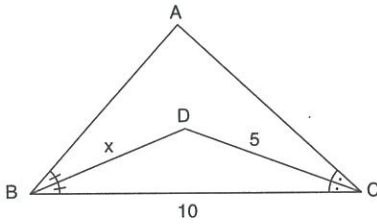
2.



$$\Rightarrow ? < x < ?$$

$$10 < x < 14$$

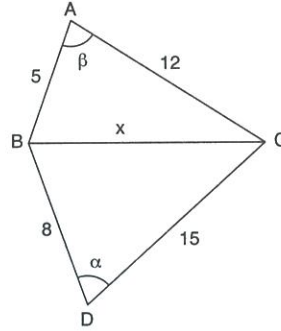
3.



$$\begin{aligned}x \in \mathbb{N} \\ \Rightarrow \max(x) = ?\end{aligned}$$

$$8$$

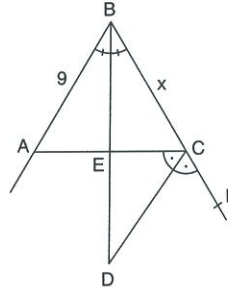
4.



$$\begin{aligned}x \in \mathbb{Z} \\ \alpha < 90^\circ \\ \beta < 90^\circ \\ \Rightarrow \sum x = ?\end{aligned}$$

$$50$$

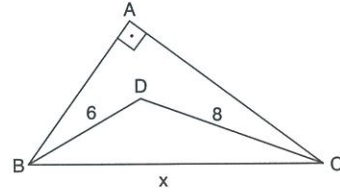
5.



$$\begin{aligned}x \in \mathbb{Z} \\ m(\widehat{BDC}) < 45^\circ \\ \Rightarrow \max(x) = ?\end{aligned}$$

$$8$$

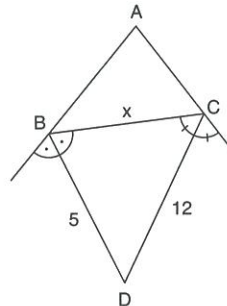
6.



$$\Rightarrow ? < x < ?$$

$$10 < x < 14$$

7.

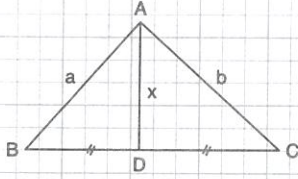


$$\begin{aligned}x \in \mathbb{Z} \\ \Rightarrow \max(x) + \min(x) = ?\end{aligned}$$

$$20$$

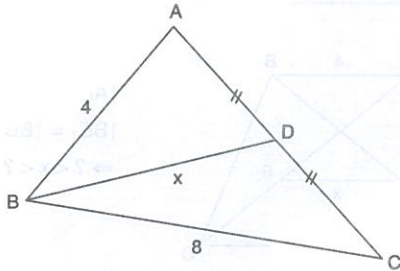


ÖZELLİK|Property 4



$$\frac{|a-b|}{2} < x < \frac{a+b}{2}$$

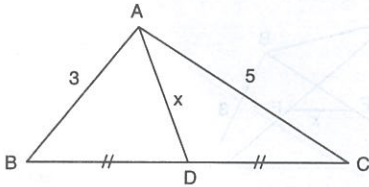
1.



$$\Rightarrow ? < x < ?$$

$$2 < x < 6$$

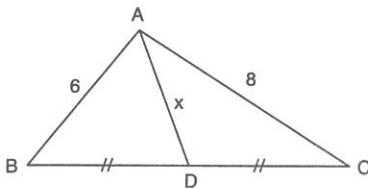
2.



$$\Rightarrow ? < x < ?$$

$$1 < x < 4$$

3.

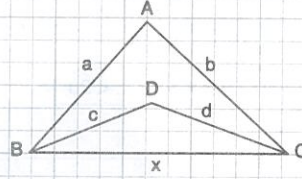


$$m(\hat{A}) > 90^\circ$$

$$\Rightarrow ? < x < ?$$

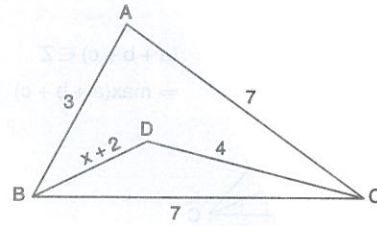
$$1 < x < 5$$

ÖZELLİK|Property 5



$$x < c + d < a + b$$

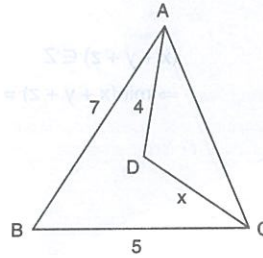
1.



$$\Rightarrow ? < x < ?$$

$$1 < x < 4$$

2.

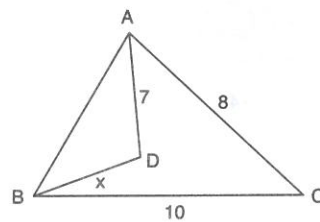


$$x \in \mathbb{Z}$$

$$\Rightarrow \max(x) = ?$$

$$7$$

3.



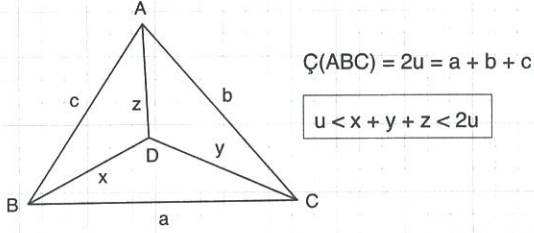
$$x \in \mathbb{Z}$$

$$\Rightarrow \max(x) = ?$$

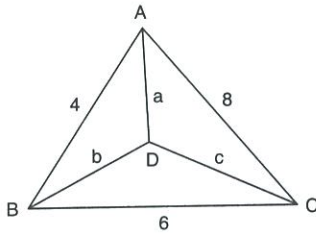
$$10$$



ÖZELLİK|Property 6



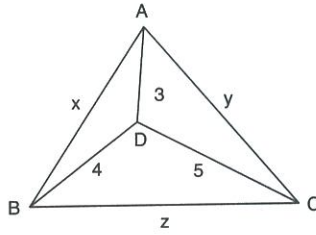
1.



$(a + b + c) \in \mathbb{Z}$
 $\Rightarrow \max(a + b + c) = ?$

17

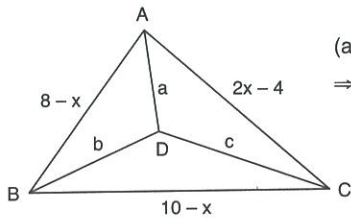
2.



$(x + y + z) \in \mathbb{Z}$
 $\Rightarrow \min(x + y + z) = ?$

13

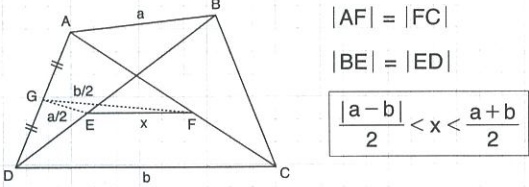
3.



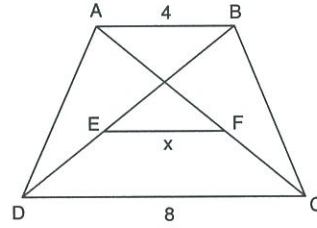
$(a + b + c) \in \mathbb{Z}$
 $\Rightarrow \max(a + b + c) = ?$

13

ÖZELLİK|Property 7



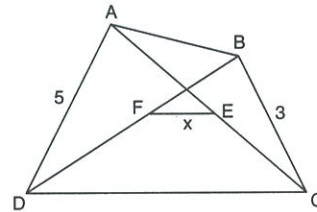
1.



$|AF| = |FC|$
 $|BE| = |ED|$
 $\Rightarrow ? < x < ?$

2 < x < 6

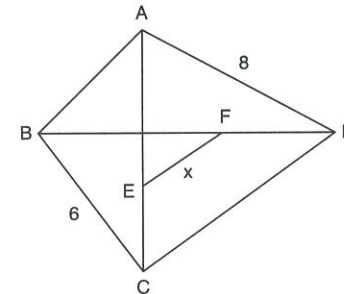
2.



$|AE| = |EC|$
 $|DF| = |FB|$
 $\Rightarrow ? < x < ?$

1 < x < 4

3.



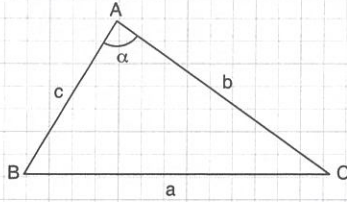
$|BF| = |FD|$
 $|AE| = |EC|$
 $\Rightarrow ? < x < ?$

1 < x < 7



ÖZELLİK|Property 8

Kosinüs Teoremi (Cosinus Theorem)



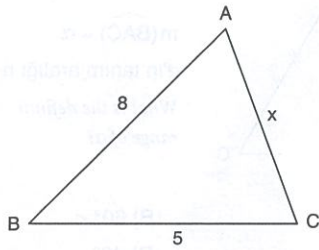
$$\cos 30^\circ = \frac{\sqrt{3}}{2}$$

$$\cos 60^\circ = \frac{1}{2}$$

$$\cos 45^\circ = \frac{\sqrt{2}}{2}$$

$$a^2 = b^2 + c^2 - 2bc \cdot \cos \alpha$$

1.

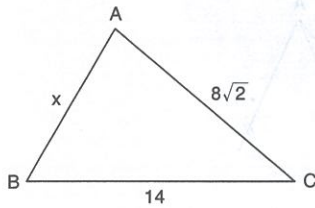


$$m(\widehat{B}) < 60^\circ$$

$$\Rightarrow ? < x < ?$$

$$3 < x < 7$$

2.



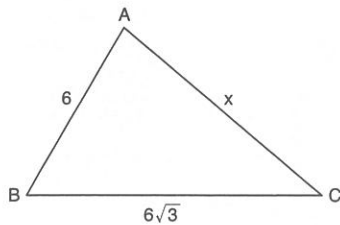
$$x \in \mathbb{Z}$$

$$m(\widehat{C}) > 45^\circ$$

$$\Rightarrow \min(x) = ?$$

$$11$$

3.



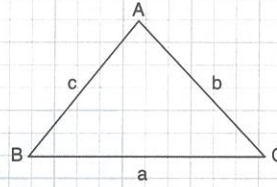
$$x \in \mathbb{Z}$$

$$m(\widehat{B}) > 30^\circ$$

$$\Rightarrow \min(x) = ?$$

$$7$$

ÖZELLİK|Property 9



$$m(\widehat{A}) > m(\widehat{B}) > m(\widehat{C})$$

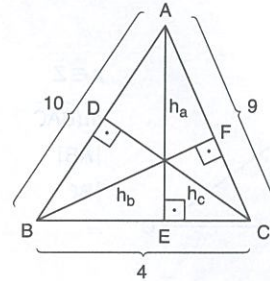
- 1) $a > b > c$
- 2) $h_a < h_b < h_c$
- 3) $n_A < n_B < n_C$
- 4) $V_a < V_b < V_c$

h: Yükseklik (height)

n: Açortay (bisector)

V: Kenarortay (median)

1.

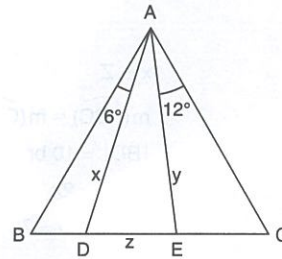


$$h_a, h_b, h_c$$

$$\Rightarrow ? > ? > ?$$

$$h_a > h_b > h_c$$

2.



ABC eşkenar üçgen

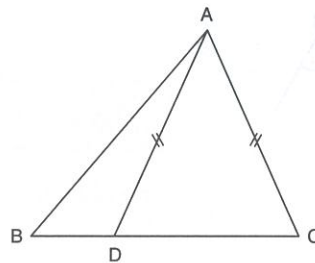
ABC equilateral triangle

$$V_x, V_y, V_z$$

$$\Rightarrow ? > ? > ?$$

$$V_z > V_y > V_x$$

3.



$$m(\widehat{DAC}) = 60^\circ$$

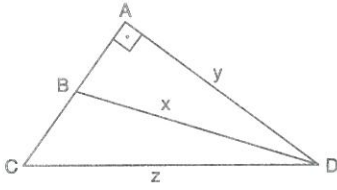
$$n_A, n_B, n_C$$

$$\Rightarrow ? > ? > ?$$

$$n_B > n_C > n_A$$



1.

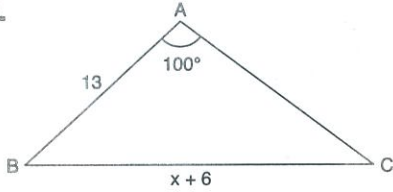


$$\begin{aligned} [CA] &\perp [AD] \\ |CD| &= z \\ |BD| &= x \\ |AD| &= y \end{aligned}$$

Aşağıdakilerden hangisi doğrudur?
Which one of the following is correct?

- A) $x > y > z$ B) $z > x > y$ C) $y > x > z$
D) $y > z > x$ E) $x > z > y$

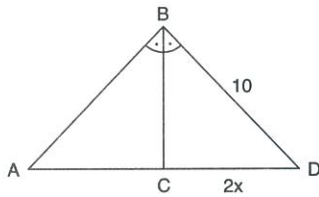
2.



$$\begin{aligned} x &\in \mathbb{Z} \\ m(\widehat{BAC}) &= 100^\circ \\ |AB| &= 13 \text{ br} \\ |BC| &= x + 6 \\ \Rightarrow \min(x) &= ? \end{aligned}$$

- A) 6 B) 7 C) 8 D) 9 E) 10

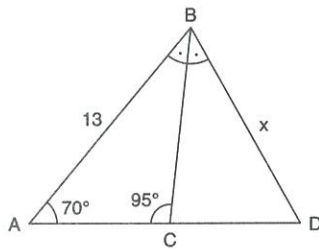
3.



$$\begin{aligned} x &\in \mathbb{Z} \\ m(\widehat{ABC}) &= m(\widehat{CBD}) \\ |BD| &= 10 \text{ br} \\ |CD| &= 2x \\ \Rightarrow \max(x) &= ? \end{aligned}$$

- A) 6 B) 5 C) 4 D) 3 E) 2

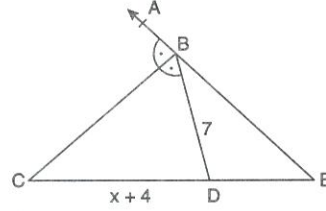
4.



$$\begin{aligned} x &\in \mathbb{Z} \\ m(\widehat{ABC}) &= m(\widehat{CBD}) \\ m(\widehat{BAD}) &= 70^\circ \\ m(\widehat{BCA}) &= 95^\circ \\ \Rightarrow \max(x) &= ? \end{aligned}$$

- A) 15 B) 14 C) 13 D) 12 E) 11

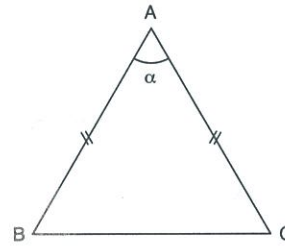
5.



$$\begin{aligned} x &\in \mathbb{Z} \\ m(\widehat{ABC}) &= m(\widehat{CBD}) \\ |BD| &= 7 \text{ br} \\ |CD| &= x + 4 \\ \Rightarrow \min(x) &= ? \end{aligned}$$

- A) 3 B) 4 C) 5 D) 6 E) 7

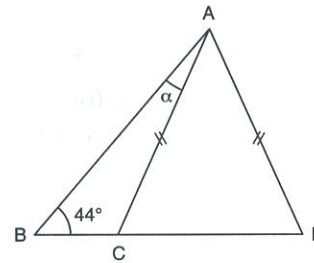
6.



$$\begin{aligned} |AB| &= |AC| \\ 20^\circ &< m(\widehat{B}) < 60^\circ \\ m(\widehat{BAC}) &= \alpha \\ \alpha\text{'in tanım aralığı nedir?} \\ \text{What is the definition} \\ \text{range of } \alpha? \end{aligned}$$

- A) $60^\circ < \alpha < 140^\circ$ B) $60^\circ < \alpha < 120^\circ$
C) $40^\circ < \alpha < 140^\circ$ D) $40^\circ < \alpha < 60^\circ$
E) $40^\circ < \alpha < 120^\circ$

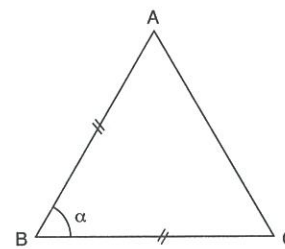
7.



$$\begin{aligned} \alpha &\in \mathbb{Z} \\ |AC| &= |AD| \\ m(\widehat{ABD}) &= 44^\circ \\ m(\widehat{BAC}) &= \alpha \\ \Rightarrow \max(\alpha) &= ? \end{aligned}$$

- A) 44 B) 45 C) 46 D) 47 E) 48

8.

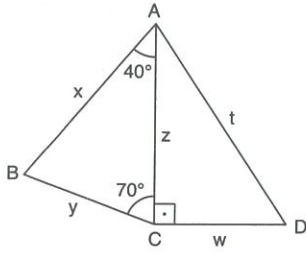


$$\begin{aligned} \alpha &\in \mathbb{Z} \\ |AB| &= |BC| \\ m(\widehat{A}) &> 50^\circ \\ m(\widehat{ABC}) &= \alpha \\ \Rightarrow \max(\alpha) &= ? \end{aligned}$$

- A) 80 B) 81 C) 77 D) 78 E) 79



9.



$$[AC] \perp [CD]$$

$$m(\widehat{BAC}) = 40^\circ$$

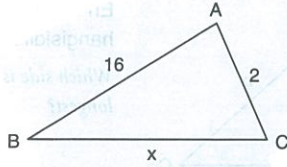
$$m(\widehat{BCA}) = 70^\circ$$

En uzun kenar hangisidir?

Which side is the longest?

- A) x B) y C) z D) t E) w

10.



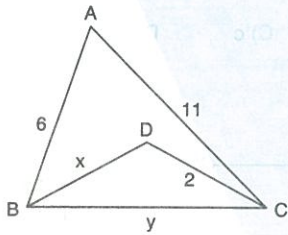
$$x \in \mathbb{Z}$$

$$m(\widehat{B}) < m(\widehat{A}) < m(\widehat{C})$$

$$\Rightarrow x = ?$$

- A) 13 B) 14 C) 15 D) 16 E) 17

11.



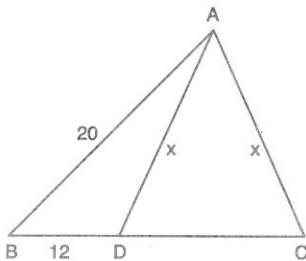
$$x, y \in \mathbb{Z}$$

$$\min(y) \text{ için } [for \min(y)]$$

$$\Rightarrow \max(x) = ?$$

- A) 3 B) 4 C) 5 D) 6 E) 7

12.



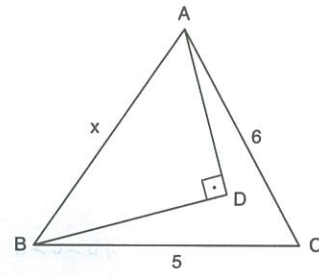
$$x \in \mathbb{Z}$$

$$|AC| = |AD| = x$$

$$\Rightarrow \max(x) = ?$$

- A) 17 B) 16 C) 15 D) 14 E) 13

13.



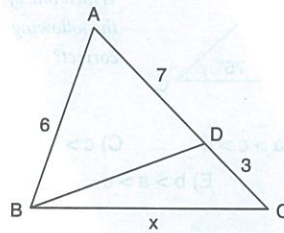
$$x \in \mathbb{Z}$$

$$[AD] \perp [BD]$$

$$\Rightarrow \max(x) = ?$$

- A) 7 B) 8 C) 9 D) 10 E) 11

14.

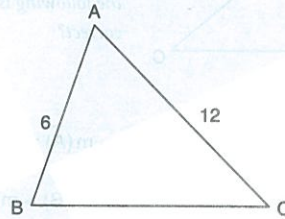


$$x \in \mathbb{Z}$$

$$\Rightarrow \max(x) = ?$$

- A) 15 B) 14 C) 13 D) 12 E) 11

15.

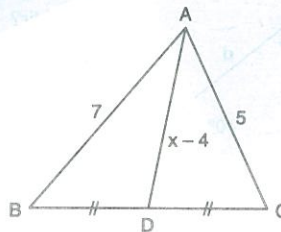


$$\angle(ABC) \in \mathbb{Z}$$

$$\Rightarrow \max[\angle(ABC)] = ?$$

- A) 37 B) 32 C) 34 D) 36 E) 35

16.



$$|BD| = |DC|$$

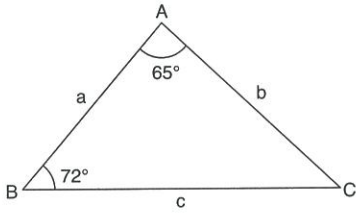
$$x \text{ 'in tanım aralığı nedir?}$$

What is the definition range of x?

- A) $5 < x < 8$ B) $10 < x < 12$ C) $6 < x < 16$
D) $5 < x < 10$ E) $6 < x < 10$



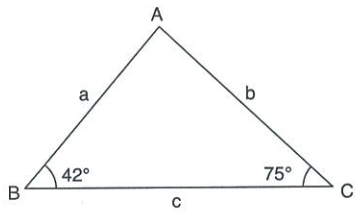
1.



- A) $a > b > c$ B) $b > a > c$ C) $b > c > a$
D) $c > b > a$ E) $a > c > b$

Aşağıdakilerden hangisi doğrudur?
Which one of the following is correct?

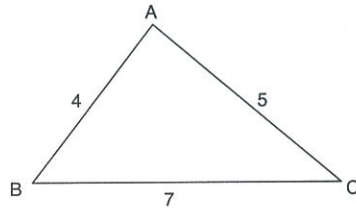
2.



- A) $c > a > b$ B) $a > c > b$ C) $c > b > a$
D) $a > b > c$ E) $b > a > c$

Aşağıdakilerden hangisi doğrudur?
Which one of the following is correct?

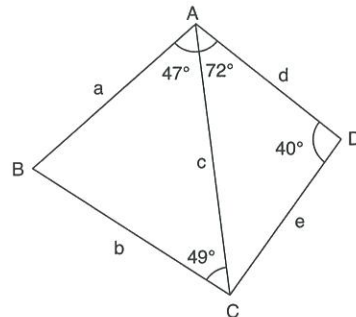
3.



- A) $m(\widehat{A}) > m(\widehat{C}) > m(\widehat{B})$ B) $m(\widehat{C}) > m(\widehat{A}) > m(\widehat{B})$
C) $m(\widehat{C}) > m(\widehat{B}) > m(\widehat{A})$ D) $m(\widehat{A}) > m(\widehat{B}) > m(\widehat{C})$
E) $m(\widehat{B}) > m(\widehat{A}) > m(\widehat{C})$

Aşağıdakilerden hangisi doğrudur?
Which one of the following is correct?

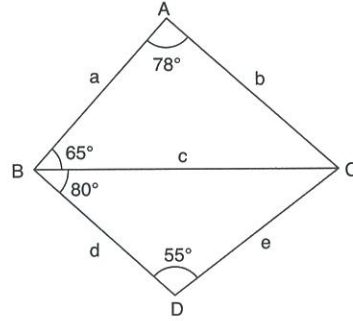
4.



- A) a B) b C) c D) d E) e

En kısa kenar hangisidir?
Which side is the shortest?

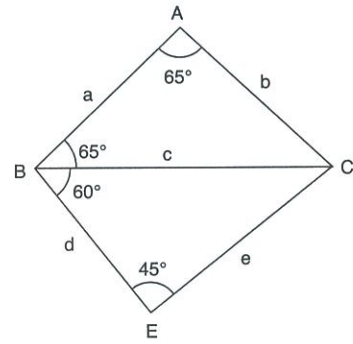
5.



- A) a B) b C) c D) d E) e

En uzun kenar hangisidir?
Which side is the longest?

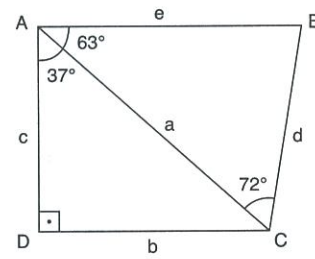
6.



- A) a B) b C) c D) d E) e

En uzun kenar hangisidir?
Which side is the longest?

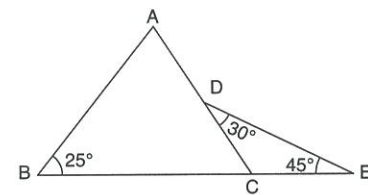
7.



- A) a B) b C) c D) d E) e

En kısa kenar hangisidir?
Which side is the shortest?

8.

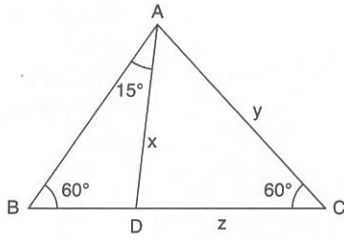


- A) [AB] B) [AC] C) [BC] D) [CE] E) [DE]

En kısa kenar hangisidir?
Which side is the shortest?



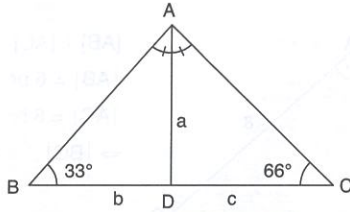
9.



Aşağıdakilerden hangisi doğrudur?
Which one of the following is correct?

- A) $x > y > z$ B) $y > x > z$ C) $z > y > x$
D) $y > z > x$ E) $z > x > y$

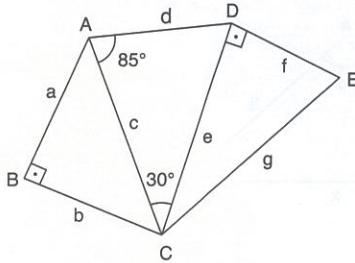
10.



Aşağıdakilerden hangisi doğrudur?
Which one of the following is correct?

- A) $a > b > c$ B) $a > c > b$ C) $b > a > c$
D) $b > c > a$ E) $c > a > b$

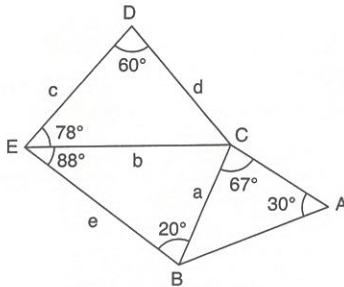
11.



En uzun kenar hangisidir?
Which side is the longest?

- A) c B) d C) e D) f E) g

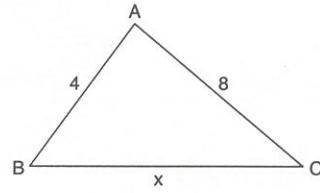
12.



En kısa kenar hangisidir?
Which side is the shortest?

- A) a B) b C) c D) d E) e

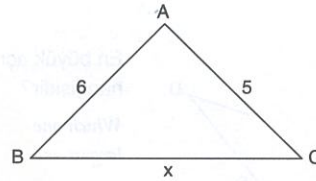
13.



x aşağıdakilerden hangisi olabilir?
Which one of the following can be rate of x?

- A) 1 B) 2 C) 4 D) 7 E) 12

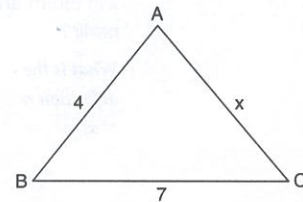
14.



x'in tanım aralığı nedir?
What is the definition range of x?

- A) $1 < x < 12$ B) $1 \leq x \leq 11$ C) $1 < x < 11$
D) $2 \leq x \leq 10$ E) $2 < x < 10$

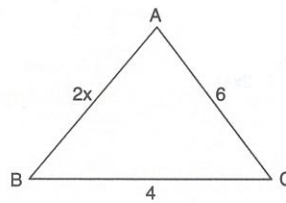
15.



$x \in \mathbb{Z}^+$
 $\Rightarrow \max(x) + \min(x) = ?$

- A) 16 B) 15 C) 14 D) 12 E) 10

16.

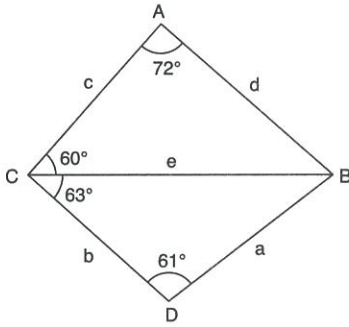


$x \in \mathbb{R}$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $2 < x < 10$ B) $2 \leq x \leq 10$ C) $1 < x < 5$
D) $2 < x < 5$ E) $1 < x < 10$



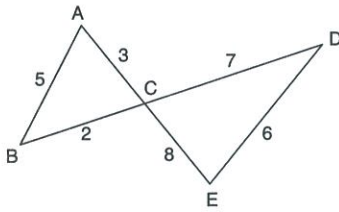
1.



En uzun kenar hangisidir?
Which side is the longest?

- A) a B) b C) c D) d E) e

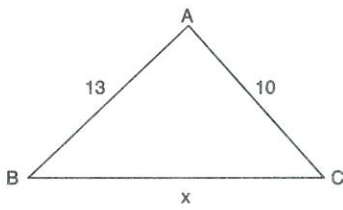
2.



En büyük açı hangisidir?
Which one is the largest angle?

- A) $m(\hat{A})$ B) $m(\hat{B})$ C) $m(\hat{C})$ D) $m(\hat{D})$ E) $m(\hat{E})$

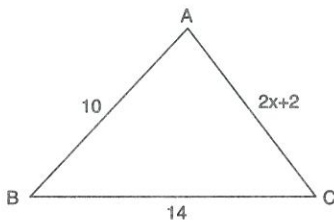
3.



x'in tanım aralığı nedir?
What is the definition range of x?

- A) $10 < x < 13$ B) $3 < x < 13$ C) $3 < x < 23$
D) $10 < x < 23$ E) $4 < x < 22$

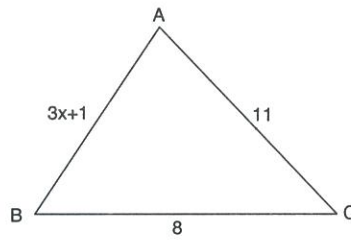
4.



x'in tanım aralığı nedir?
What is the definition range of x?

- A) $5 < x < 7$ B) $3 < x < 5$ C) $4 < x < 24$
D) $2 < x < 12$ E) $1 < x < 11$

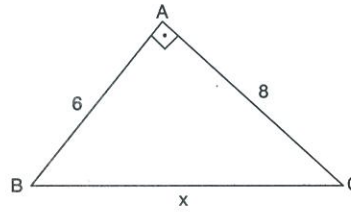
5.



x'in tanım aralığı nedir?
What is the definition range of x?

- A) $1 < x < \frac{20}{3}$ B) $\frac{2}{3} < x < 6$ C) $1 < x < 6$
D) $1 < x < \frac{19}{3}$ E) $3 < x < 19$

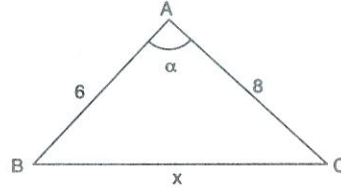
6.



$[AB] \perp [AC]$
 $|AB| = 6$ br
 $|AC| = 8$ br
 $\Rightarrow |BC| = x = ?$

- A) 6 B) 8 C) 10 D) 12 E) 14

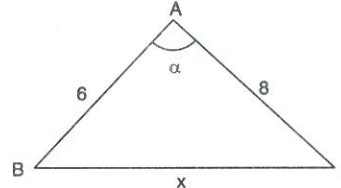
7.



$\alpha > 90^\circ$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $2 < x < 10$ B) $6 < x < 8$ C) $6 < x < 14$
D) $10 < x < 14$ E) $2 < x < 14$

8.

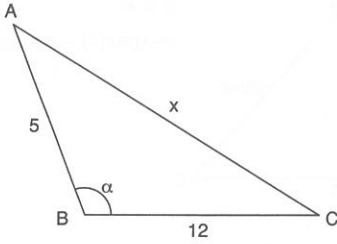


$\alpha < 90^\circ$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $2 < x < 10$ B) $6 < x < 8$ C) $6 < x < 14$
D) $10 < x < 14$ E) $2 < x < 14$



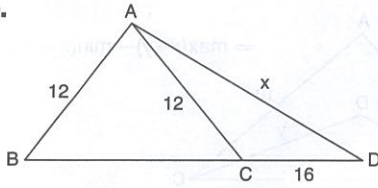
9.



$\alpha > 90^\circ$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $5 < x < 7$ B) $7 < x < 12$ C) $12 < x < 13$
D) $13 < x < 17$ E) $7 < x < 17$

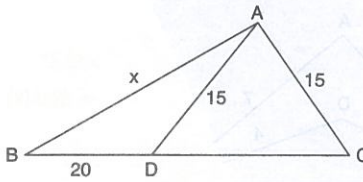
10.



$x \in \mathbb{Z}$
 $|AB| = 12$ br
 $|AC| = 12$ br
 $|CD| = 16$ br
 $|AD| = x$
 $\Rightarrow \min(x) = ?$

- A) 4 B) 12 C) 16 D) 20 E) 21

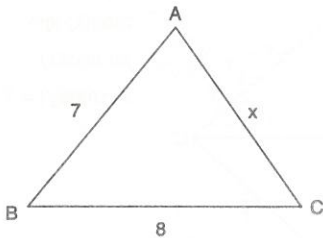
11.



$x \in \mathbb{Z}$
 $|AD| = 15$ br
 $|AC| = 15$ br
 $|BD| = 20$ br
 $|AB| = x$
 $\Rightarrow \min(x) = ?$

- A) 5 B) 15 C) 20 D) 25 E) 26

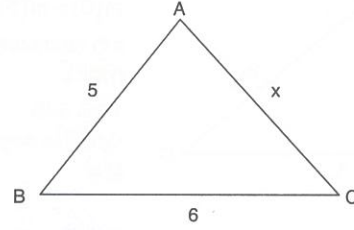
12.



$m(\widehat{B}) > m(\widehat{C})$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $1 < x < 7$ B) $1 < x < 8$ C) $7 < x < 15$
D) $8 < x < 15$ E) $1 < x < 15$

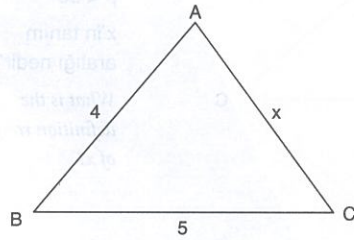
13.



$m(\widehat{A}) > m(\widehat{B})$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $1 < x < 5$ B) $1 < x < 6$ C) $5 < x < 11$
D) $6 < x < 11$ E) $1 < x < 11$

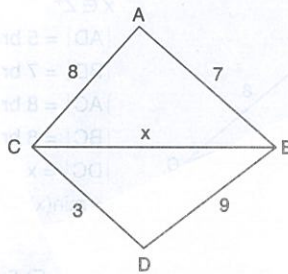
14.



$m(\widehat{A}) > m(\widehat{B})$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $4 < x < 9$ B) $5 \leq x \leq 9$ C) $4 < x < 5$
D) $1 < x < 5$ E) $1 < x < 9$

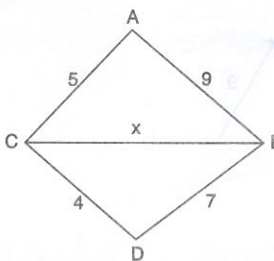
15.



x'in tanım aralığı nedir?
What is the definition range of x?

- A) $1 < x < 7$ B) $1 < x < 12$ C) $1 < x < 15$
D) $6 < x < 12$ E) $6 < x < 11$

16.

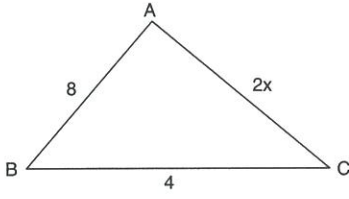


x'in tanım aralığı nedir?
What is the definition range of x?

- A) $9 < x < 11$ B) $7 < x < 11$ C) $3 < x < 11$
D) $5 < x < 14$ E) $4 < x < 11$



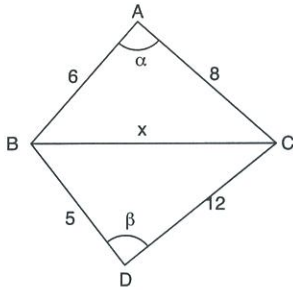
1.



$m(\widehat{C}) > m(\widehat{B})$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $2 < x < 4$ B) $2 < x < 8$ C) $4 < x < 6$
D) $4 < x < 8$ E) $6 < x < 8$

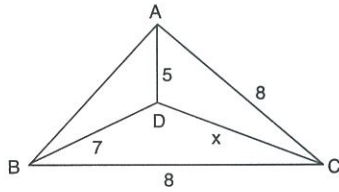
2.



$\alpha > 90^\circ$
 $\beta < 90^\circ$
x'in tanım aralığı nedir?
What is the definition range of x?

- A) $7 < x < 13$ B) $10 < x < 13$ C) $10 < x < 17$
D) $8 < x < 12$ E) $13 < x < 17$

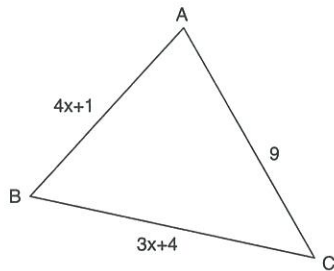
3.



$x \in \mathbb{Z}^+$
 $|AD| = 5$ br
 $|BD| = 7$ br
 $|AC| = 8$ br
 $|BC| = 8$ br
 $|DC| = x$
 $\Rightarrow \min(x) = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

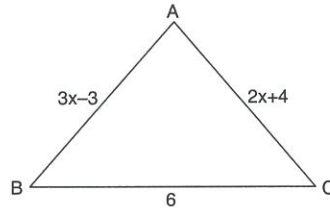
4.



x'in tanım aralığı nedir?
What is the definition range of x?

- A) $2 < x < 9$ B) $1 < x < 9$ C) $\frac{4}{7} < x < 9$
D) $\frac{4}{7} < x < 12$ E) $\frac{2}{7} < x < 12$

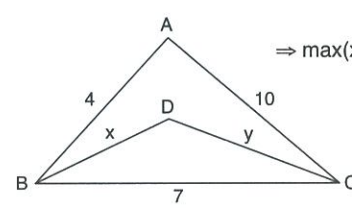
5.



$x \in \mathbb{Z}^+$
 $\Rightarrow \max(x) + \min(x) = ?$

- A) 12 B) 13 C) 14 D) 15 E) 16

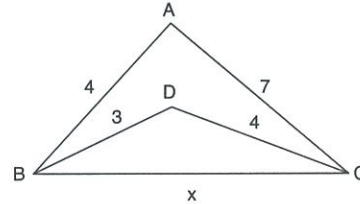
6.



$(x + y) \in \mathbb{Z}^+$
 $\Rightarrow \max(x+y) - \min(x+y) = ?$

- A) 4 B) 5 C) 6 D) 7 E) 8

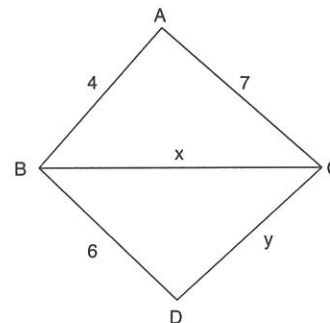
7.



$x \in \mathbb{Z}^+$
 $\Rightarrow \max(x) = ?$

- A) 10 B) 9 C) 8 D) 7 E) 6

8.

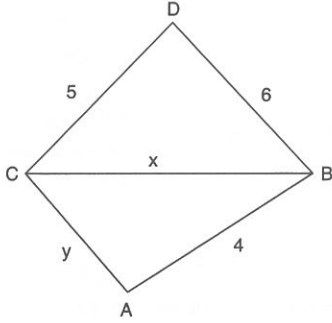


$x, y \in \mathbb{N}$
 $\max(x)$ için
 $\Rightarrow \max(y) = ?$

- A) 17 B) 16 C) 15 D) 14 E) 13



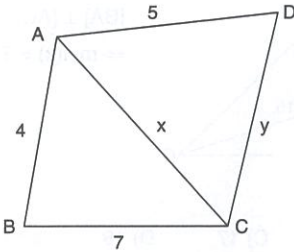
9.



$x, y \in \mathbb{N}$
 $\max(x)$ için
 for $\max(x)$
 $\Rightarrow \min(y) = ?$

- A) 6 B) 7 C) 8 D) 9 E) 10

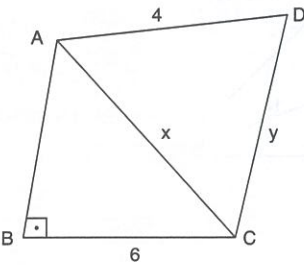
10.



$x, y \in \mathbb{N}$
 $\min(x)$ için
 for $\min(x)$
 $\Rightarrow \max(y) = ?$

- A) 9 B) 8 C) 7 D) 6 E) 5

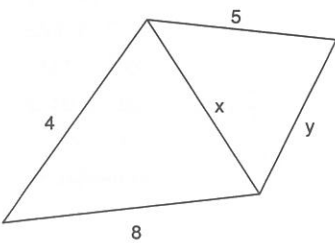
11.



$x, y \in \mathbb{Z}^+$
 $\min(x)$ için
 for $\min(x)$
 $\Rightarrow \max(y) = ?$

- A) 7 B) 8 C) 9 D) 10 E) 11

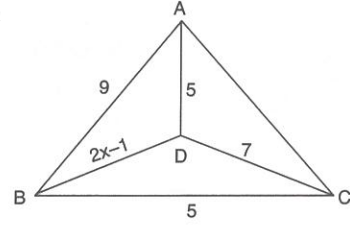
12.



$x \in \mathbb{R}, y \in \mathbb{N}$
 $\max(x)$ için
 for $\max(x)$
 $\Rightarrow \max(y) = ?$

- A) 16 B) 15 C) 14 D) 12 E) 11

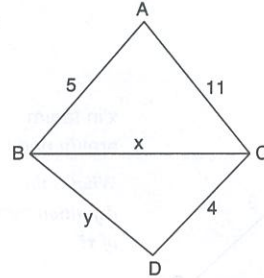
13.



$x \in \mathbb{Z}^+$
 $\Rightarrow \max(x) = ?$

- A) 4 B) 5 C) 6 D) 7 E) 8

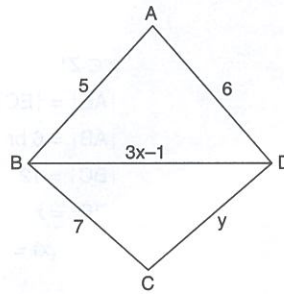
14.



$x \in \mathbb{R}, y \in \mathbb{N}$
 $\min(x)$ için
 for $\min(x)$
 $\Rightarrow \max(y) = ?$

- A) 7 B) 8 C) 9 D) 10 E) 11

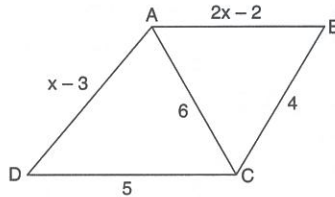
15.



$x, y \in \mathbb{Z}$
 $\max(x)$ için
 for $\max(x)$
 $\Rightarrow \max(y) = ?$

- A) 16 B) 15 C) 14 D) 13 E) 12

16.

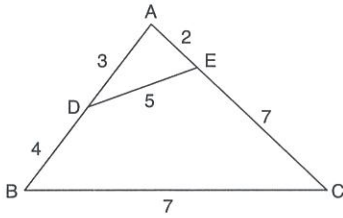


x 'in tanım aralığı
 nedir?
 What is the
 definition range
 of x ?

- A) $2 < x < 6$ B) $4 < x < 6$ C) $4 < x < 10$
 D) $4 < x < 9$ E) $2 < x < 10$



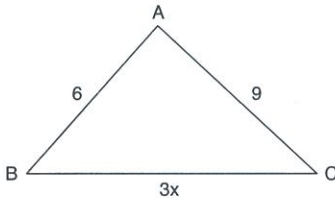
1.



En büyük açı hangisidir?
Which one is the largest angle?

- A) $m(\widehat{A})$ B) $m(\widehat{B})$ C) $m(\widehat{C})$ D) $m(\widehat{D})$ E) $m(\widehat{E})$

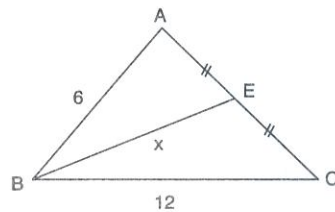
2.



x 'in tanım aralığı nedir?
What is the definition range of x ?

- A) $1 < x < 3$ B) $2 < x < 3$ C) $1 < x < 5$
D) $2 < x < 5$ E) $3 < x < 5$

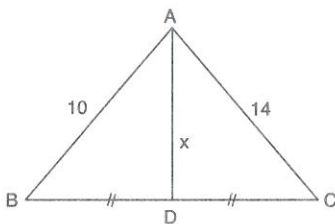
3.



$x \in \mathbb{Z}^+$
 $|AE| = |EC|$
 $|AB| = 6 \text{ br}$
 $|BC| = 12 \text{ br}$
 $|BE| = x$
 $\Rightarrow \min(x) = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

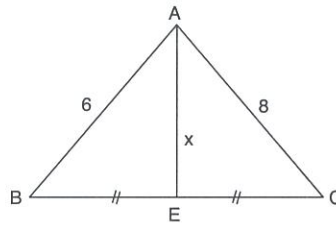
4.



$x \in \mathbb{Z}^+$
 $\Rightarrow \max(x) = ?$

- A) 6 B) 11 C) 12 D) 13 E) 23

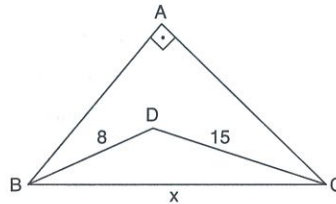
5.



$m(\widehat{A}) > 90^\circ$
 x 'in tanım aralığı nedir?
What is the definition range of x ?

- A) $1 < x < 5$ B) $1 < x < 7$ C) $2 < x < 10$
D) $5 < x < 7$ E) $10 < x < 14$

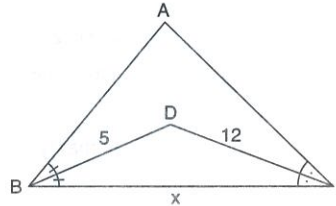
6.



$x \in \mathbb{Z}^+$
 $[BA] \perp [AC]$
 $\Rightarrow \min(x) = ?$

- A) 8 B) 9 C) 17 D) 18 E) 19

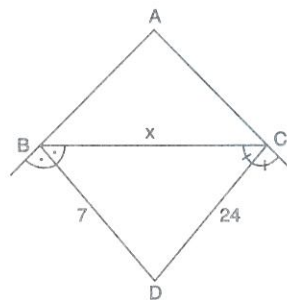
7.



$x \in \mathbb{Z}$
 $m(\widehat{ABD}) = m(\widehat{DBC})$
 $m(\widehat{ACD}) = m(\widehat{DCB})$
 $\Rightarrow \min(x) + \max(x) = ?$

- A) 30 B) 29 C) 27 D) 26 E) 25

8.

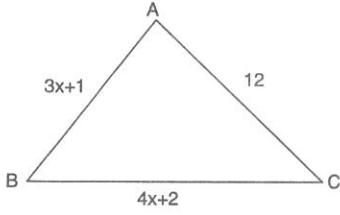


$x \in \mathbb{Z}$
 $[BD], [DC]$ açıortay
 $[BD], [DC]$ bisector
 $|BD| = 7 \text{ br}$
 $|DC| = 24 \text{ br}$
 $|BC| = x$
 $\Rightarrow \max(x) = ?$

- A) 22 B) 23 C) 24 D) 25 E) 26



9.



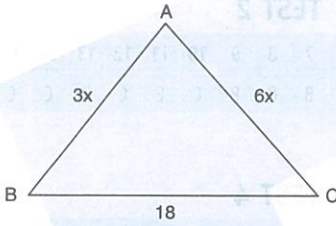
$$x \in \mathbb{Z}^+$$

Üçgenin çevresinin maksimum değeri kaç birimdir?

What is the maximum rate of perimeter of triangle?

- A) 83 B) 84 C) 85 D) 86 E) 87

10.



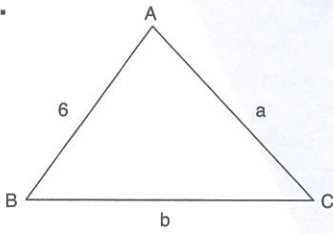
$$x \in \mathbb{Z}^+$$

Üçgenin çevresinin maksimum değeri kaç birimdir?

What is the maximum rate of perimeter of triangle?

- A) 67 B) 66 C) 65 D) 64 E) 63

11.



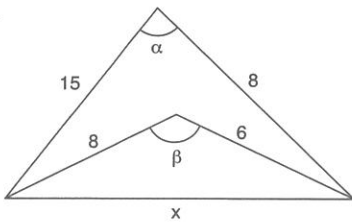
$$a, b \in \mathbb{Z}^+$$

$m(\widehat{A}) < m(\widehat{C}) < m(\widehat{B})$
Üçgenin çevresinin maksimum değeri kaç birimdir?

What is the maximum rate of perimeter of triangle?

- A) 19 B) 20 C) 21 D) 22 E) 23

12.



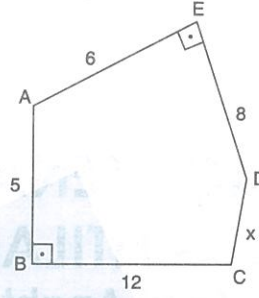
$$\alpha < 90^\circ < \beta$$

x'in tanım aralığı nedir?

What is the definition range of x?

- A) $8 < x < 15$ B) $10 < x < 15$ C) $10 < x < 17$
D) $10 < x < 14$ E) $17 < x < 23$

13.



$$x \in \mathbb{Z}^+$$

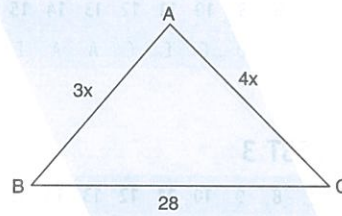
$$[AB] \perp [BC]$$

$$[AE] \perp [ED]$$

$$\Rightarrow \min(x) = ?$$

- A) 5 B) 4 C) 3 D) 2 E) 1

14.



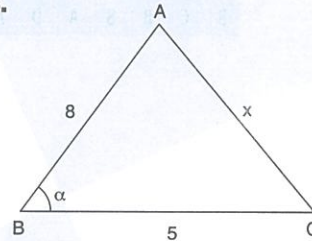
$$x \in \mathbb{Z}^+$$

$$m(\widehat{A}) > m(\widehat{B})$$

$$\Rightarrow \max(x) - \min(x) = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 7

15.



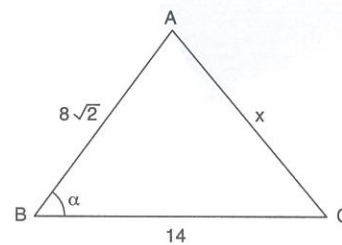
$$\alpha > 60^\circ$$

x'in tanım aralığı nedir?

What is the definition range of x?

- A) $3 < x < 7$ B) $6 < x < 13$ C) $3 < x < 13$
D) $7 < x < 13$ E) $7 < x < 12$

16.



$$x \in \mathbb{Z}^+$$

$$\alpha < 45^\circ$$

$$\Rightarrow \max(x) = ?$$

- A) 7 B) 8 C) 9 D) 10 E) 11



AÇI-KENAR BAĞINTILARI

ANGLE-SIDE RELATIONSHIPS

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	C	D	B	A	B	E	D	C	E	C	A	A	E	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	D	B	E	D	B	D	B	C	E	C	D	C	C	C

TEST 3

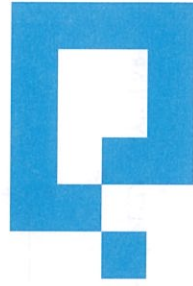
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	C	E	B	C	D	A	D	E	E	C	B	D	D	E

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	B	D	D	C	B	E	C	B	B	D	A	C	D	C	B

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	B	B	A	D	A	C	C	E	C	D	B	A	D	C

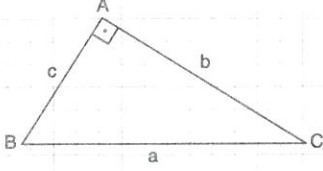


DİK ÜÇGEN

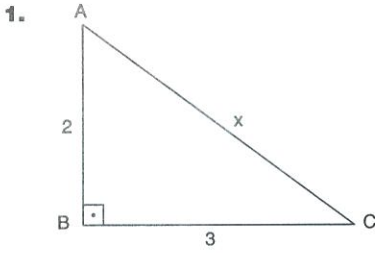
RIGHT TRIANGLES



ÖZELLİK|Property 1

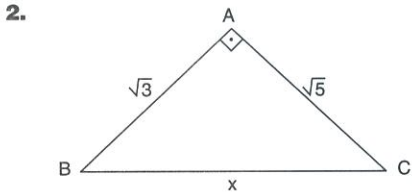


$$\Rightarrow a^2 = b^2 + c^2$$



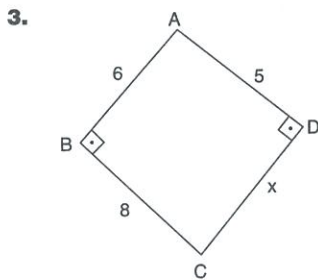
$$\Rightarrow x = ?$$

$$\sqrt{13}$$



$$\Rightarrow x = ?$$

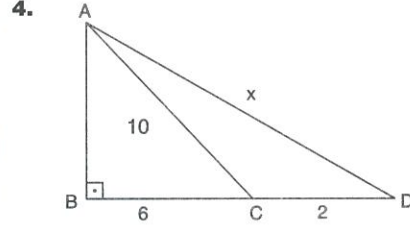
$$2\sqrt{2}$$



$$\Rightarrow x = ?$$

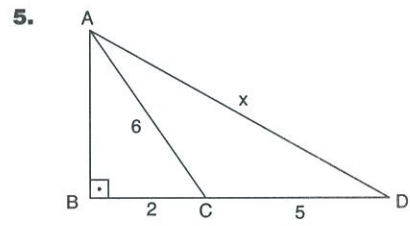
$$5\sqrt{3}$$

PUZA YAYINLARI



$$\Rightarrow x = ?$$

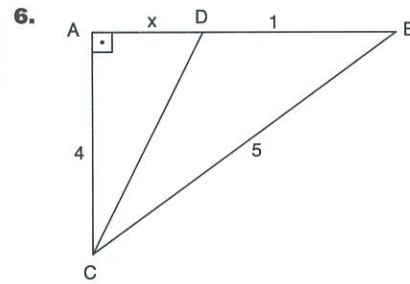
$$8\sqrt{2}$$



$$\Rightarrow x = ?$$

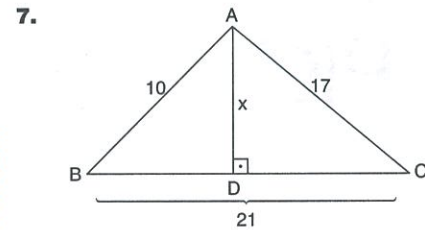
$$9$$

PUZA YAYINLARI



$$\Rightarrow x = ?$$

$$2$$



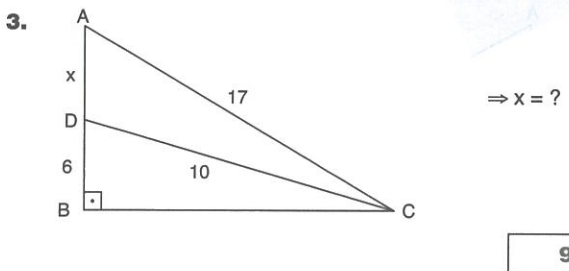
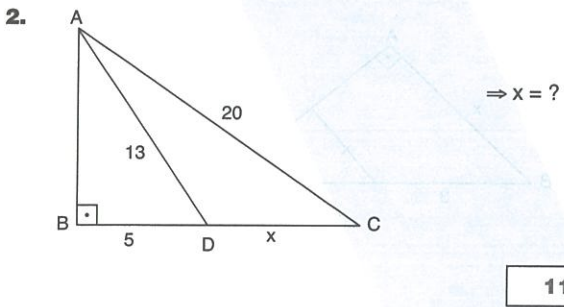
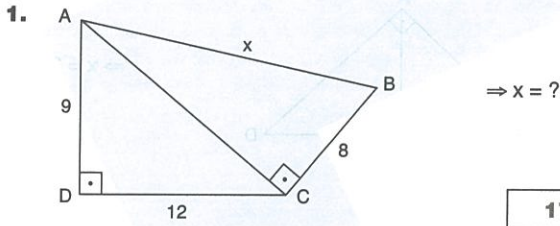
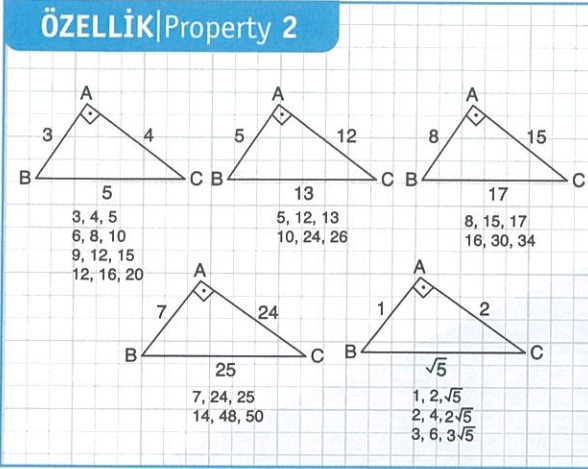
$$\Rightarrow x = ?$$

$$8$$

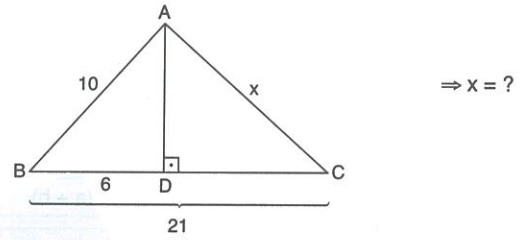
PUZA YAYINLARI



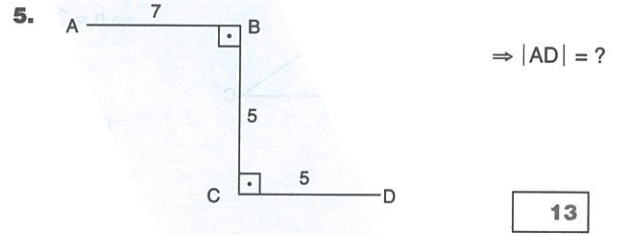
ÖZELLİK|Property 2



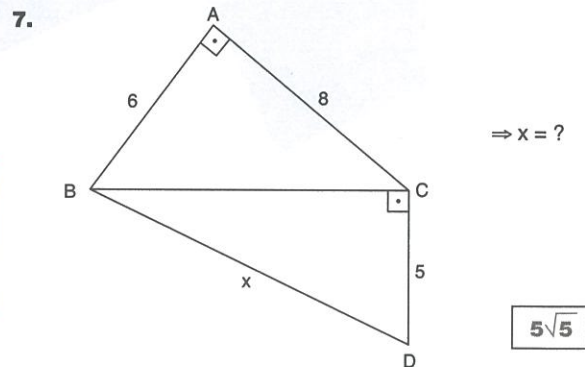
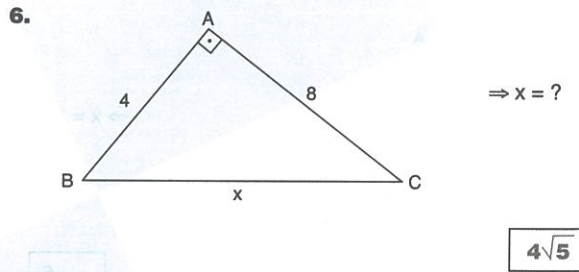
4. PUZA YAYINLARI



17

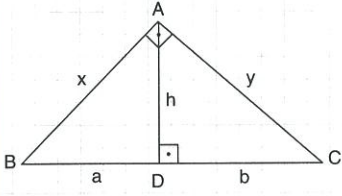


6. PUZA YAYINLARI





ÖZELLİK|Property 3



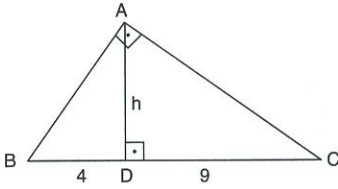
$$\Rightarrow h^2 = a \cdot b$$

$$\Rightarrow x^2 = a(a + b)$$

$$\Rightarrow y^2 = b(a + b)$$

$$\Rightarrow x \cdot y = (a + b)h$$

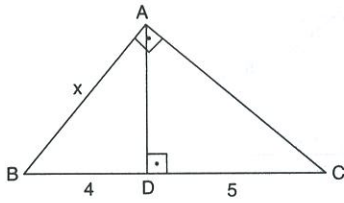
1.



$$\Rightarrow h = ?$$

6

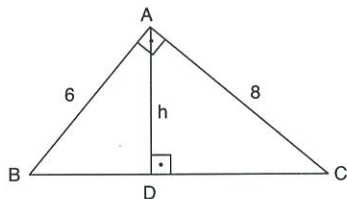
2.



$$\Rightarrow x = ?$$

6

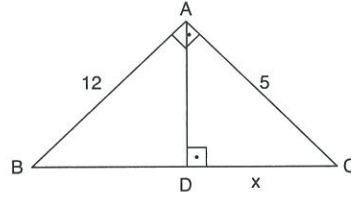
3.



$$\Rightarrow h = ?$$

4,8

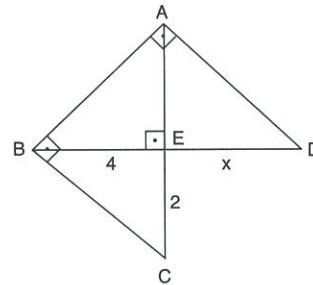
4.



$$\Rightarrow x = ?$$

 $\frac{25}{13}$

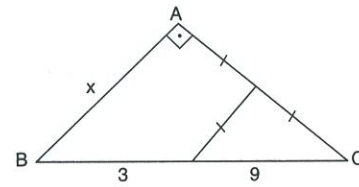
5.



$$\Rightarrow x = ?$$

16

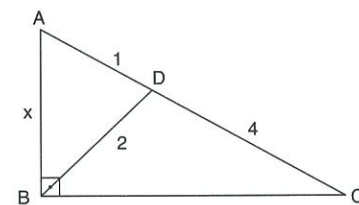
6.



$$\Rightarrow x = ?$$

6

7.

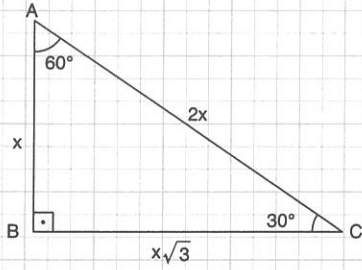


$$\Rightarrow x = ?$$

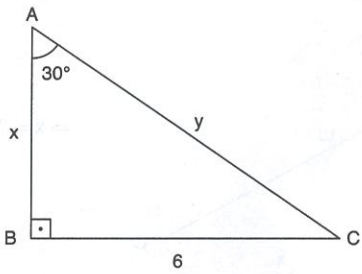
 $\sqrt{5}$



ÖZELLİK|Property 4



1.

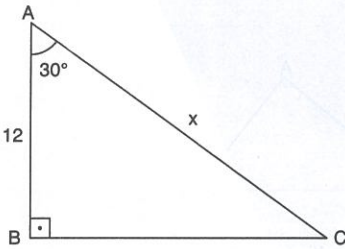


$$\Rightarrow x = ?$$

$$\Rightarrow y = ?$$

$$6\sqrt{3}, 12$$

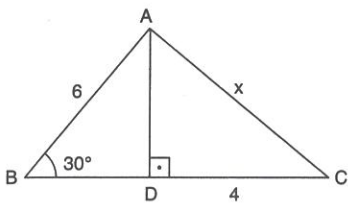
2.



$$\Rightarrow x = ?$$

$$8\sqrt{3}$$

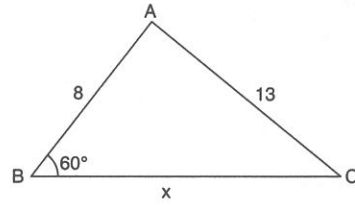
3.



$$\Rightarrow x = ?$$

$$5$$

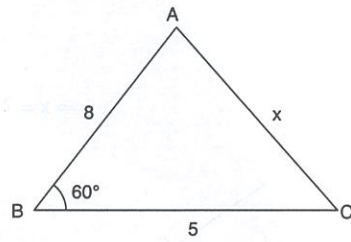
4.



$$\Rightarrow x = ?$$

$$15$$

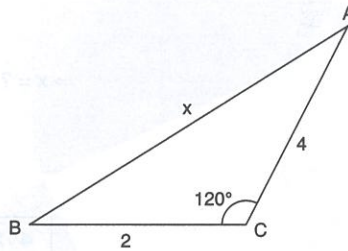
5.



$$\Rightarrow x = ?$$

$$7$$

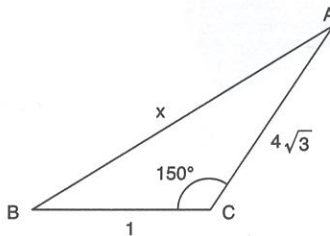
6.



$$\Rightarrow x = ?$$

$$2\sqrt{7}$$

7.

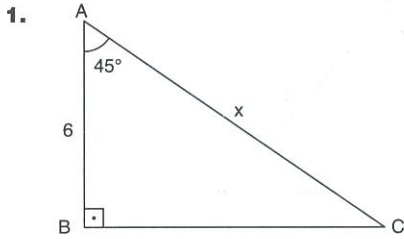
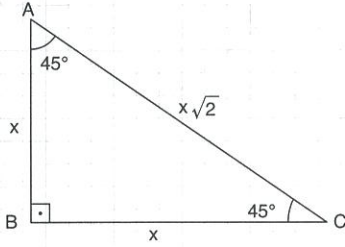


$$\Rightarrow x = ?$$

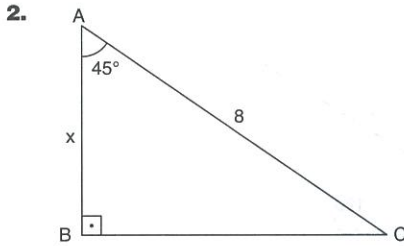
$$\sqrt{61}$$



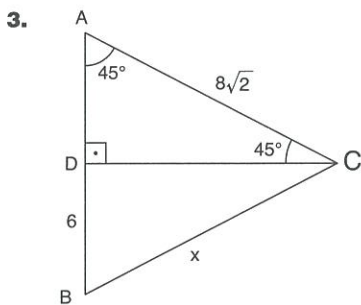
ÖZELLİK|Property 5



$6\sqrt{2}$



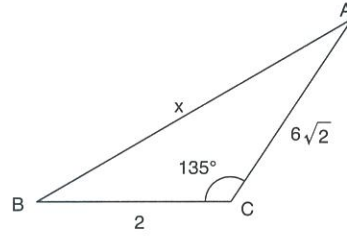
$4\sqrt{2}$



10

PUZA YAYINLARI

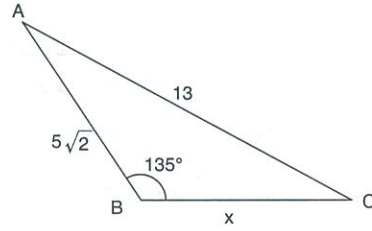
4.



$\Rightarrow x = ?$

10

5.

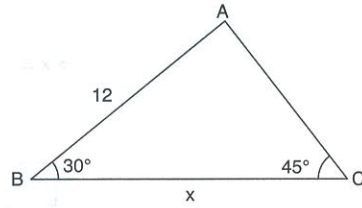


$\Rightarrow x = ?$

7

PUZA YAYINLARI

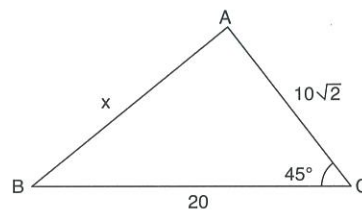
6.



$\Rightarrow x = ?$

$6\sqrt{3} + 6$

7.



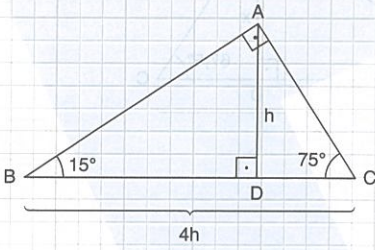
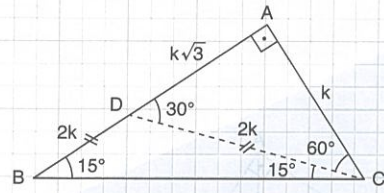
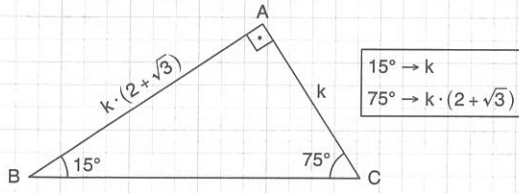
$\Rightarrow x = ?$

$10\sqrt{2}$

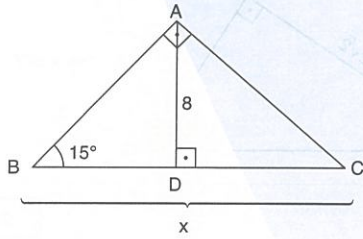
PUZA YAYINLARI



ÖZELLİK|Property 6



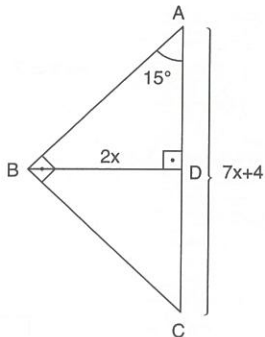
1.



$\Rightarrow x = ?$

32

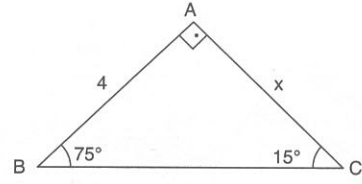
2.



$\Rightarrow x = ?$

4

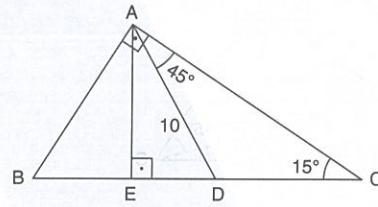
3.



$\Rightarrow x = ?$

$8 + 4\sqrt{3}$

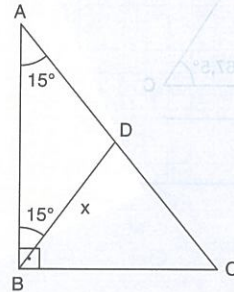
4.



$\Rightarrow |BC| = ?$

$20\sqrt{3}$

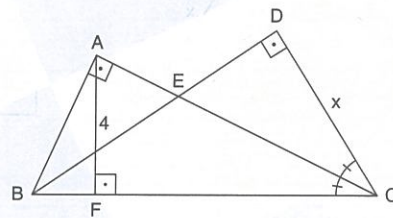
5.



$|AC| = 12 \text{ br}$
 $\Rightarrow x = ?$

6

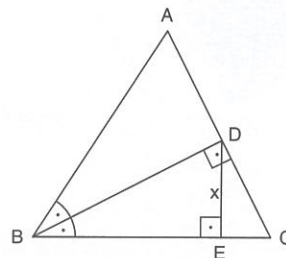
6.



$m(\widehat{BCD}) = 30^\circ$
 $|AF| = 4 \text{ br}$
 $\Rightarrow x = ?$

$8\sqrt{3}$

7.

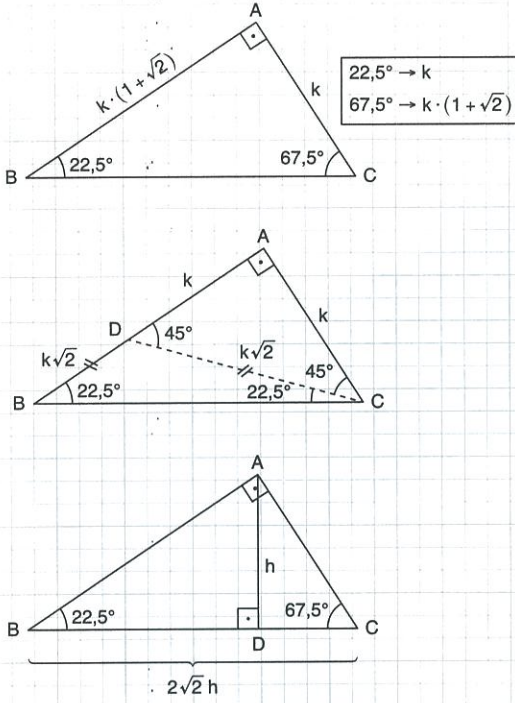


$m(\widehat{DBC}) = 15^\circ$
[BD] bisector
 $|AB| = 6 \text{ br}$
 $\Rightarrow x = ?$

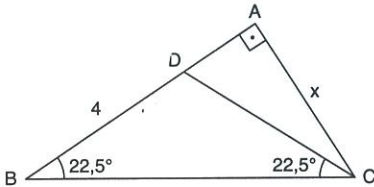
$\frac{3}{2}$



ÖZELLİK|Property 7



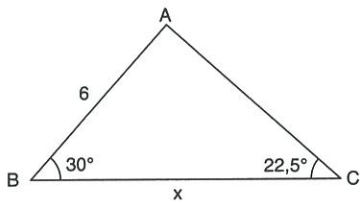
1.



⇒ x = ?

$2\sqrt{2}$

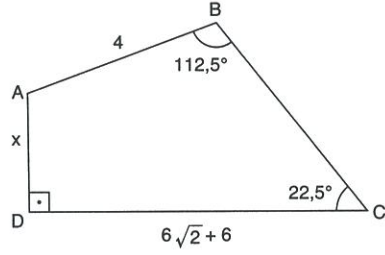
2.



⇒ x = ?

$3 + 3\sqrt{2} + 3\sqrt{3}$

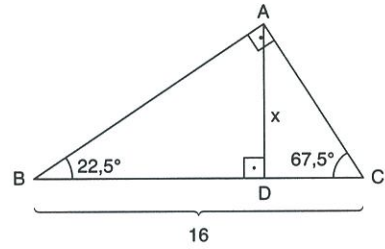
3.



⇒ x = ?

2

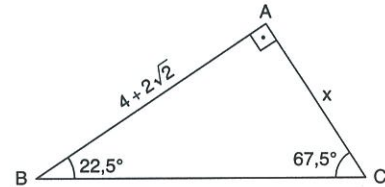
4.



⇒ x = ?

$4\sqrt{2}$

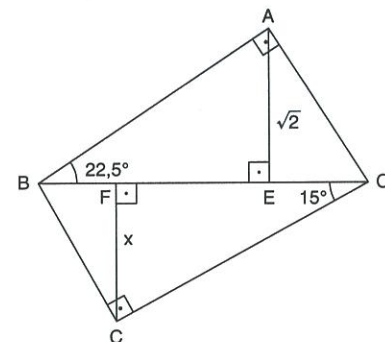
5.



⇒ x = ?

$2\sqrt{2}$

6.

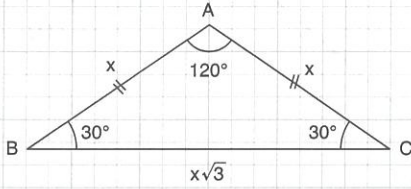


⇒ x = ?

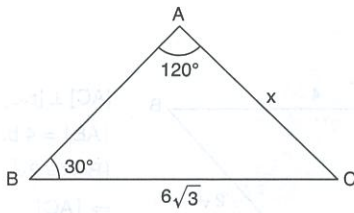
1



ÖZELLİK|Property 8



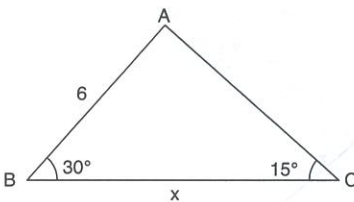
1.



$$\Rightarrow x = ?$$

6

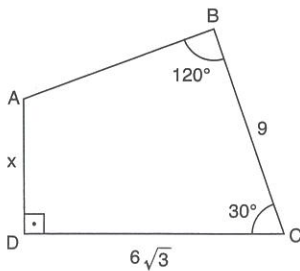
2.



$$\Rightarrow x = ?$$

$6 + 6\sqrt{3}$

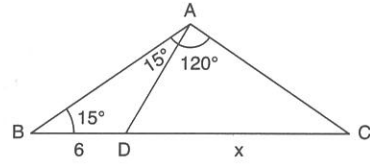
3.



$$\Rightarrow x = ?$$

3

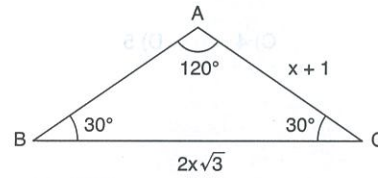
4.



$$\Rightarrow x = ?$$

$6\sqrt{3}$

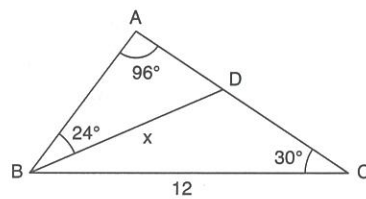
5.



$$\Rightarrow \angle(ABC) = ?$$

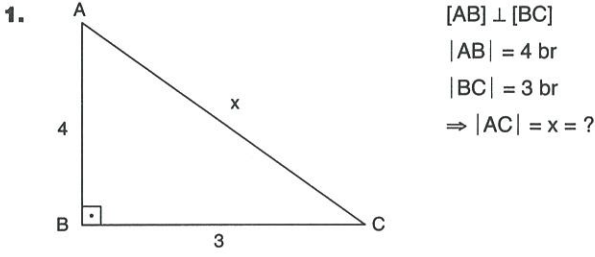
$4 + 2\sqrt{3}$

6.

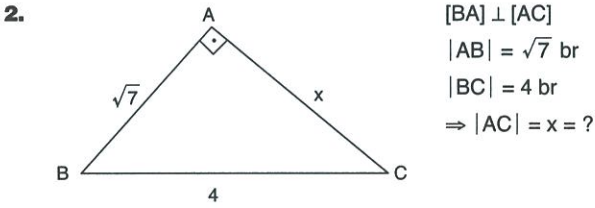


$$\Rightarrow x = ?$$

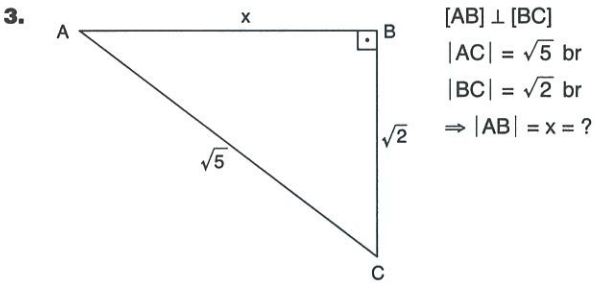
$4\sqrt{3}$



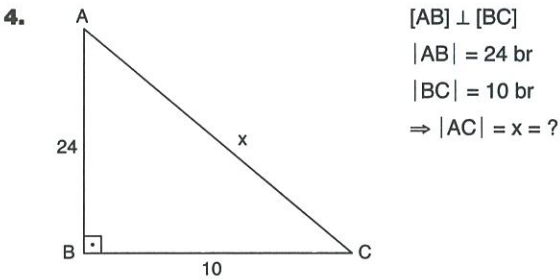
- A) 25 B) 7 C) 5 D) $2\sqrt{7}$ E) $2\sqrt{2}$



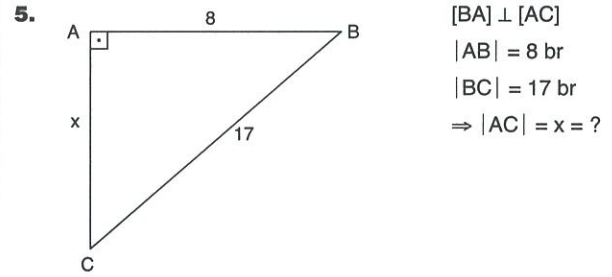
- A) $\sqrt{5}$ B) 3 C) 4 D) 5 E) $\sqrt{23}$



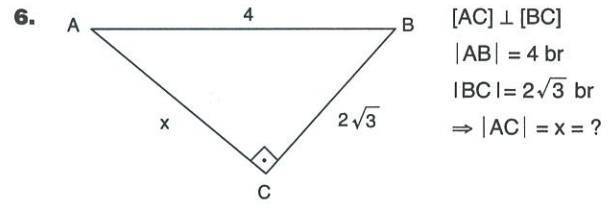
- A) 1 B) $\sqrt{2}$ C) $\sqrt{3}$ D) 2 E) $\sqrt{5}$



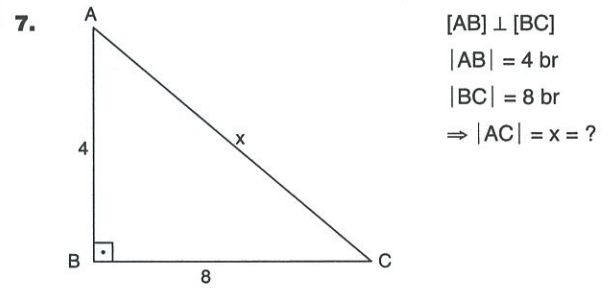
- A) 10 B) 20 C) 24 D) 25 E) 26



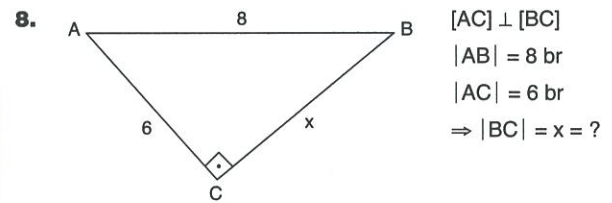
- A) 15 B) 13 C) 10 D) 8 E) 6



- A) 1 B) 2 C) $\sqrt{3}$ D) $2\sqrt{3}$ E) $2\sqrt{7}$



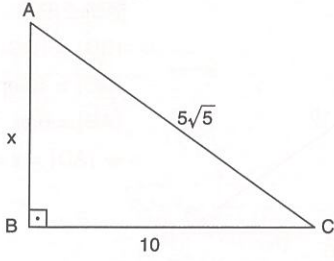
- A) 4 B) $4\sqrt{2}$ C) $4\sqrt{3}$ D) $4\sqrt{5}$ E) 8



- A) 10 B) $2\sqrt{7}$ C) $\sqrt{7}$ D) 2 E) 1



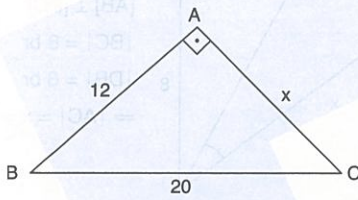
9.



$[AB] \perp [BC]$
 $|BC| = 10$ br
 $|AC| = 5\sqrt{5}$ br
 $\Rightarrow |AB| = x = ?$

- A) 5 B) $5\sqrt{2}$ C) 10 D) $10\sqrt{2}$ E) $10\sqrt{5}$

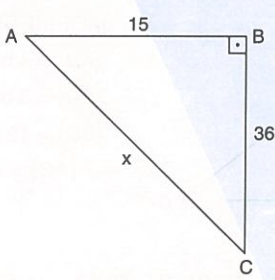
10.



$[BA] \perp [AC]$
 $|AB| = 12$ br
 $|BC| = 20$ br
 $\Rightarrow |AC| = x = ?$

- A) 12 B) 15 C) 16 D) 18 E) 20

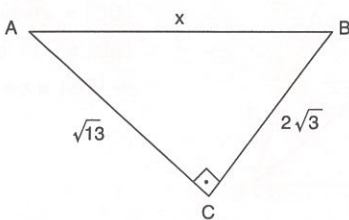
11.



$[AB] \perp [BC]$
 $|AB| = 15$ br
 $|BC| = 36$ br
 $\Rightarrow |AC| = x = ?$

- A) 35 B) 36 C) 37 D) 38 E) 39

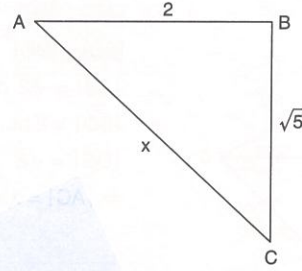
12.



$[AC] \perp [BC]$
 $|AC| = \sqrt{13}$ br
 $|BC| = 2\sqrt{3}$ br
 $\Rightarrow |AB| = x = ?$

- A) 4 B) 5 C) 6 D) 7 E) 8

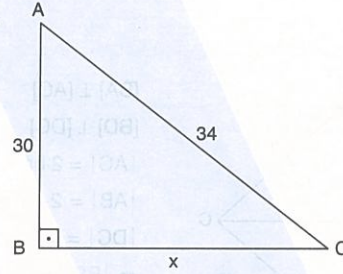
13.



$m(\widehat{BAC}) + m(\widehat{BCA}) = 90^\circ$
 $|AB| = 2$ br
 $|BC| = \sqrt{5}$ br
 $\Rightarrow |AC| = x = ?$

- A) 2 B) 3 C) 5 D) $\sqrt{7}$ E) $\sqrt{29}$

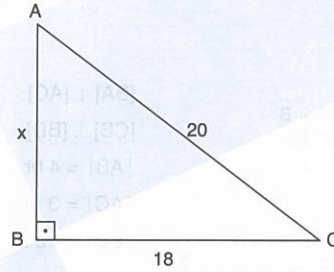
14.



$[AB] \perp [BC]$
 $|AB| = 30$ br
 $|AC| = 34$ br
 $\Rightarrow |BC| = x = ?$

- A) 2 B) 4 C) 8 D) 10 E) 16

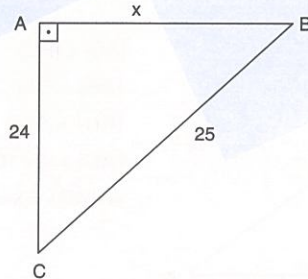
15.



$[AB] \perp [BC]$
 $|AC| = 20$ br
 $|BC| = 18$ br
 $\Rightarrow |AB| = x = ?$

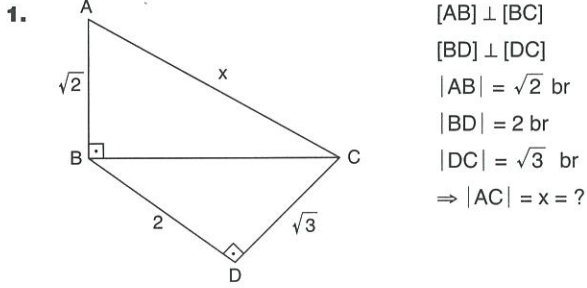
- A) 2 B) $\sqrt{19}$ C) $2\sqrt{19}$ D) 18 E) 20

16.

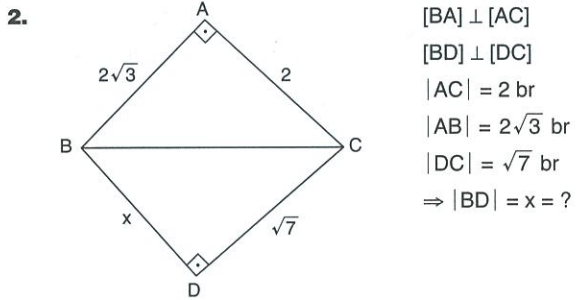


$[BA] \perp [AC]$
 $|AC| = 24$ br
 $|BC| = 25$ br
 $\Rightarrow |AB| = x = ?$

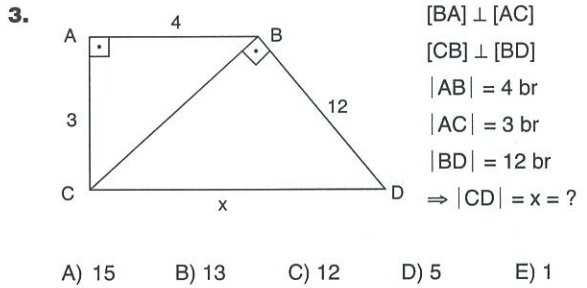
- A) 1 B) 2 C) 6 D) 7 E) $\sqrt{7}$



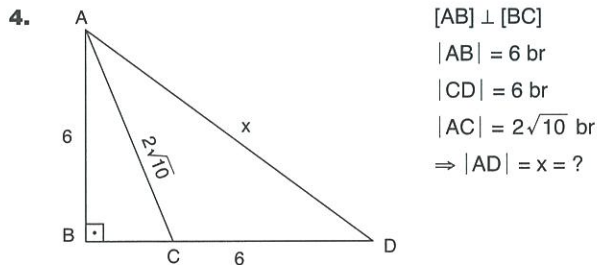
- A) 1 B) $\sqrt{2}$ C) 2 D) $\sqrt{3}$ E) 3



- A) $\sqrt{3}$ B) $\sqrt{5}$ C) 3 D) 4 E) $\sqrt{10}$



- A) 15 B) 13 C) 12 D) 5 E) 1

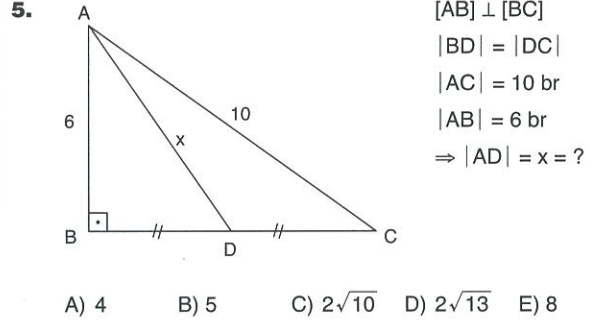


- A) 10 B) $6\sqrt{3}$ C) $6\sqrt{2}$ D) 8 E) 6

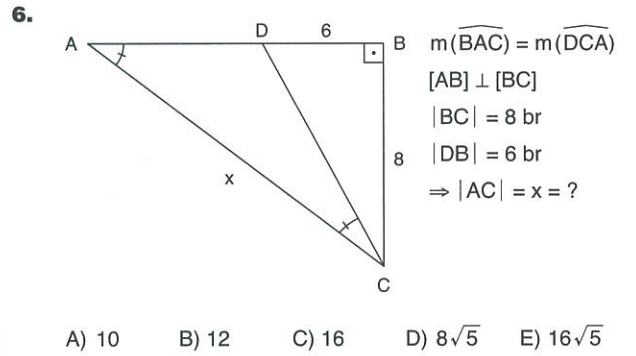
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PUZA YAYINLARI

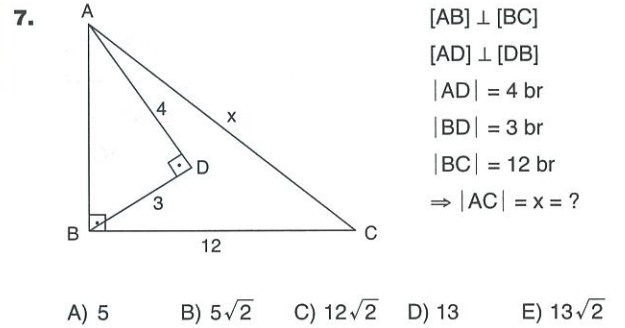
PUZA YAYINLARI



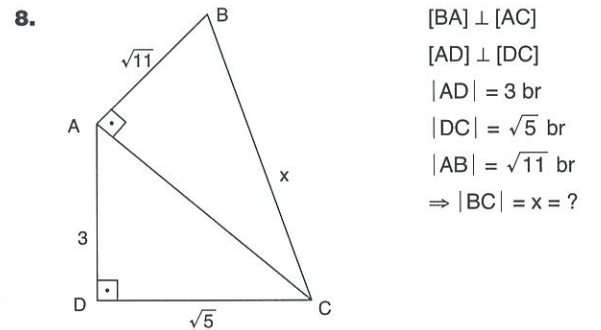
- A) 4 B) 5 C) $2\sqrt{10}$ D) $2\sqrt{13}$ E) 8



- A) 10 B) 12 C) 16 D) $8\sqrt{5}$ E) $16\sqrt{5}$



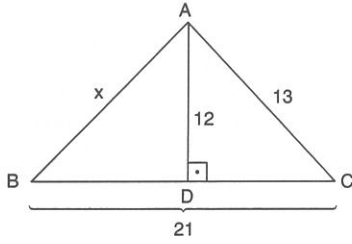
- A) 5 B) $5\sqrt{2}$ C) $12\sqrt{2}$ D) 13 E) $13\sqrt{2}$



- A) 4 B) 5 C) $2\sqrt{7}$ D) $\sqrt{30}$ E) $4\sqrt{2}$



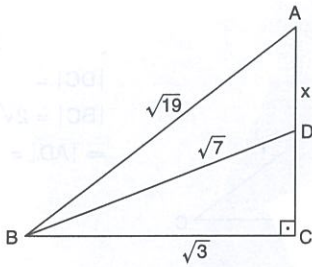
9.



$[AD] \perp [BC]$
 $|AC| = 13$ br
 $|AD| = 12$ br
 $|BC| = 21$ br
 $\Rightarrow |AB| = x = ?$

- A) 15 B) 16 C) 18 D) 20 E) 25

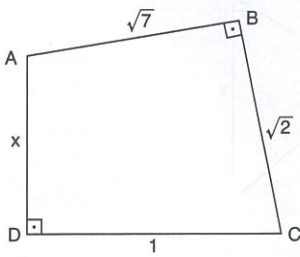
10.



$[AC] \perp [BC]$
 $|AB| = \sqrt{19}$ br
 $|BD| = \sqrt{7}$ br
 $|BC| = \sqrt{3}$ br
 $\Rightarrow |AD| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

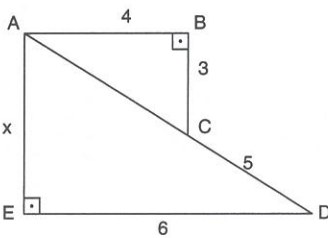
11.



$[AB] \perp [BC]$
 $[AD] \perp [DC]$
 $|AB| = \sqrt{7}$ br
 $|BC| = \sqrt{2}$ br
 $|DC| = 1$ br
 $\Rightarrow |AD| = x = ?$

- A) 2 B) $\sqrt{3}$ C) $2\sqrt{2}$ D) $\sqrt{10}$ E) $2\sqrt{3}$

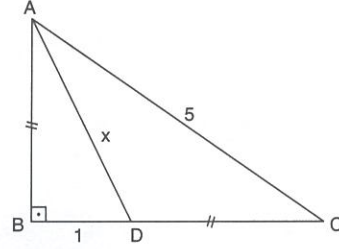
12.



$[AB] \perp [BC]$
 $[AE] \perp [ED]$
 $|AB| = 4$ br
 $|BC| = 3$ br
 $|CD| = 5$ br
 $|ED| = 6$ br
 $\Rightarrow |AE| = x = ?$

- A) 8 B) 9 C) 10 D) 12 E) 15

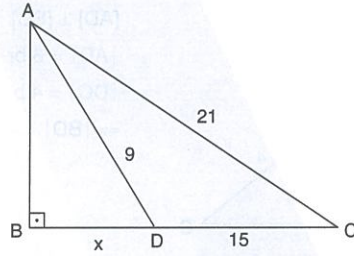
13.



$[AB] \perp [BC]$
 $|AB| = |DC|$
 $|BD| = 1$ br
 $|AC| = 5$ br
 $\Rightarrow |AD| = x = ?$

- A) 3 B) $\sqrt{10}$ C) $\sqrt{11}$ D) $2\sqrt{3}$ E) $\sqrt{14}$

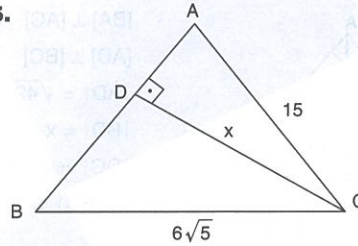
14.



$[AB] \perp [BC]$
 $|AD| = 9$ br
 $|DC| = 15$ br
 $|AC| = 21$ br
 $\Rightarrow |BD| = x = ?$

- A) 4 B) $\frac{9}{2}$ C) 5 D) $\frac{11}{2}$ E) 6

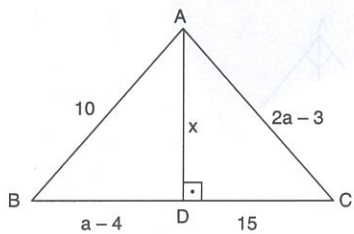
15.



$[CD] \perp [AB]$
 $|AB| = |AC| = 15$ br
 $|BC| = 6\sqrt{5}$ br
 $\Rightarrow |DC| = x = ?$

- A) 6 B) 8 C) 9 D) 10 E) 12

16.

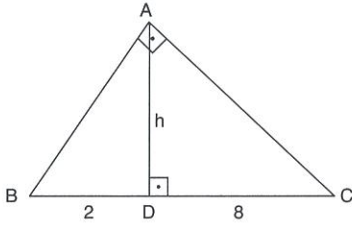


$[AD] \perp [BC]$
 $|AB| = 10$ br
 $|DC| = 15$ br
 $|AC| = 2a-3$
 $|BD| = a-4$
 $\Rightarrow |AD| = x = ?$

- A) 6 B) $\frac{15}{2}$ C) 8 D) $\frac{17}{2}$ E) 9



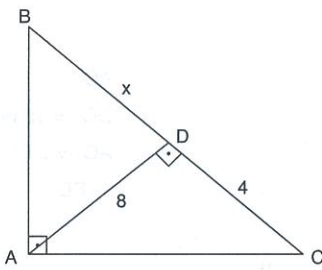
1.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ |BD| &= 2 \text{ br} \\ |DC| &= 8 \text{ br} \\ \Rightarrow |AD| &= h = ? \end{aligned}$$

- A) 2 B) 4 C) 5 D) 6 E) 8

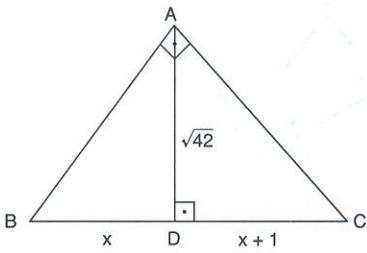
2.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ |AD| &= 8 \text{ br} \\ |DC| &= 4 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 4 B) 8 C) 12 D) 16 E) 32

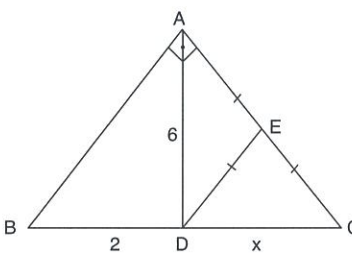
3.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ |AD| &= \sqrt{42} \text{ br} \\ |BD| &= x \\ |DC| &= x+1 \\ \Rightarrow |BC| &= ? \end{aligned}$$

- A) 16 B) 14 C) 13 D) 12 E) 7

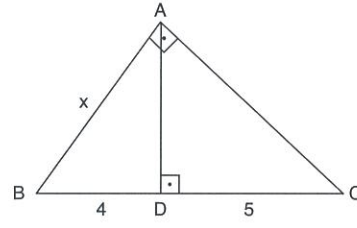
4.



$$\begin{aligned} [BA] &\perp [AC] \\ |AE| &= |EC| = |DE| \\ |AD| &= 6 \text{ br} \\ |BD| &= 2 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 9 B) 16 C) 18 D) 38 E) 48

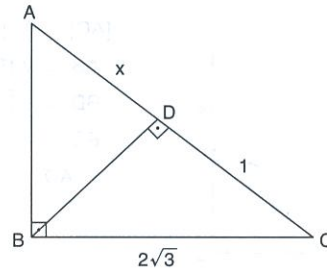
5.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ |BD| &= 4 \text{ br} \\ |DC| &= 5 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 4 B) 5 C) 6 D) 9 E) 12

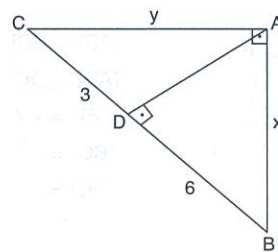
6.



$$\begin{aligned} [AB] &\perp [BC] \\ [BD] &\perp [AC] \\ |DC| &= 1 \text{ br} \\ |BC| &= 2\sqrt{3} \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 7 B) 8 C) 9 D) 10 E) 11

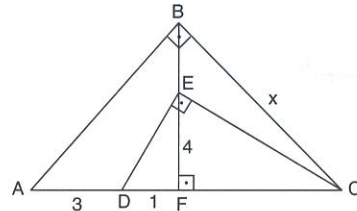
7.



$$\begin{aligned} [CA] &\perp [AB] \\ [AD] &\perp [BC] \\ |DC| &= 3 \text{ br} \\ |BD| &= 6 \text{ br} \\ |AD| &= y \\ |AB| &= x \\ \Rightarrow \frac{x}{y} &= ? \end{aligned}$$

- A) 1 B) $\sqrt{2}$ C) $\sqrt{3}$ D) 2 E) 4

8.

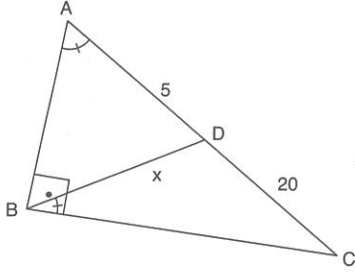


$$\begin{aligned} [AB] &\perp [BC] \\ [DE] &\perp [EC] \\ [BF] &\perp [AC] \\ |EF| &= 4 \text{ br} \\ |DF| &= 1 \text{ br} \\ |AD| &= 3 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 1 B) $\sqrt{2}$ C) $\sqrt{3}$ D) $2\sqrt{3}$ E) $8\sqrt{5}$



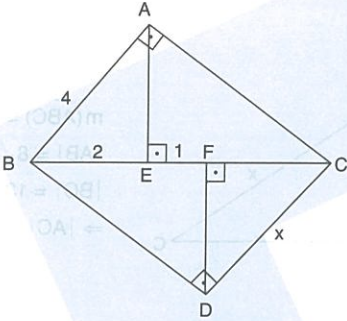
9.



$[AB] \perp [BC]$
 $m(\widehat{BAC}) = m(\widehat{DBC})$
 $|AD| = 5 \text{ br}$
 $|DC| = 20 \text{ br}$
 $\Rightarrow |BD| = x = ?$

- A) 5 B) 10 C) 15 D) 20 E) 25

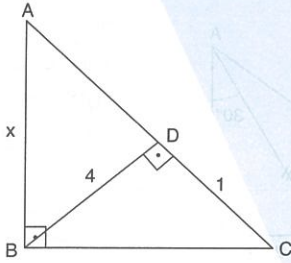
10.



$[BA] \perp [AC]$
 $[AE] \perp [BC]$
 $[BD] \perp [DC]$
 $[DF] \perp [BC]$
 $|AB| = 4 \text{ br}$
 $|BE| = 2 \text{ br}$
 $|EF| = 1 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) 3 B) 4 C) 5 D) $2\sqrt{5}$ E) $2\sqrt{10}$

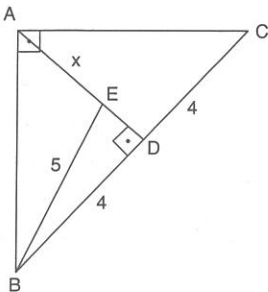
11.



$[AB] \perp [BC]$
 $[BD] \perp [AC]$
 $|BD| = 4 \text{ br}$
 $|DC| = 1 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) $\sqrt{17}$ B) 16 C) $2\sqrt{7}$ D) 17 E) $4\sqrt{17}$

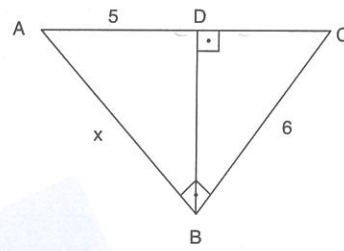
12.



$[CA] \perp [AB]$
 $[AD] \perp [BC]$
 $|BE| = 5 \text{ br}$
 $|BD| = |DC| = 4 \text{ br}$
 $\Rightarrow |AE| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

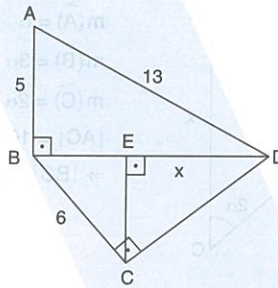
13.



$[AC] \perp [BD]$
 $[AB] \perp [BC]$
 $|AD| = 5 \text{ br}$
 $|BC| = 6 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) $\sqrt{3}$ B) $3\sqrt{5}$ C) $5\sqrt{3}$ D) $5\sqrt{5}$ E) 15

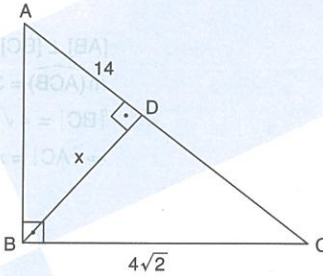
14.



$[AB] \perp [BD]$
 $[BC] \perp [CD]$
 $[CE] \perp [BD]$
 $|AD| = 13 \text{ br}$
 $|AB| = 5 \text{ br}$
 $|BC| = 6 \text{ br}$
 $\Rightarrow |ED| = x = ?$

- A) 9 B) 6 C) 5 D) 4 E) 2

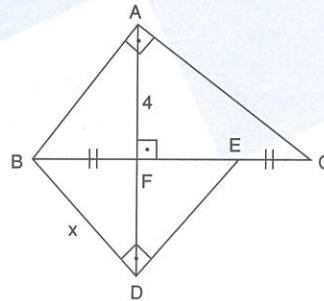
15.



$[AB] \perp [BC]$
 $[BD] \perp [AC]$
 $|AD| = 14 \text{ br}$
 $|BC| = 4\sqrt{2} \text{ br}$
 $\Rightarrow |BD| = x = ?$

- A) $\sqrt{5}$ B) $\sqrt{7}$ C) $2\sqrt{2}$ D) $2\sqrt{7}$ E) 6

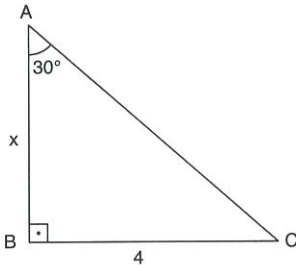
16.

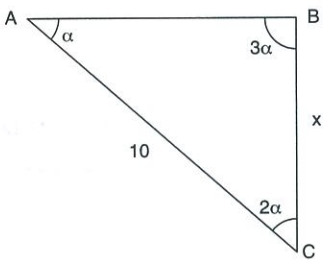


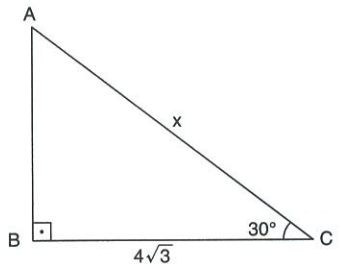
$|BF| = |EC|$
 $[BA] \perp [AC]$
 $[BD] \perp [DE]$
 $[AF] \perp [BC]$
 $|AF| = 4 \text{ br}$
 $\Rightarrow |BD| = x = ?$

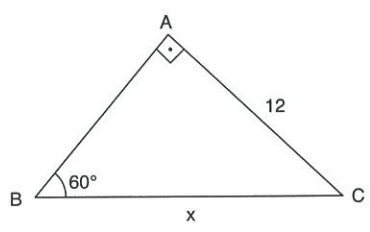
- A) 1 B) 2 C) 3 D) 4 E) 5



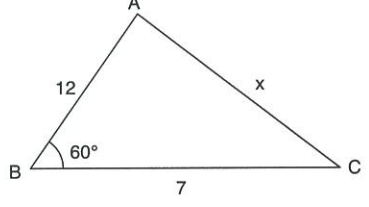
1.  $[AB] \perp [BC]$
 $m(\widehat{BAC}) = 30^\circ$
 $|BC| = 4 \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) 2 B) 4 C) $2\sqrt{3}$ D) $4\sqrt{3}$ E) 8

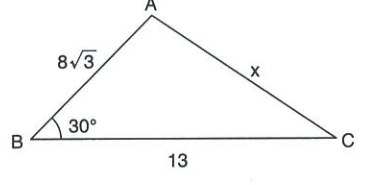
2.  $m(\widehat{A}) = \alpha$
 $m(\widehat{B}) = 3\alpha$
 $m(\widehat{C}) = 2\alpha$
 $|AC| = 10 \text{ br}$
 $\Rightarrow |BC| = x = ?$
- A) 5 B) $5\sqrt{3}$ C) 10 D) $10\sqrt{3}$ E) 30

3.  $[AB] \perp [BC]$
 $m(\widehat{ACB}) = 30^\circ$
 $|BC| = 4\sqrt{3} \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) 2 B) $2\sqrt{3}$ C) 4 D) 8 E) $8\sqrt{3}$

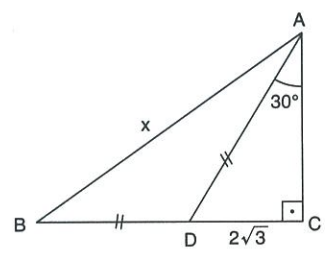
4.  $[BA] \perp [AC]$
 $m(\widehat{ABC}) = 60^\circ$
 $|AC| = 12 \text{ br}$
 $\Rightarrow |BC| = x = ?$
- A) 3 B) $3\sqrt{3}$ C) 6 D) $6\sqrt{3}$ E) $8\sqrt{3}$

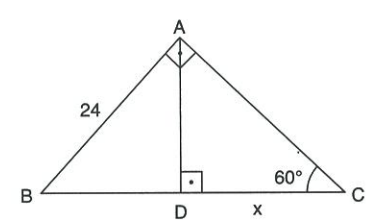
PUZA YAYINLARI

5.  $m(\widehat{ABC}) = 60^\circ$
 $|AB| = 12 \text{ br}$
 $|BC| = 7 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) $\sqrt{74}$ B) $\sqrt{101}$ C) $\sqrt{107}$ D) $\sqrt{109}$ E) $\sqrt{111}$

6.  $m(\widehat{ABC}) = 30^\circ$
 $|AB| = 8\sqrt{3} \text{ br}$
 $|BC| = 13 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) 4 B) 5 C) 6 D) 7 E) 8

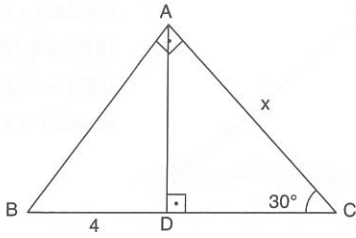
PUZA YAYINLARI

7.  $[AC] \perp [BC]$
 $|AD| = |BD|$
 $|DC| = 2\sqrt{3} \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) $4\sqrt{3}$ B) 6 C) $6\sqrt{3}$ D) 12 E) $12\sqrt{3}$

8.  $[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $m(\widehat{ACB}) = 60^\circ$
 $|AB| = 24 \text{ br}$
 $\Rightarrow |DC| = x = ?$
- A) $4\sqrt{3}$ B) $6\sqrt{3}$ C) 6 D) 8 E) $8\sqrt{3}$



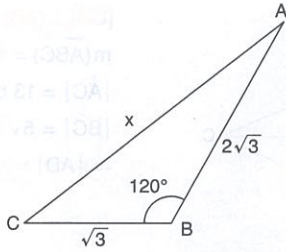
9.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ m(\widehat{ACB}) &= 30^\circ \\ |BD| &= 4 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 2 B) $2\sqrt{3}$ C) 4 D) $4\sqrt{3}$ E) $8\sqrt{3}$

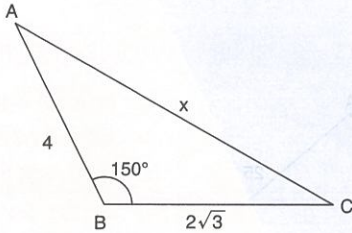
10.



$$\begin{aligned} m(\widehat{ABC}) &= 120^\circ \\ |AB| &= 2\sqrt{3} \text{ br} \\ |BC| &= \sqrt{3} \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $3\sqrt{3}$ B) 9 C) $4\sqrt{3}$ D) $5\sqrt{3}$ E) $\sqrt{21}$

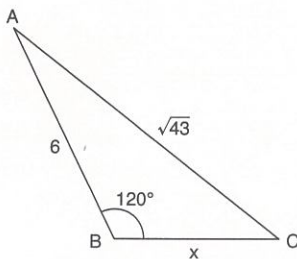
11.



$$\begin{aligned} m(\widehat{ABC}) &= 150^\circ \\ |AB| &= 4 \text{ br} \\ |BC| &= 2\sqrt{3} \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 4 B) $2\sqrt{3}$ C) $\sqrt{7}$ D) 6 E) $2\sqrt{13}$

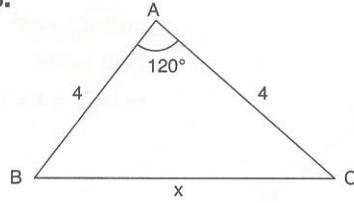
12.



$$\begin{aligned} m(\widehat{ABC}) &= 120^\circ \\ |AB| &= 6 \text{ br} \\ |AC| &= \sqrt{43} \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 5

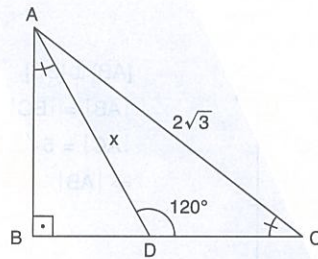
13.



$$\begin{aligned} m(\widehat{BAC}) &= 120^\circ \\ |AB| &= |AC| = 4 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 4 D) $4\sqrt{2}$ E) $4\sqrt{3}$

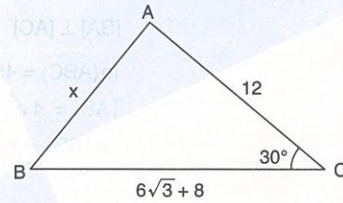
14.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{ACB}) \\ |AC| &= 2\sqrt{3} \\ m(\widehat{ADC}) &= 120^\circ \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 2 B) $2\sqrt{3}$ C) 6 D) $6\sqrt{2}$ E) $6\sqrt{3}$

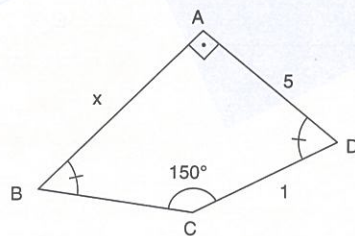
15.



$$\begin{aligned} m(\widehat{ACB}) &= 30^\circ \\ |AC| &= 12 \text{ br} \\ |BC| &= 6\sqrt{3} + 8 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

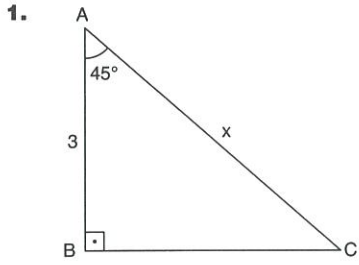
- A) 6 B) 8 C) 10 D) 12 E) 13

16.



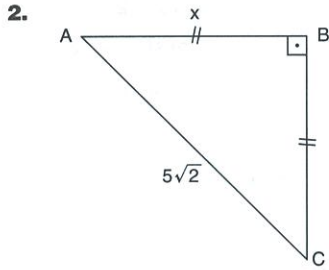
$$\begin{aligned} m(\widehat{BCD}) &= 150^\circ \\ [BA] &\perp [AD] \\ m(\widehat{B}) &= m(\widehat{D}) \\ |AD| &= 5 \text{ br} \\ |DC| &= 1 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 1 B) $\sqrt{2}$ C) $\sqrt{3}$ D) $2\sqrt{3}$ E) 6



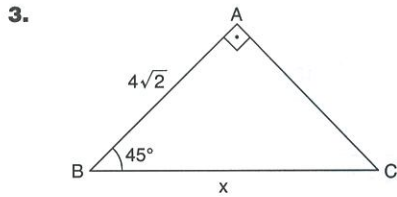
$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{BAC}) &= 45^\circ \\ |AB| &= 3 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $\frac{3}{2}$ B) $\frac{3\sqrt{2}}{2}$ C) 3 D) $3\sqrt{2}$ E) 6



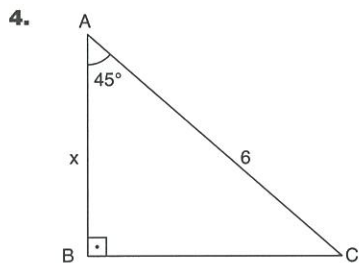
$$\begin{aligned} [AB] &\perp [BC] \\ |AB| &= |BC| \\ |AC| &= 5\sqrt{2} \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 10 B) $5\sqrt{3}$ C) 5 D) $\frac{5\sqrt{2}}{2}$ E) $\frac{5}{2}$



$$\begin{aligned} [BA] &\perp [AC] \\ m(\widehat{ABC}) &= 45^\circ \\ |AB| &= 4\sqrt{2} \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) $2\sqrt{2}$ B) 4 C) $4\sqrt{2}$ D) 8 E) $8\sqrt{2}$

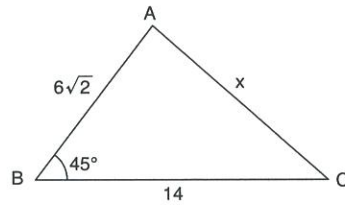


$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{BAC}) &= 45^\circ \\ |AC| &= 6 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 3 B) $3\sqrt{2}$ C) 6 D) $6\sqrt{2}$ E) 12

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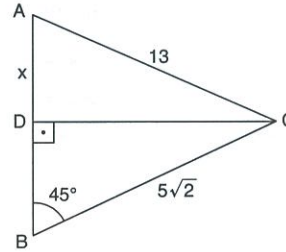
5.



$$\begin{aligned} m(\widehat{ABC}) &= 45^\circ \\ |AB| &= 6\sqrt{2} \text{ br} \\ |BC| &= 14 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 6 B) 8 C) $6\sqrt{2}$ D) $8\sqrt{2}$ E) 10

6.

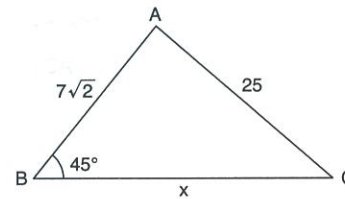


$$\begin{aligned} [CD] &\perp [AB] \\ m(\widehat{ABC}) &= 45^\circ \\ |AC| &= 13 \text{ br} \\ |BC| &= 5\sqrt{2} \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 5 B) $5\sqrt{2}$ C) 12 D) $13\sqrt{2}$ E) 26

PUZA YAYINLARI

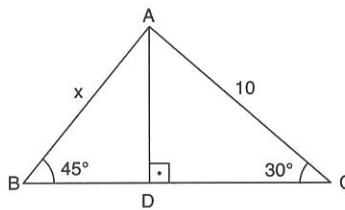
7.



$$\begin{aligned} m(\widehat{ABC}) &= 45^\circ \\ |AB| &= 7\sqrt{2} \text{ br} \\ |AC| &= 25 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 7 B) $7\sqrt{2}$ C) 24 D) 25 E) 31

8.



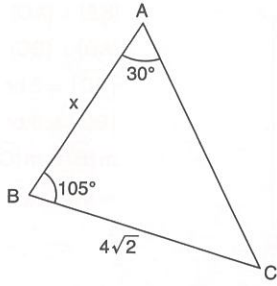
$$\begin{aligned} [AD] &\perp [BC] \\ m(\widehat{ABC}) &= 45^\circ \\ m(\widehat{ACB}) &= 30^\circ \\ |AC| &= 10 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 5 B) $5\sqrt{2}$ C) $5\sqrt{3}$ D) $\sqrt{6}$ E) $10\sqrt{2}$

PUZA YAYINLARI



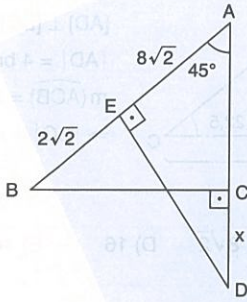
9.



$$\begin{aligned} m(\widehat{ABC}) &= 105^\circ \\ m(\widehat{BAC}) &= 30^\circ \\ |BC| &= 4\sqrt{2} \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 2 B) $2\sqrt{2}$ C) 4 D) $4\sqrt{2}$ E) 8

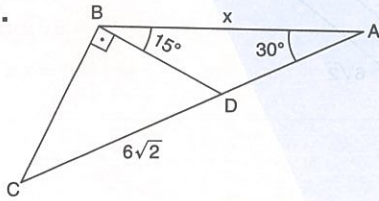
10.



$$\begin{aligned} [DE] &\perp [AB] \\ [BC] &\perp [AD] \\ m(\widehat{BAC}) &= 45^\circ \\ |AE| &= 8\sqrt{2} \\ |BE| &= 2\sqrt{2} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) 6 D) 8 E) 10

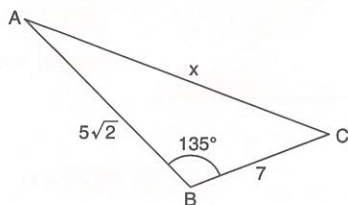
11.



$$\begin{aligned} [DB] &\perp [BC] \\ m(\widehat{BAC}) &= 30^\circ \\ m(\widehat{DBA}) &= 15^\circ \\ |DC| &= 6\sqrt{2} \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) $2\sqrt{2}$ B) $3\sqrt{2}$ C) $4\sqrt{2}$ D) $5\sqrt{2}$ E) $6\sqrt{2}$

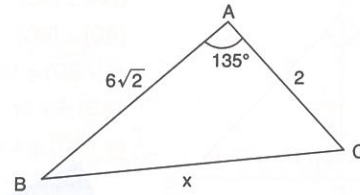
12.



$$\begin{aligned} m(\widehat{ABC}) &= 135^\circ \\ |BC| &= 7 \text{ br} \\ |AB| &= 5\sqrt{2} \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 5 B) $5\sqrt{2}$ C) $7\sqrt{2}$ D) 13 E) 14

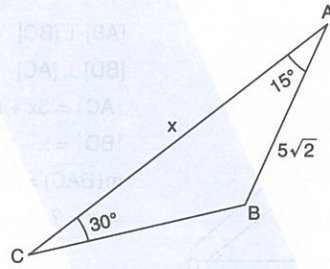
13.



$$\begin{aligned} m(\widehat{BAC}) &= 135^\circ \\ |AC| &= 2 \text{ br} \\ |AB| &= 6\sqrt{2} \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 4 B) 6 C) 8 D) $8\sqrt{2}$ E) 10

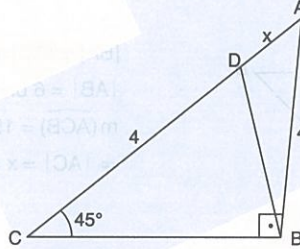
14.



$$\begin{aligned} m(\widehat{BAC}) &= 15^\circ \\ m(\widehat{ACB}) &= 30^\circ \\ |AB| &= 5\sqrt{2} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 5 B) 6 C) 8 D) $8\sqrt{2}$ E) 10

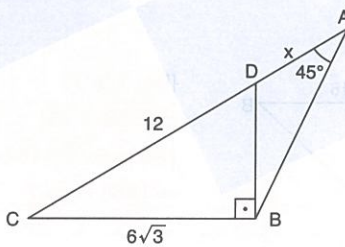
15.



$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{ACB}) &= 45^\circ \\ |AB| &= |CD| = 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) $(\sqrt{3}-1)$ B) $2(\sqrt{2}-1)$ C) $4(\sqrt{2}-1)$ D) $2(\sqrt{2}+1)$ E) $4(\sqrt{3}+1)$

16.

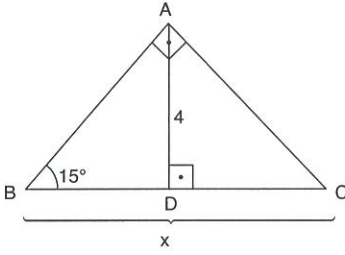


$$\begin{aligned} [CB] &\perp [BD] \\ m(\widehat{CAB}) &= 45^\circ \\ |DC| &= 12 \text{ br} \\ |BC| &= 6\sqrt{3} \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) $(\sqrt{3}-1)$ B) $2(\sqrt{3}-1)$ C) $3(\sqrt{3}-1)$ D) $2(\sqrt{3}+1)$ E) $3(\sqrt{3}+1)$



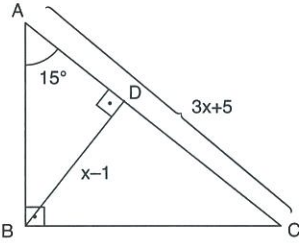
1.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ m(\widehat{ABC}) &= 15^\circ \\ |AD| &= 4 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 4 D) 8 E) 16

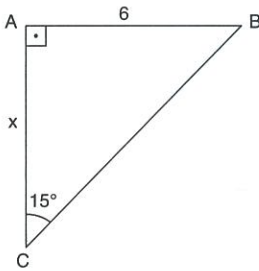
2.



$$\begin{aligned} [AB] &\perp [BC] \\ [BD] &\perp [AC] \\ |AC| &= 3x + 5 \\ |BD| &= x - 1 \\ m(\widehat{BAC}) &= 15^\circ \\ \Rightarrow x &= ? \end{aligned}$$

- A) 7 B) 8 C) 9 D) 10 E) 11

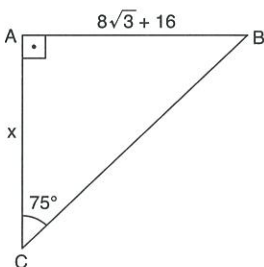
3.



$$\begin{aligned} [BA] &\perp [AC] \\ |AB| &= 6 \text{ br} \\ m(\widehat{ACB}) &= 15^\circ \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $6(\sqrt{3} + 2)$ B) $6(\sqrt{3} + 1)$
C) $6(\sqrt{3} - 1)$ D) $3(\sqrt{3} + 1)$
E) $3(\sqrt{3} - 1)$

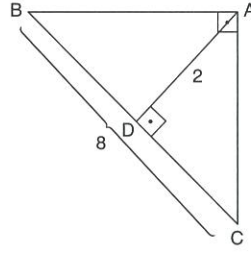
4.



$$\begin{aligned} [BA] &\perp [AC] \\ m(\widehat{ACB}) &= 75^\circ \\ |AB| &= 8\sqrt{3} + 16 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 2 B) 3 C) 4 D) 6 E) 8

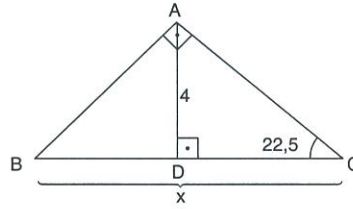
5.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ |AD| &= 2 \text{ br} \\ |BC| &= 8 \text{ br} \\ m(\widehat{B}) &> m(\widehat{C}) \\ \Rightarrow m(\widehat{B}) &= ? \end{aligned}$$

- A) 15 B) 30 C) 45 D) 60 E) 75

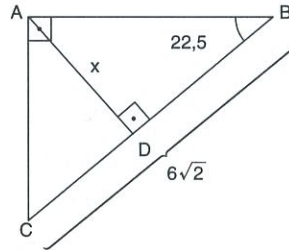
6.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ |AD| &= 4 \text{ br} \\ m(\widehat{ACB}) &= 22,5^\circ \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 4 B) $4\sqrt{2}$ C) $8\sqrt{2}$ D) 16 E) $16\sqrt{2}$

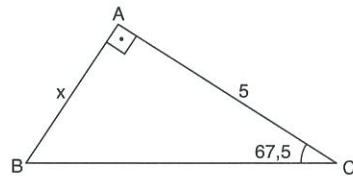
7.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ m(\widehat{ABC}) &= 22,5^\circ \\ |BC| &= 6\sqrt{2} \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 2 B) 3 C) $3\sqrt{2}$ D) 6 E) $6\sqrt{2}$

8.

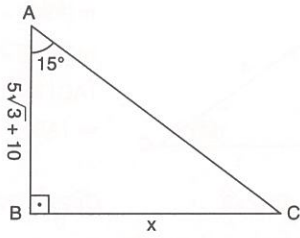


$$\begin{aligned} [BA] &\perp [AC] \\ m(\widehat{ABC}) &= 67,5^\circ \\ |AC| &= 5 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) $5(\sqrt{2} + 1)$ B) $10(\sqrt{2} + 1)$
C) $5(\sqrt{2} - 1)$ D) $10(\sqrt{2} - 1)$
E) $5\sqrt{2}$



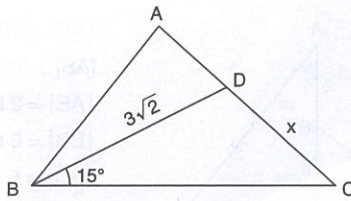
9.



$[AB] \perp [BC]$
 $m(\widehat{BAC}) = 15^\circ$
 $|AB| = 5\sqrt{3} + 10$ br
 $\Rightarrow |BC| = x = ?$

- A) 4 B) 5 C) 6 D) 8 E) 10

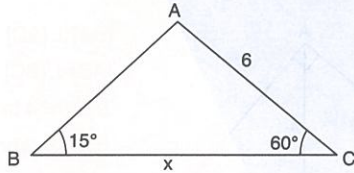
10.



ABC eşkenar üçgen
 ABC equilateral triangle
 $m(\widehat{DBC}) = 15^\circ$
 $|BD| = 3\sqrt{2}$
 $\Rightarrow |DC| = x = ?$

- A) $3 + \sqrt{3}$ B) 2 C) 3
 D) $3 - \sqrt{3}$ E) $2 + \sqrt{3}$

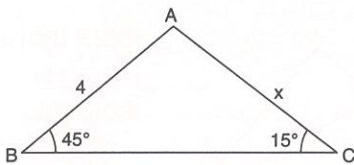
11.



$m(\widehat{ACB}) = 60^\circ$
 $m(\widehat{ABC}) = 15^\circ$
 $|AC| = 6$ br
 $\Rightarrow |BC| = x = ?$

- A) $12(1 + \sqrt{3})$ B) $6(2 + \sqrt{3})$
 C) $6(1 + \sqrt{3})$ D) $3(1 + 2\sqrt{3})$
 E) $66\sqrt{3}$

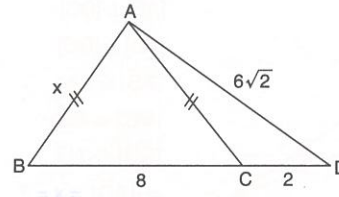
12.



$m(\widehat{ABC}) = 45^\circ$
 $m(\widehat{ACB}) = 15^\circ$
 $|AB| = 4$ br
 $\Rightarrow |AC| = x = ?$

- A) $4(1 + \sqrt{3})$ B) $2(2 + \sqrt{3})$
 C) $2(1 + 2\sqrt{3})$ D) $4\sqrt{3}$
 E) 4

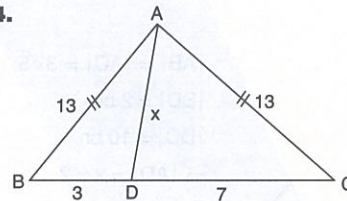
13.



$|AB| = |AC|$
 $|BC| = 8$ br
 $|AD| = 6\sqrt{2}$ br
 $|CD| = 2$ br
 $\Rightarrow |AB| = x = ?$

- A) 4 B) $4\sqrt{2}$ C) $\sqrt{13}$ D) $2\sqrt{13}$ E) 10

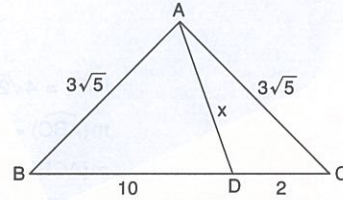
14.



$|AB| = |AC| = 13$ br
 $|BD| = 3$ br
 $|DC| = 7$ br
 $\Rightarrow |AD| = x = ?$

- A) $\sqrt{37}$ B) $\sqrt{39}$ C) 7
 D) $2\sqrt{37}$ E) $2\sqrt{39}$

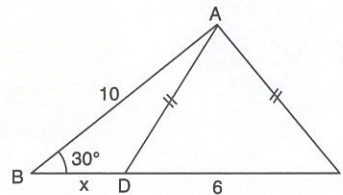
15.



$|AB| = 3\sqrt{5}$ br
 $|AC| = 3\sqrt{5}$ br
 $|BD| = 10$ br
 $|DC| = 2$ br
 $\Rightarrow |AD| = x = ?$

- A) $\sqrt{5}$ B) $\sqrt{10}$ C) 5 D) 10 E) $10\sqrt{2}$

16.



$|AD| = |AC|$
 $m(\widehat{ABC}) = 30^\circ$
 $|AB| = 10$ br
 $|DC| = 6$ br
 $\Rightarrow |BD| = x = ?$

- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) $5\sqrt{3}$
 D) $5(\sqrt{3} - 1)$ E) $5\sqrt{3} - 3$



1. $[AB] \perp [BC]$
 $[BD] \perp [DC]$
 $|AB| = 5 \text{ br}$
 $|DC| = 4 \text{ br}$
 $|BD| = 3 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) 10 B) 8 C) $5\sqrt{3}$ D) $5\sqrt{2}$ E) 5

2. $|AB| = |AC| = 3\sqrt{5} \text{ br}$
 $|BD| = 2 \text{ br}$
 $|DC| = 10 \text{ br}$
 $\Rightarrow |AD| = x = ?$
- A) $5\sqrt{2}$ B) 5 C) 4 D) $4\sqrt{2}$ E) 3

3. $|AB| = 4\sqrt{2} \text{ br}$
 $m(\widehat{ABC}) = 45^\circ$
 $m(\widehat{ACB}) = 30^\circ$
 $\Rightarrow |AC| = x = ?$
- A) $4\sqrt{3}$ B) 8 C) $6\sqrt{2}$ D) 6 E) 12

4. $[BA] \perp [AC]$
 $[ED] \perp [BC]$
 $m(\widehat{BED}) = 30^\circ$
 $|ED| = 2\sqrt{3} \text{ br}$
 $|EA| = 2 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) 4 B) $4\sqrt{3}$ C) 8 D) $6\sqrt{3}$ E) 12

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5. $m(\widehat{ABC}) = 45^\circ$
 $m(\widehat{ACB}) = 15^\circ$
 $|AC| = 4 \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) 2 B) $2\sqrt{3}$ C) $2\sqrt{3} - 2$
D) $2\sqrt{3} + 2$ E) $6\sqrt{2}$

6. $|AC| = |DE|$
 $[AB] \perp [DC]$
 $|AE| = 2 \text{ br}$
 $|EB| = 6 \text{ br}$
 $|BC| = 6 \text{ br}$
 $\Rightarrow |BD| = x = ?$
- A) 4 B) 6 C) 8 D) 10 E) 15

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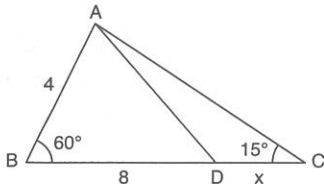
7. $[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $|AD| = 4 \text{ br}$
 $|DC| = 2 \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) $4\sqrt{2}$ B) 5 C) $4\sqrt{5}$ D) 10 E) $8\sqrt{5}$

8. $|DC| = |BC| = 5 \text{ br}$
 $|AD| = 1 \text{ br}$
 $|BD| = 6 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) $4\sqrt{2}$ B) 5 C) 6 D) $6\sqrt{2}$ E) 8

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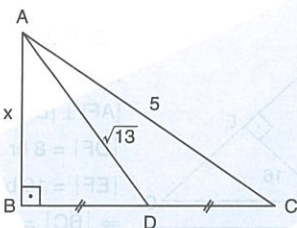
9.



$$\begin{aligned} m(\widehat{ABC}) &= 60^\circ \\ m(\widehat{ACB}) &= 15^\circ \\ |AB| &= 4 \text{ br} \\ |BD| &= 8 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 4 B) $4\sqrt{3}$ C) 6 D) $6\sqrt{3}$ E) $2\sqrt{3}$

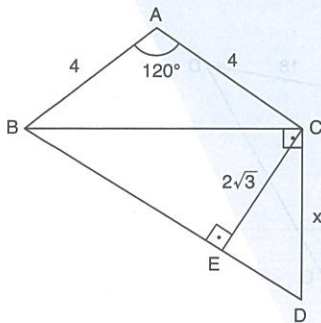
10.



$$\begin{aligned} |BD| &= |DC| \\ |AB| &\perp |BC| \\ |AC| &= 5 \text{ br} \\ |AD| &= \sqrt{13} \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 2 B) 3 C) $3\sqrt{2}$ D) 4 E) $4\sqrt{2}$

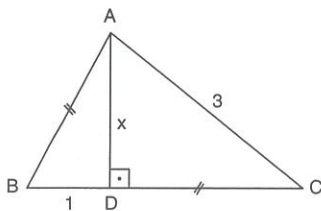
11.



$$\begin{aligned} m(\widehat{BAC}) &= 120^\circ \\ |CE| &\perp |BD| \\ |BC| &\perp |CD| \\ |AB| &= |AC| = 4 \text{ br} \\ |EC| &= 2\sqrt{3} \text{ br} \\ \Rightarrow |CD| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) 6 D) $6\sqrt{3}$ E) 8

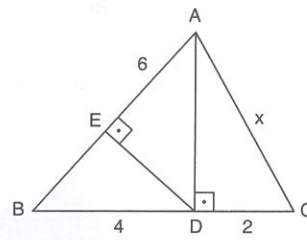
12.



$$\begin{aligned} |AD| &\perp |BC| \\ |AB| &= |AC| \\ |AC| &= 3 \text{ br} \\ |BD| &= 1 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) $\frac{1}{2}$ B) 1 C) $\frac{3}{2}$ D) 2 E) $\frac{5}{2}$

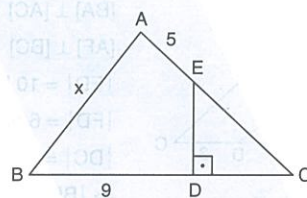
13.



$$\begin{aligned} |DE| &\perp |AB| \\ |AD| &\perp |BC| \\ |AE| &= 6 \text{ br} \\ |DC| &= 2 \text{ br} \\ |BD| &= 4 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $4\sqrt{2}$ B) 5 C) $\sqrt{17}$ D) $2\sqrt{13}$ E) $2\sqrt{17}$

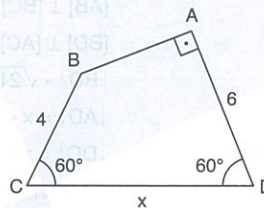
14.



$$\begin{aligned} ABC &\text{ eşkenar üçgen} \\ ABC &\text{ equilateral triangle} \\ |ED| &\perp |BC| \\ |AE| &= 5 \text{ br} \\ |BD| &= 9 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 14 B) 13 C) 12 D) 11 E) 10

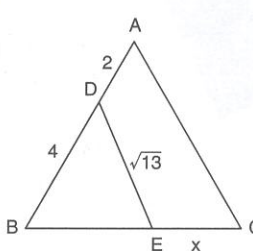
15.



$$\begin{aligned} m(\widehat{BCD}) &= 60^\circ \\ m(\widehat{CDA}) &= 60^\circ \\ |BA| &\perp |AD| \\ |BC| &= 4 \text{ br} \\ |AD| &= 6 \text{ br} \\ \Rightarrow |CD| &= x = ? \end{aligned}$$

- A) 6 B) 8 C) 10 D) 12 E) 14

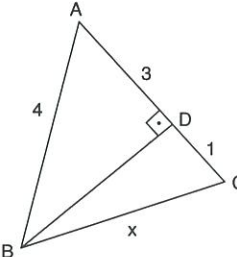
16.

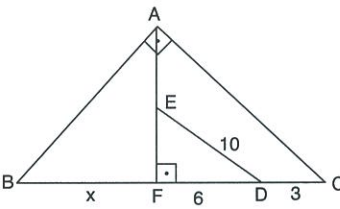


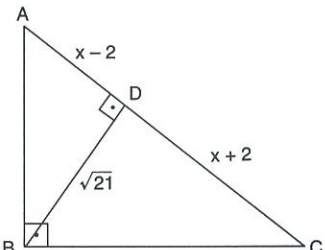
$$\begin{aligned} ABC &\text{ eşkenar üçgen} \\ ABC &\text{ equilateral triangle} \\ |AD| &= 2 \text{ br} \\ |BD| &= 4 \text{ br} \\ |DE| &= \sqrt{13} \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

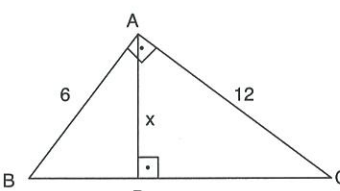
- A) 1 B) 2 C) 3 D) 4 E) 5



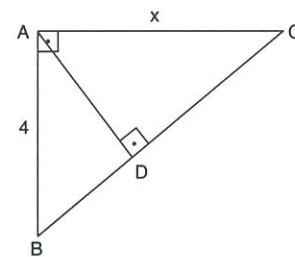
1.  $[BD] \perp [AC]$
 $|AB| = 4 \text{ br}$
 $|AD| = 3 \text{ br}$
 $|DC| = 1 \text{ br}$
 $\Rightarrow |BC| = x = ?$
- A) $2\sqrt{2}$ B) $3\sqrt{2}$ C) $\sqrt{26}$ D) $2\sqrt{26}$ E) 26

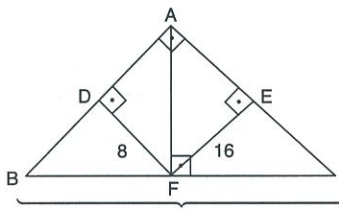
2.  $2|AE| = |EF|$
 $[BA] \perp [AC]$
 $[AF] \perp [BC]$
 $|ED| = 10 \text{ br}$
 $|FD| = 6 \text{ br}$
 $|DC| = 3 \text{ br}$
 $\Rightarrow |BF| = x = ?$
- A) 4 B) 6 C) 9 D) 12 E) 16

3.  $[AB] \perp [BC]$
 $[BD] \perp [AC]$
 $|BD| = \sqrt{21} \text{ br}$
 $|AD| = x - 2$
 $|DC| = x + 2$
 $\Rightarrow |AC| = ?$
- A) 4 B) 5 C) 6 D) 8 E) 10

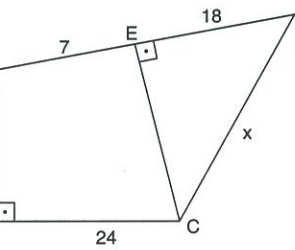
4.  $[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $|AB| = 6 \text{ br}$
 $|AC| = 12 \text{ br}$
 $\Rightarrow |AD| = x = ?$
- A) 3 B) 6 C) $6\sqrt{5}$ D) $\frac{12\sqrt{5}}{5}$ E) $12\sqrt{5}$

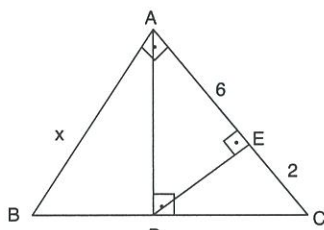
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5.  $[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $|DC| = 3|BD|$
 $|AB| = 4 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) $4\sqrt{3}$ D) $6\sqrt{3}$ E) $8\sqrt{3}$

6.  AEFD dikdörtgen
AEFD rectangle
 $[AF] \perp [BC]$
 $|DF| = 8 \text{ br}$
 $|EF| = 16 \text{ br}$
 $\Rightarrow |BC| = x = ?$
- A) $4\sqrt{5}$ B) $8\sqrt{5}$ C) $12\sqrt{5}$
D) $16\sqrt{5}$ E) $20\sqrt{5}$

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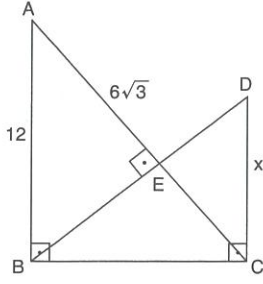
7.  $[AB] \perp [BC]$
 $[CE] \perp [AD]$
 $|BA| = |AE| = 7 \text{ br}$
 $|ED| = 18 \text{ br}$
 $|BC| = 24 \text{ br}$
 $\Rightarrow |DC| = x = ?$
- A) 18 B) 20 C) 24 D) 25 E) 30

8.  $[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $[DE] \perp [AC]$
 $|AE| = 6 \text{ br}$
 $|EC| = 2 \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) 6 D) $4\sqrt{3}$ E) $8\sqrt{3}$

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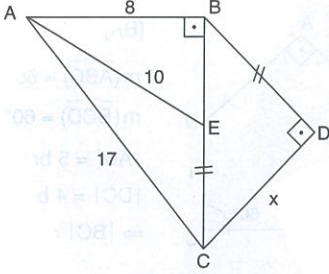
9.



$[AB] \perp [BC]$
 $[BC] \perp [DC]$
 $[BE] \perp [AC]$
 $|AE| = 6\sqrt{3}$ br
 $|AB| = 12$ br
 $\Rightarrow |DC| = x = ?$

- A) $2\sqrt{3}$ B) $3\sqrt{3}$ C) 4 D) $4\sqrt{3}$ E) $6\sqrt{3}$

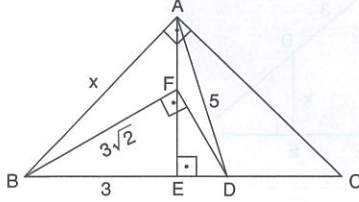
10.



$[AB] \perp [BC]$
 $[BD] \perp [DC]$
 $|BD| = |EC|$
 $|AB| = 8$ br
 $|AE| = 10$ br
 $|AC| = 17$ br
 $\Rightarrow |DC| = x = ?$

- A) 6 B) 9 C) 12 D) 15 E) 20

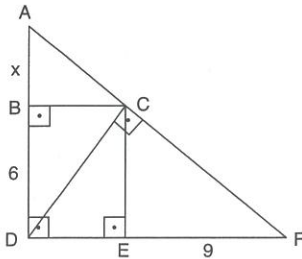
11.



$[BA] \perp [AC]$
 $[BF] \perp [FD]$
 $[AE] \perp [BC]$
 $|BF| = 3\sqrt{2}$ br
 $|AD| = 5$ br
 $|BE| = 3$ br
 $\Rightarrow |AB| = x = ?$

- A) 5 B) $5\sqrt{3}$ C) 15 D) $\sqrt{30}$ E) 30

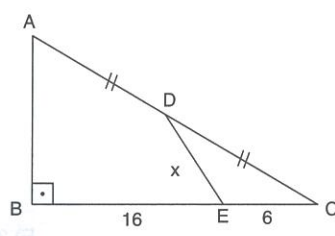
12.



BCED dikdörtgen
 $BCED$ rectangle
 $[DC] \perp [AF]$
 $|BD| = 6$ br
 $|EF| = 9$ br
 $\Rightarrow |AB| = x = ?$

- A) $\frac{4}{3}$ B) $\frac{8}{3}$ C) $\frac{16}{3}$ D) $\frac{7}{2}$ E) 7

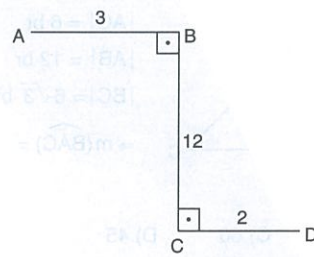
13.



$[AB] \perp [BC]$
 $|AD| = |DC|$
 $|BE| = 16$ br
 $|EC| = 6$ br
 $|AC| = 24$ br
 $\Rightarrow |DE| = x = ?$

- A) $2\sqrt{29}$ B) $\sqrt{29}$ C) $4\sqrt{3}$ D) 7 E) 5

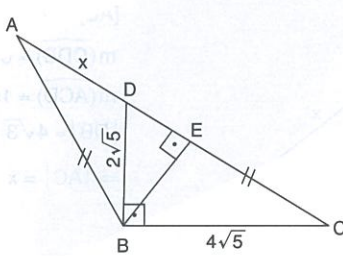
14.



$[AB] \perp [BC]$
 $[BC] \perp [CD]$
 $|AB| = 3$ br
 $|BC| = 12$ br
 $|CD| = 2$ br
 $\Rightarrow |AD| = ?$

- A) 5 B) 10 C) 12 D) 13 E) 15

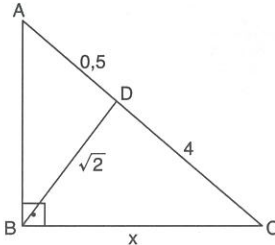
15.



$[DB] \perp [BC]$
 $[BE] \perp [DC]$
 $|AB| = |EC|$
 $|BD| = 2\sqrt{5}$ br
 $|BC| = 4\sqrt{5}$ br
 $\Rightarrow |AD| = x = ?$

- A) $2(\sqrt{3}-1)$ B) $4(\sqrt{3}-1)$
 C) $4\sqrt{3}-2$ D) $4(\sqrt{3}+1)$
 E) $2(\sqrt{3}+1)$

16.

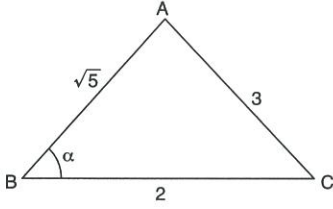


$[AB] \perp [DC]$
 $|AD| = 0,5$ br
 $|DC| = 4$ br
 $|BD| = \sqrt{2}$ br
 $\Rightarrow |BC| = x = ?$

- A) $\sqrt{2}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $4\sqrt{2}$ E) $5\sqrt{2}$



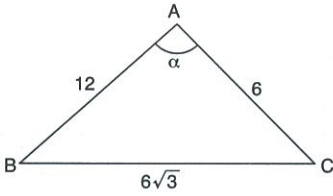
1.



$$\begin{aligned} |AC| &= 3 \text{ br} \\ |BC| &= 2 \text{ br} \\ |AB| &= \sqrt{5} \text{ br} \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 90 B) 75 C) 60 D) 45 E) 30

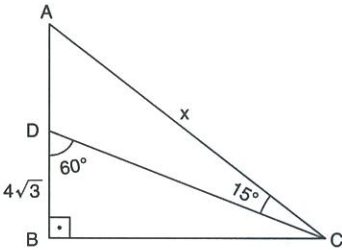
2.



$$\begin{aligned} |AC| &= 6 \text{ br} \\ |AB| &= 12 \text{ br} \\ |BC| &= 6\sqrt{3} \text{ br} \\ \Rightarrow m(\widehat{BAC}) &= \alpha = ? \end{aligned}$$

- A) 90 B) 75 C) 60 D) 45 E) 30

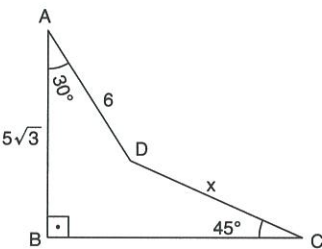
3.



$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{CDB}) &= 60^\circ \\ m(\widehat{ACD}) &= 15^\circ \\ |DB| &= 4\sqrt{3} \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $8\sqrt{3}$ B) $12\sqrt{6}$ C) 12 D) $12\sqrt{2}$ E) $12\sqrt{3}$

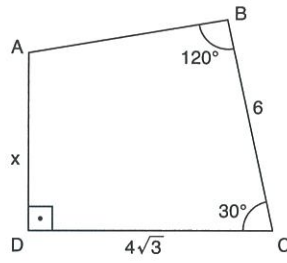
4.



$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{BAD}) &= 30^\circ \\ m(\widehat{BCD}) &= 45^\circ \\ |AD| &= 6 \text{ br} \\ |AB| &= 5\sqrt{3} \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 3 B) 6 C) $2\sqrt{3}$ D) $3\sqrt{3}$ E) $2\sqrt{6}$

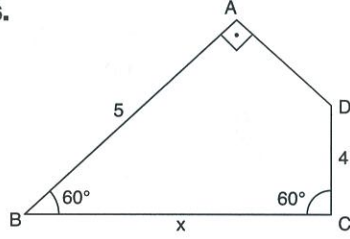
5.



$$\begin{aligned} [AD] &\perp [DC] \\ m(\widehat{ABC}) &= 120^\circ \\ m(\widehat{BCD}) &= 30^\circ \\ |BC| &= 6 \text{ br} \\ |DC| &= 4\sqrt{3} \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) $2\sqrt{3}$ E) $3\sqrt{3}$

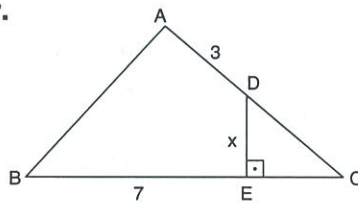
6.



$$\begin{aligned} [BA] &\perp [AD] \\ m(\widehat{ABC}) &= 60^\circ \\ m(\widehat{BCD}) &= 60^\circ \\ |AB| &= 5 \text{ br} \\ |DC| &= 4 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 3 B) 4 C) 5 D) 6 E) 7

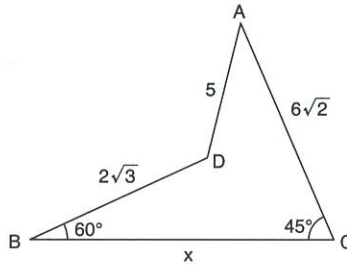
7.



$$\begin{aligned} ABC &\text{ eşkenar üçgen} \\ ABC &\text{ equilateral triangle} \\ [DE] &\perp [EC] \\ |AD| &= 3 \text{ br} \\ |BE| &= 7 \text{ br} \\ \Rightarrow |DE| &= x = ? \end{aligned}$$

- A) 2 B) $2\sqrt{3}$ C) 4 D) $4\sqrt{3}$ E) $8\sqrt{3}$

8.

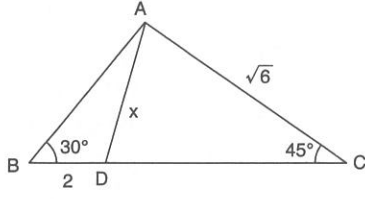


$$\begin{aligned} m(\widehat{DAC}) &> 45^\circ \\ m(\widehat{DBC}) &= 60^\circ \\ m(\widehat{ACB}) &= 45^\circ \\ |AD| &= 5 \text{ br} \\ |AC| &= 6\sqrt{2} \text{ br} \\ |BD| &= 2\sqrt{3} \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) $4(\sqrt{3}+1)$ B) $4(\sqrt{3}+1)$
C) $6\sqrt{3}+1$ D) $10+\sqrt{3}$
E) $6+\sqrt{3}$



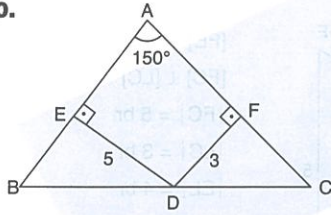
9.



$$\begin{aligned} m(\widehat{ABC}) &= 30^\circ \\ m(\widehat{ACB}) &= 45^\circ \\ |AC| &= \sqrt{6} \text{ br} \\ |BD| &= 2 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) $\sqrt{3}$ D) $\sqrt{5}$ E) $\sqrt{6}$

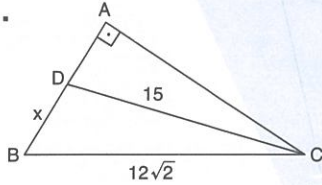
10.



$$\begin{aligned} |AB| &= |AC| \\ [DE] &\perp [AB] \\ [DF] &\perp [AC] \\ |DE| &= 5 \text{ br} \\ |DF| &= 3 \text{ br} \\ m(\widehat{BAC}) &= 150^\circ \\ \Rightarrow |BE| + |FC| &= ? \end{aligned}$$

- A) $10 + 5\sqrt{3}$ B) $6 + 3\sqrt{3}$ C) $10 + 8\sqrt{3}$
D) $16 + 5\sqrt{3}$ E) $16 + 8\sqrt{3}$

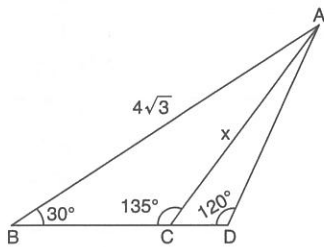
11.



$$\begin{aligned} [BA] &\perp [AC] \\ |AB| &= |AC| \\ |BC| &= 12\sqrt{2} \text{ br} \\ |DC| &= 15 \text{ br} \\ |DB| &= x \\ \Rightarrow x &= ? \end{aligned}$$

- A) 10 B) 9 C) 6 D) 5 E) 3

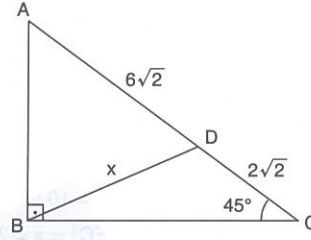
12.



$$\begin{aligned} m(\widehat{ABD}) &= 30^\circ \\ m(\widehat{ACB}) &= 135^\circ \\ m(\widehat{ADB}) &= 120^\circ \\ |AB| &= 4\sqrt{3} \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) $4\sqrt{3}$ D) $2\sqrt{6}$ E) 6

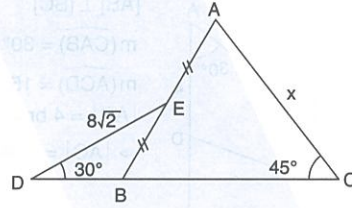
13.



$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{BCA}) &= 45^\circ \\ |AD| &= 6\sqrt{2} \text{ br} \\ |DC| &= 2\sqrt{2} \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 2 B) 3 C) $2\sqrt{7} + 2$
D) $4\sqrt{2}$ E) $2\sqrt{10}$

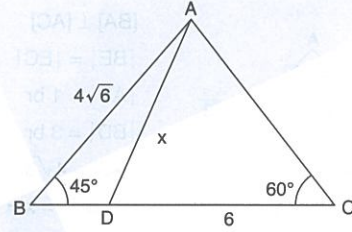
14.



$$\begin{aligned} m(\widehat{ACD}) &= 45^\circ \\ m(\widehat{EDC}) &= 30^\circ \\ |AB| &= |AC| \\ |AE| &= |EB| \\ |DE| &= 8\sqrt{2} \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 4 B) 6 C) 8 D) 12 E) 16

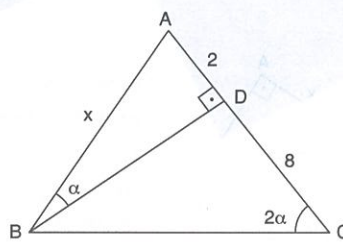
15.



$$\begin{aligned} m(\widehat{ABC}) &= 45^\circ \\ m(\widehat{ACB}) &= 60^\circ \\ |AB| &= 4\sqrt{6} \text{ br} \\ |DC| &= 6 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) $2\sqrt{3}$ B) $2\sqrt{13}$ C) $2\sqrt{7}$ D) $4\sqrt{10}$ E) $4\sqrt{7}$

16.

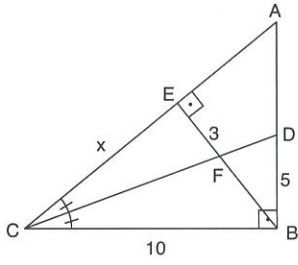


$$\begin{aligned} [BD] &\perp [AC] \\ m(\widehat{ACB}) &= 2\alpha \\ m(\widehat{ABD}) &= \alpha \\ |AD| &= 2 \text{ br} \\ |DC| &= 8 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) $2\sqrt{6}$ B) $4\sqrt{2}$ C) $2\sqrt{10}$ D) $4\sqrt{3}$ E) $2\sqrt{15}$



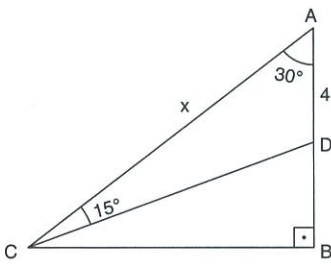
1.



$[AB] \perp [BC]$
 $[BE] \perp [AC]$
 $m(\widehat{ACD}) = m(\widehat{DCB})$
 $|EF| = 3 \text{ br}$
 $|DB| = 5 \text{ br}$
 $|BC| = 10 \text{ br}$
 $\Rightarrow |EC| = x = ?$

A) 4 B) 5 C) 6 D) 10 E) 12

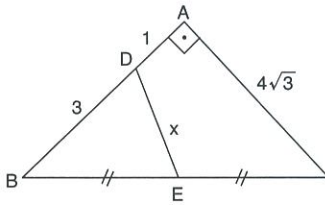
2.



$[AB] \perp [BC]$
 $m(\widehat{CAB}) = 30^\circ$
 $m(\widehat{ACD}) = 15^\circ$
 $|AD| = 4 \text{ br}$
 $\Rightarrow |AC| = x = ?$

A) 6 B) 8 C) 10
 D) $4(\sqrt{3}-1)$ E) $4(\sqrt{3}+1)$

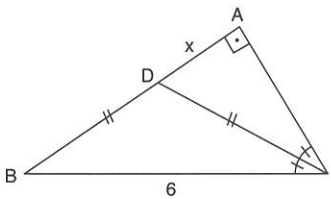
3.



$[BA] \perp [AC]$
 $|BE| = |EC|$
 $|AD| = 1 \text{ br}$
 $|BD| = 3 \text{ br}$
 $|AC| = 4\sqrt{3} \text{ br}$
 $\Rightarrow |DE| = x = ?$

A) $\sqrt{2}$ B) $\sqrt{3}$ C) $\sqrt{5}$ D) $\sqrt{7}$ E) $\sqrt{13}$

4.

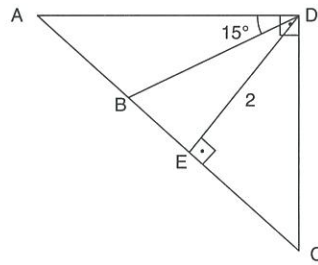


$[BA] \perp [AC]$
 $m(\widehat{ACD}) = m(\widehat{DCB})$
 $|BD| = |DC|$
 $|BC| = 6 \text{ br}$
 $\Rightarrow |AD| = x = ?$

A) $\sqrt{2}$ B) $\sqrt{3}$ C) 3 D) 4 E) $\sqrt{6}$

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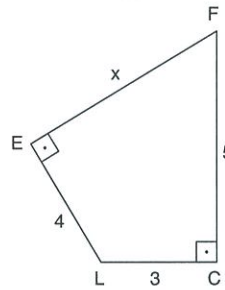
5.



$|BD| = |BC|$
 $[AD] \perp [DC]$
 $[DE] \perp [AC]$
 $|ED| = 2 \text{ br}$
 $m(\widehat{ADB}) = 15^\circ$
 $\Rightarrow |AC| = ?$

A) $\frac{1}{2}$ B) 1 C) 2 D) 4 E) 8

6.

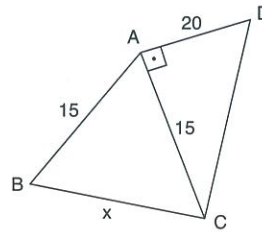


$[FE] \perp [EL]$
 $[FC] \perp [LC]$
 $|FC| = 5 \text{ br}$
 $|LC| = 3 \text{ br}$
 $|EL| = 4 \text{ br}$
 $\Rightarrow |EF| = x = ?$

A) $\sqrt{2}$ B) 3 C) $3\sqrt{2}$ D) $4\sqrt{2}$ E) 5

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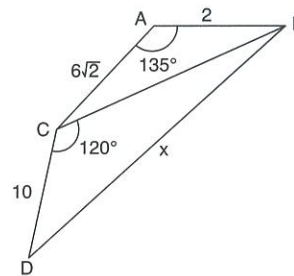
7.



$|AB| = |AC| = 15 \text{ br}$
 $m(\widehat{ADC}) = m(\widehat{ABC})$
 $[DA] \perp [AC]$
 $|AD| = 20 \text{ br}$
 $\Rightarrow |BC| = x = ?$

A) 9 B) 12 C) 15 D) 18 E) 24

8.

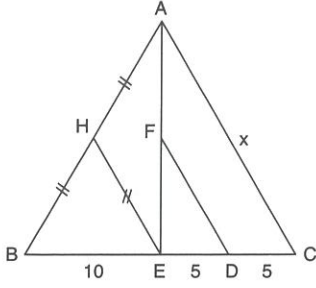


$m(\widehat{BAC}) = 135^\circ$
 $m(\widehat{BCD}) = 120^\circ$
 $|AB| = 2 \text{ br}$
 $|AC| = 6\sqrt{2} \text{ br}$
 $|DC| = 10 \text{ br}$
 $\Rightarrow |BD| = x = ?$

A) 5 B) $5\sqrt{3}$ C) 10 D) $10\sqrt{2}$ E) $10\sqrt{3}$



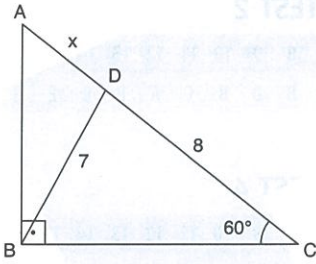
9.



$$\begin{aligned} |AH| &= |HB| = |HE| \\ |AF| &= |FE| \\ |ED| &= |DC| = 5 \text{ br} \\ |BE| &= 10 \text{ br} \\ |AB| &= 16 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 6 B) 9 C) 12 D) 16 E) 20

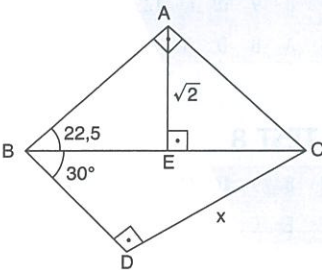
10.



$$\begin{aligned} [AB] &\perp [BC] \\ |DC| &= 8 \text{ br} \\ |BD| &= 7 \text{ br} \\ m(\widehat{ACB}) &= 60^\circ \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 8

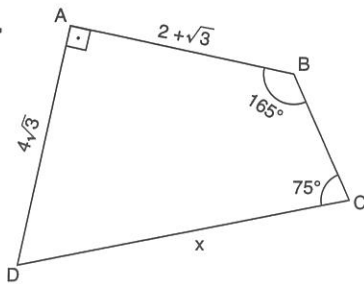
11.



$$\begin{aligned} [BA] &\perp [AC] \\ [AE] &\perp [BC] \\ [BD] &\perp [DC] \\ |AE| &= \sqrt{2} \text{ br} \\ m(\widehat{ABC}) &= 22,5^\circ \\ m(\widehat{CBD}) &= 30^\circ \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 1 B) $\sqrt{2}$ C) 2 D) $2\sqrt{2}$ E) 4

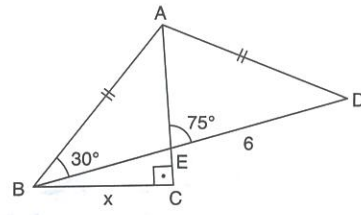
12.



$$\begin{aligned} [DA] &\perp [AB] \\ m(\widehat{ABC}) &= 165^\circ \\ |AB| &= 2 + \sqrt{3} \text{ br} \\ |AD| &= 4\sqrt{3} \text{ br} \\ m(\widehat{BCD}) &= 75^\circ \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) $\sqrt{3} + 4$ B) $3\sqrt{3}$ C) $2\sqrt{3} + 1$
D) $4\sqrt{3} + 1$ E) $5 + 2\sqrt{3}$

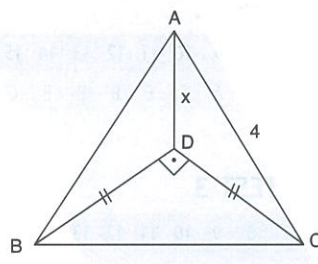
13.



$$\begin{aligned} |BA| &= |AD| \\ [AC] &\perp [BC] \\ m(\widehat{ABD}) &= 30^\circ \\ m(\widehat{AED}) &= 75^\circ \\ |ED| &= 6 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 3 B) $3\sqrt{2}$ C) $3\sqrt{3}$ D) 6 E) $6\sqrt{2}$

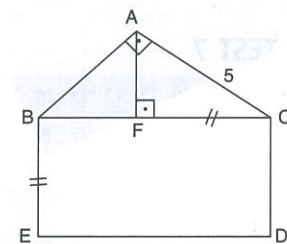
14.



$$\begin{aligned} ABC &\text{ eşkenar üçgen} \\ ABC &\text{ equilateral} \\ &\text{triangle} \\ [BD] &\perp [DC] \\ |BD| &= |DC| \\ |AC| &= 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 2 B) $2\sqrt{3} - 2$ C) $2\sqrt{3}$
D) $4\sqrt{3}$ E) 12

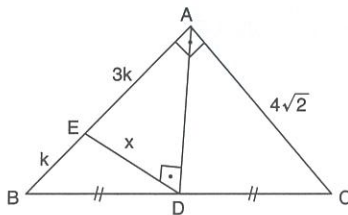
15.



$$\begin{aligned} BCDE &\text{ dikdörtgen} \\ BCDE &\text{ rectangle} \\ [BA] &\perp [AC] \\ [AF] &\perp [BC] \\ |FC| &= |BE| \\ |BF| &= 24 \text{ br} \\ |AC| &= 5 \text{ br} \\ \Rightarrow \angle(BCDE) &= ? \end{aligned}$$

- A) 45 B) 49 C) 50 D) 51 E) 52

16.



$$\begin{aligned} [AB] &\perp [AC] \\ [AD] &\perp [DE] \\ |AE| &= 3|EB| \\ |BD| &= |DC| \\ |AC| &= 4\sqrt{2} \\ \Rightarrow |ED| &= x = ? \end{aligned}$$

- A) $\sqrt{3}$ B) 3 C) $2\sqrt{3}$ D) $\sqrt{6}$ E) 6



DİK ÜÇGEN RIGHT TRIANGLES

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	C	E	A	B	D	B	A	C	E	B	B	E	C	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	C	B	A	D	D	D	B	D	B	C	A	B	B	E	C

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	C	C	C	E	B	E	B	E	E	A	B	A	D	D

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	A	D	E	D	D	D	A	E	E	E	A	E	A	C	D

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	D	B	E	C	E	B	E	C	E	D	E	E	C	C

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	C	A	E	E	C	B	A	B	D	B	A	D	D	C	E

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	B	D	C	C	C	A	B	B	B	D	D	B	B	C

TEST 8

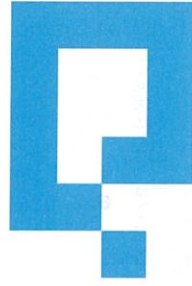
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	E	E	D	C	E	E	E	C	C	A	B	C	D	C	C

TEST 9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	C	D	E	B	D	D	D	B	E	E	D	E	E	B	C

TEST 10

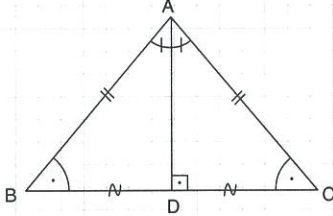
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	E	E	B	E	C	E	E	D	B	C	D	B	B	E	C



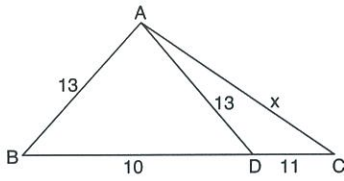
**İKİZKENAR-EŞKENAR
ÜÇGEN**
ISOSCELES-EQUILATERAL
TRIANGLE



ÖZELLİK | Property 1



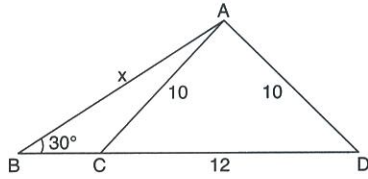
1.



$\Rightarrow x = ?$

20

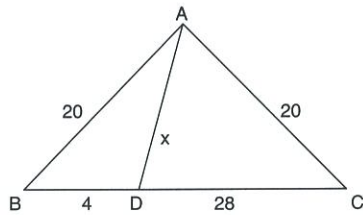
2.



$\Rightarrow x = ?$

16

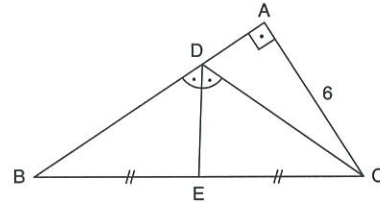
3.



$\Rightarrow x = ?$

 $12\sqrt{2}$

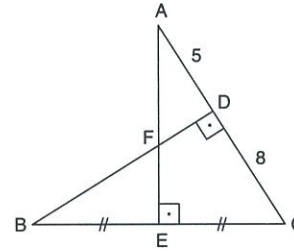
4.



$|AB| = 18 \text{ br}$
 $\Rightarrow \angle(ADC) = ?$

24

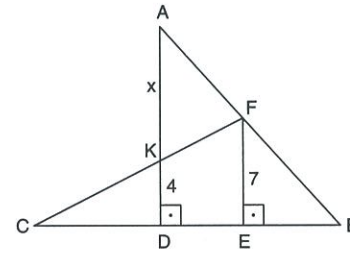
5.



$\Rightarrow |BD| = ?$

12

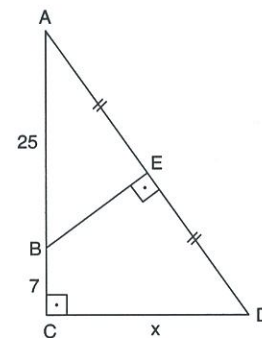
6.



$|CF| = |FB|$
 $\Rightarrow x = ?$

6

7.

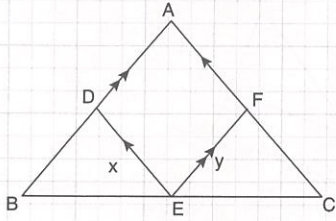


$\Rightarrow x = ?$

24

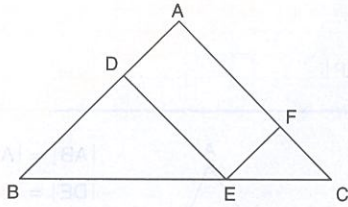


ÖZELLİK | Property 2



$$\begin{aligned} |AB| &= |AC| \\ [EF] &\parallel [AB] \\ [DE] &\parallel [AC] \\ x + y &= |AB| = |AC| \end{aligned}$$

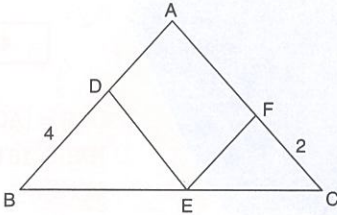
1.



$$\begin{aligned} |AB| &= |AC| \\ [AD] &\parallel [EF] \\ [DE] &\parallel [AC] \\ \text{Ç(ADEF)} &= 12 \text{ br} \\ \Rightarrow |AC| &= ? \end{aligned}$$

6

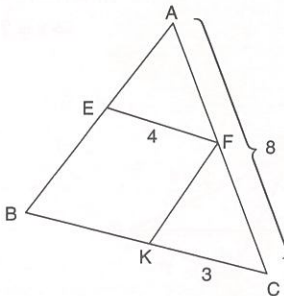
2.



$$\begin{aligned} \text{ADEF paralelkenar} \\ \text{ADEF paralellogram} \\ |AB| &= |AC| \\ \Rightarrow \text{Ç(AFED)} &= ? \end{aligned}$$

12

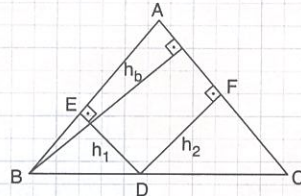
3.



$$\begin{aligned} |BA| &= |BC| \\ [EF] &\parallel [BC] \\ [FK] &\parallel [AB] \\ \Rightarrow \text{Ç(ABC)} &= ? \end{aligned}$$

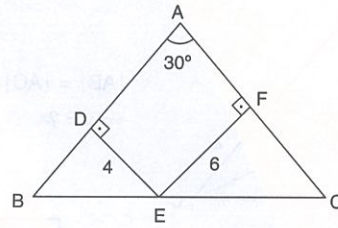
22

ÖZELLİK | Property 3



$$\begin{aligned} |AB| &= |AC| \\ h_1 + h_2 &= h_b = h_c \end{aligned}$$

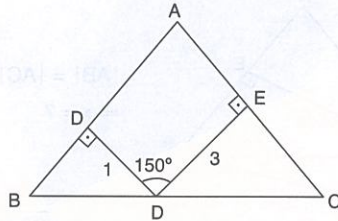
1.



$$\begin{aligned} |AB| &= |AC| \\ \Rightarrow |AC| &= ? \end{aligned}$$

20

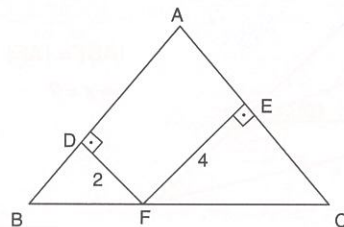
2.



$$\begin{aligned} |AB| &= |AC| \\ \Rightarrow |AC| &= ? \end{aligned}$$

8

3.

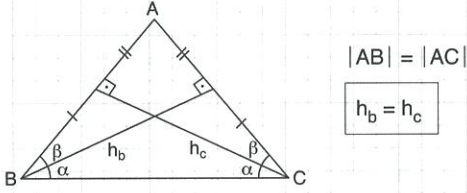


$$\begin{aligned} |AB| &= |AC| = 10 \\ \Rightarrow |BC| &= ? \end{aligned}$$

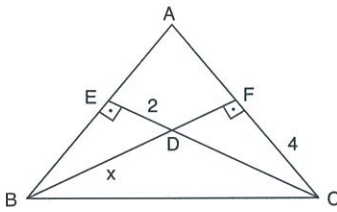
$2\sqrt{10}$



ÖZELLİK | Property 4

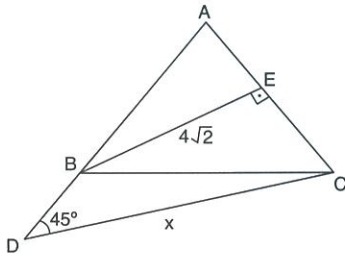


1.



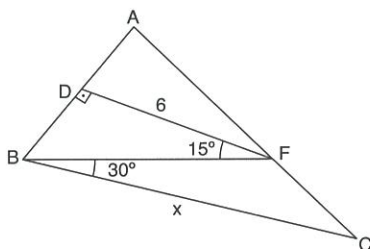
$$2\sqrt{5}$$

2.



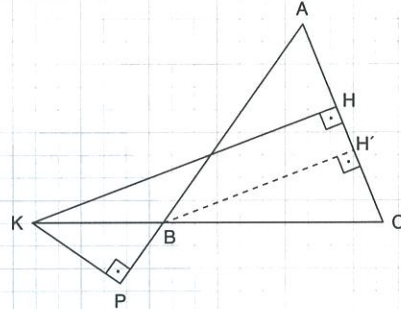
$$8$$

3.

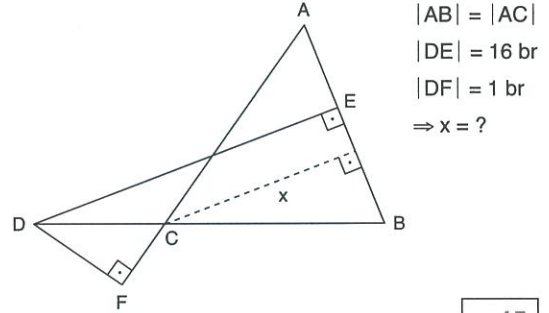


$$6\sqrt{2}$$

ÖZELLİK | Property 5

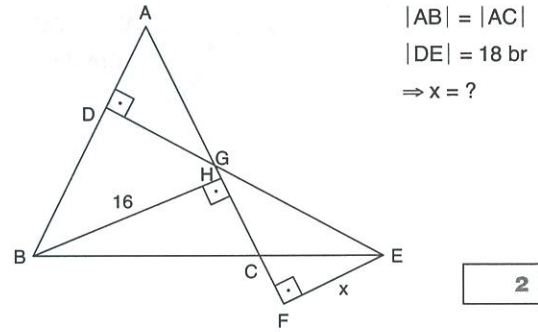


1.



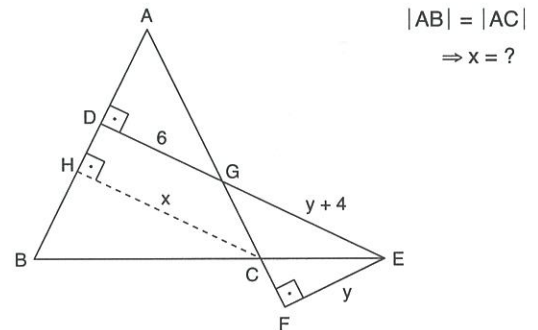
$$15$$

2.



$$2$$

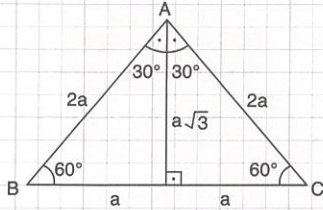
3.



$$10$$

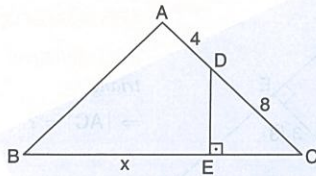


ÖZELLİK | Property 6



ABC eşkenar üçgen
ABC equilateral triangle
 $|AB| = |AC| = |BC|$

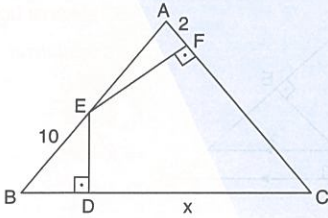
1.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow x = ?$

8

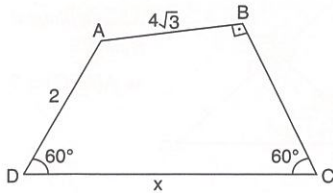
2.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow x = ?$

9

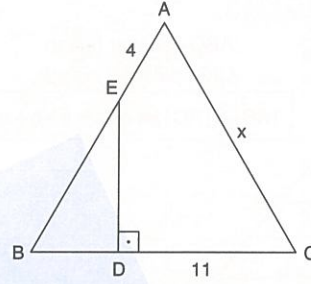
3.



$\Rightarrow x = ?$

10

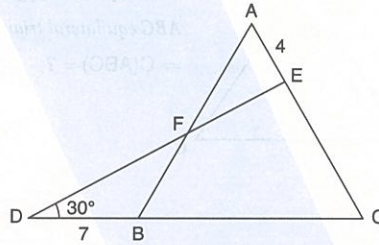
4.



ABC eşkenar üçgen
(ABC equilateral triangle)
 $\Rightarrow x = ?$

18

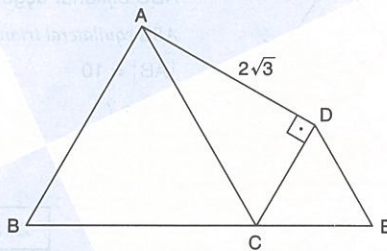
5.



ABC eşkenar üçgen
(ABC equilateral triangle)
 $\Rightarrow |BC| = ?$

15

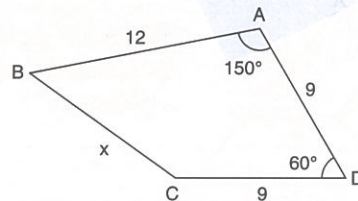
6.



ABC, DEC eşkenar üçgen
(ABC, DEC equilateral triangle)
 $\Rightarrow |BE| = ?$

6

7.



$\Rightarrow x = ?$

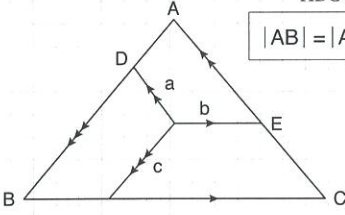
15



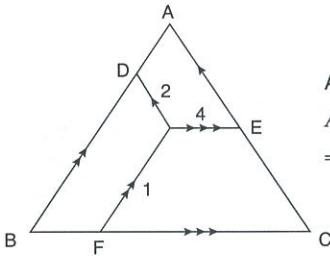
ÖZELLİK | Property 7

ABC eşkenar üçgen
ABC equilateral triangle

$$|AB| = |AC| = |BC| = a + b + c$$



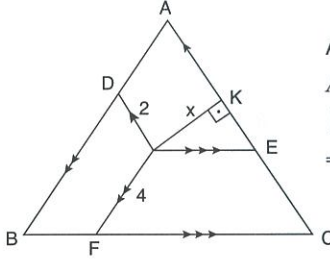
1.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow \angle(ABC) = ?$

21

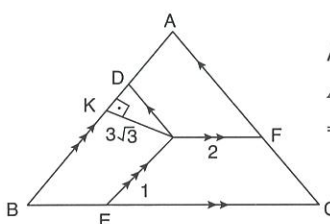
2.



ABC eşkenar üçgen
ABC equilateral triangle
 $|AB| = 10$
 $\Rightarrow x = ?$

$2\sqrt{3}$

3.



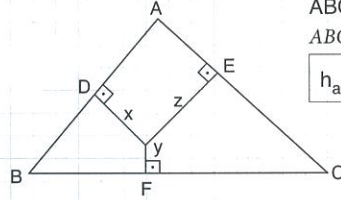
ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow \angle(ABC) = ?$

27

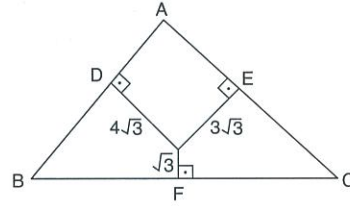
ÖZELLİK | Property 8

ABC eşkenar üçgen
ABC equilateral triangle

$$h_a = h_b = h_c = x + y + z$$



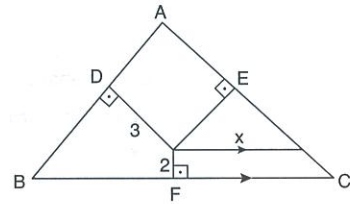
1.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow |AC| = ?$

16

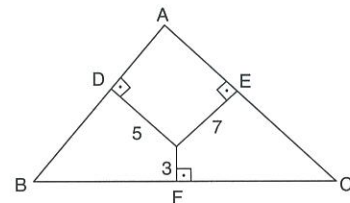
2.



ABC eşkenar üçgen
ABC equilateral triangle
 $h_a = 8$ br
 $\Rightarrow x = ?$

$2\sqrt{3}$

3.

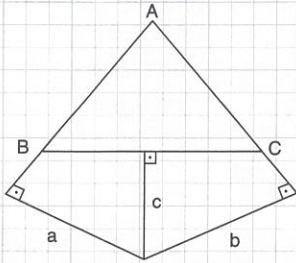


ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow A(ABC) = ?$

$75\sqrt{3}$



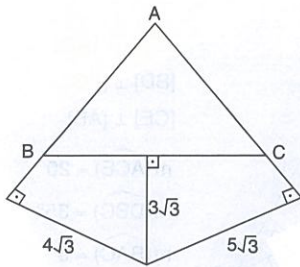
ÖZELLİK | Property 9



ABC eşkenar üçgen
ABC equilateral triangle

$$h_a = h_b = h_c = a + b - c$$

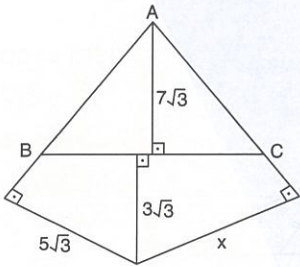
1.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow |AC| = ?$

12

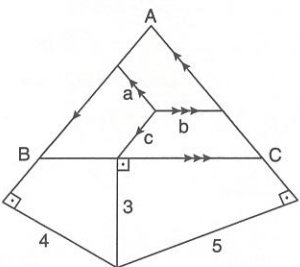
2.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow x = ?$

5√3

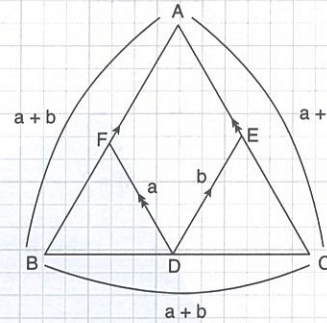
3.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow a + b + c = ?$

4√3

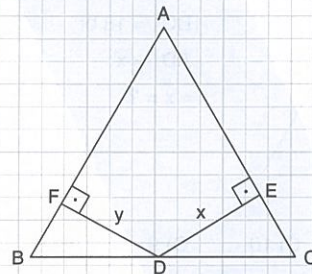
ÖZELLİK | Property 10



ABC eşkenar üçgen
ABC equilateral triangle

[DF] // [AC]
[DE] // [AB]

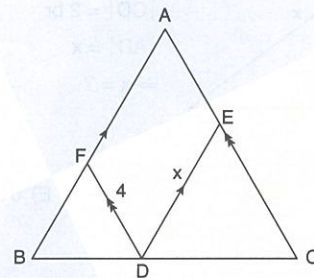
$$|AC| = |AB| = |BC| = a + b$$



[DF] ⊥ [AB]
[DE] ⊥ [AC]

ABC eşkenar üçgen (ABC equilateral triangle)
 $h_a = h_b = h_c = x + y$

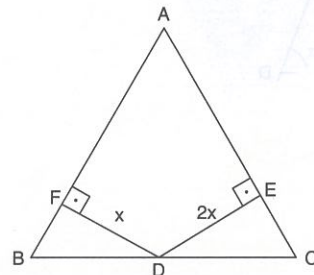
1.



ABC eşkenar üçgen
ABC equilateral triangle
 $\angle(ABC) = 36^\circ$
 $\Rightarrow x = ?$

8

2.

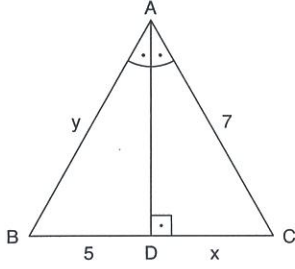


ABC eşkenar üçgen
ABC equilateral triangle
 $|AC| = 12$ br
 $\Rightarrow x = ?$

2√3



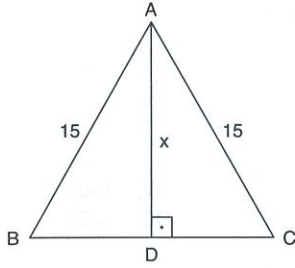
1.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ [AD] &\perp [BC] \\ |AC| &= 7 \text{ br} \\ |BD| &= 5 \text{ br} \\ |AB| &= y \\ |DC| &= x \\ \Rightarrow (y - x) &= ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 12

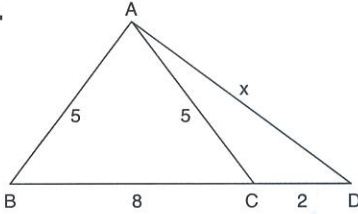
2.



$$\begin{aligned} [AD] &\perp [BC] \\ |AB| &= |AC| = 15 \text{ br} \\ |BC| &= 18 \text{ br} \\ |AD| &= x \\ \Rightarrow x &= ? \end{aligned}$$

- A) 14 B) 12 C) 10 D) 9 E) 8

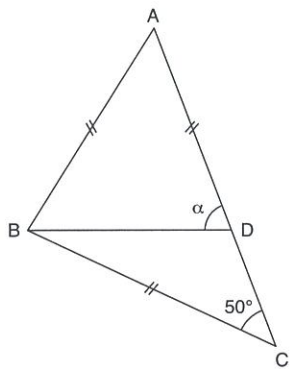
3.



$$\begin{aligned} |AB| &= |AC| = 5 \text{ br} \\ |BC| &= 8 \text{ br} \\ |CD| &= 2 \text{ br} \\ |AD| &= x \\ \Rightarrow x &= ? \end{aligned}$$

- A) $3\sqrt{5}$ B) $6\sqrt{5}$ C) 6 D) 12 E) $6\sqrt{3}$

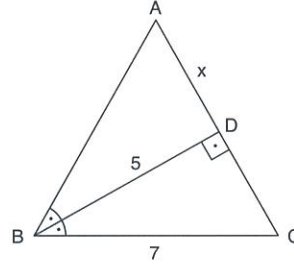
4.



$$\begin{aligned} |AB| &= |AD| = |BC| \\ m(\widehat{ACB}) &= 50^\circ \\ m(\widehat{ADB}) &= \alpha \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 50 B) 55 C) 60 D) 65 E) 70

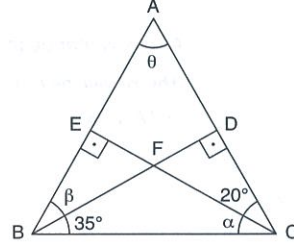
5.



$$\begin{aligned} [BD] &\perp [AC] \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ |BD| &= 5 \text{ br} \\ |BC| &= 7 \text{ br} \\ |AD| &= x \\ \Rightarrow x &= ? \end{aligned}$$

- A) $\sqrt{21}$ B) $6\sqrt{3}$ C) $6\sqrt{2}$ D) $2\sqrt{3}$ E) $2\sqrt{6}$

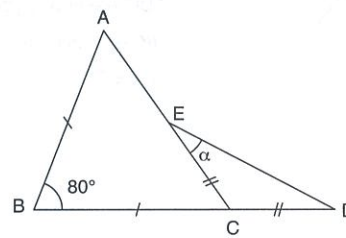
6.



$$\begin{aligned} |AB| &= |AC| \\ [BD] &\perp [AC] \\ [CE] &\perp [AB] \\ m(\widehat{ACE}) &= 20^\circ \\ m(\widehat{DBC}) &= 35^\circ \\ m(\widehat{BAC}) &= \theta \\ m(\widehat{ABD}) &= \beta \\ m(\widehat{ECB}) &= \alpha \\ \Rightarrow \alpha + \beta + \theta &= ? \end{aligned}$$

- A) 125 B) 120 C) 110 D) 115 E) 130

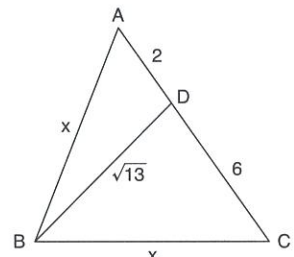
7.



$$\begin{aligned} |EC| &= |CD| \\ |AB| &= |BC| \\ m(\widehat{ABD}) &= 80^\circ \\ m(\widehat{CED}) &= \alpha \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 15 B) 20 C) 25 D) 30 E) 35

8.

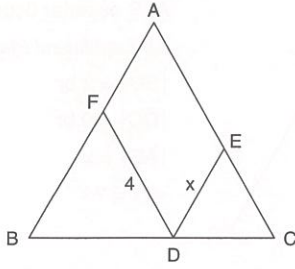


$$\begin{aligned} |AD| &= 2 \text{ br} \\ |DC| &= 6 \text{ br} \\ |BD| &= \sqrt{13} \text{ br} \\ |AB| &= |BC| = x \\ \Rightarrow x &= ? \end{aligned}$$

- A) 3 B) 4 C) 5 D) 6 E) 9



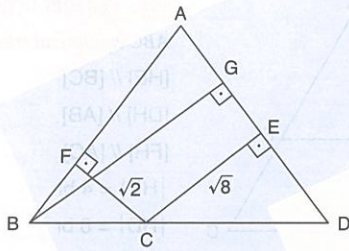
9.



$[DF] \parallel [AC]$
 $[DE] \parallel [AB]$
 $|AB| = |AC| = 12 \text{ br}$
 $|FD| = 4 \text{ br}$
 $|DE| = x$
 $\Rightarrow x = ?$

- A) 4 B) 6 C) 8 D) 10 E) 11

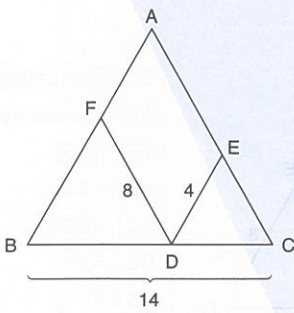
10.



$[CF] \perp [AB]$
 $[CE] \perp [AD]$
 $|AB| = |AD|$
 $[BG] \perp [AD]$
 $|CE| = \sqrt{8} \text{ br}$
 $|CF| = \sqrt{2} \text{ br}$
 $\Rightarrow |BG| = ?$

- A) $\sqrt{5}$ B) $\sqrt{6}$ C) $\sqrt{10}$ D) $3\sqrt{2}$ E) $2\sqrt{2}$

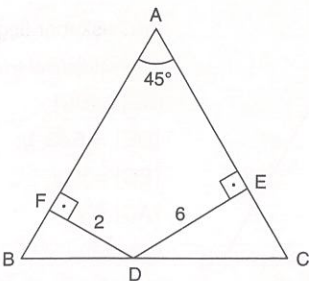
11.



$|AB| = |AC|$
 $[FD] \parallel [AC]$
 $[DE] \parallel [AB]$
 $|DE| = 4 \text{ br}$
 $|FD| = 8 \text{ br}$
 $|BC| = 14 \text{ br}$
 $\Rightarrow \text{Ç}(ABC) = ?$

- A) 38 B) 36 C) 32 D) 30 E) 28

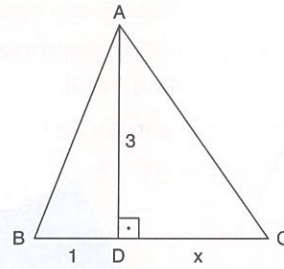
12.



$m(\widehat{BAC}) = 45^\circ$
 $[DF] \perp [AB]$
 $[DE] \perp [AC]$
 $|FD| = 2 \text{ br}$
 $|DE| = 6 \text{ br}$
 $|AB| = |AC| = x$
 $\Rightarrow x = ?$

- A) $6\sqrt{2}$ B) $8\sqrt{2}$ C) 6 D) 8 E) 10

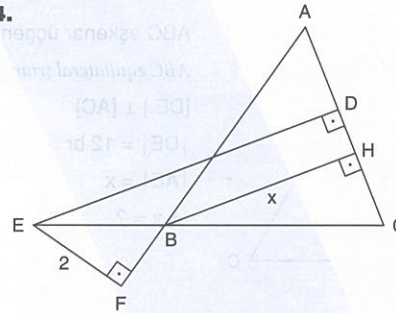
13.



$[AD] \perp [BC]$
 $|AC| = |BC|$
 $|AD| = 3 \text{ br}$
 $|DC| = x$
 $\Rightarrow x = ?$

- A) 4 B) 5 C) 6 D) 7 E) 8

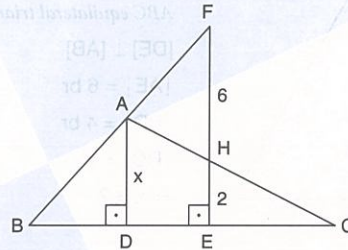
14.



$|AB| = |AC|$
 $[ED] \perp [AC]$
 $[EF] \perp [FA]$
 $[BH] \perp [AC]$
 $|ED| = 11 \text{ br}$
 $|EF| = 2 \text{ br}$
 $|BH| = x$
 $\Rightarrow x = ?$

- A) 7 B) 8 C) 9 D) 10 E) 13

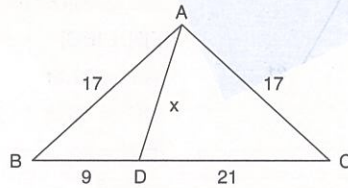
15.



$|AB| = |AC|$
 $[AD] \perp [BC]$
 $[FE] \perp [BC]$
 $|FH| = 6 \text{ br}$
 $|HE| = 2 \text{ br}$
 $|AD| = x$
 $\Rightarrow x = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

16.

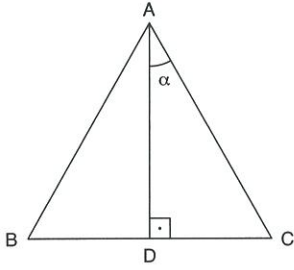


$|AB| = 17 \text{ br}$
 $|AC| = 17 \text{ br}$
 $|BD| = 9 \text{ br}$
 $|DC| = 21 \text{ br}$
 $|AD| = x$
 $\Rightarrow x = ?$

- A) 6 B) 8 C) 10 D) 15 E) 16



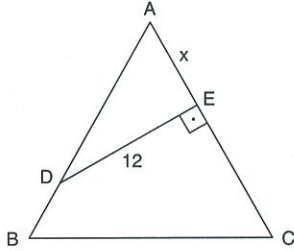
1.



ABC eşkenar üçgen
ABC equilateral triangle
 $[AD] \perp [BC]$
 $m(\widehat{DAC}) = \alpha$
 $\Rightarrow \alpha = ?$

- A) 15 B) 30 C) 45 D) 60 E) 75

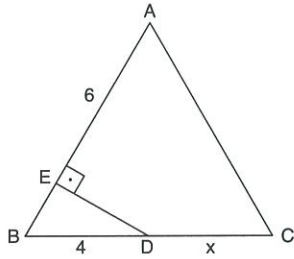
2.



ABC eşkenar üçgen
ABC equilateral triangle
 $[DE] \perp [AC]$
 $|DE| = 12$ br
 $|AE| = x$
 $\Rightarrow x = ?$

- A) $4\sqrt{3}$ B) 6 C) $8\sqrt{3}$ D) $6\sqrt{3}$ E) $4\sqrt{3}$

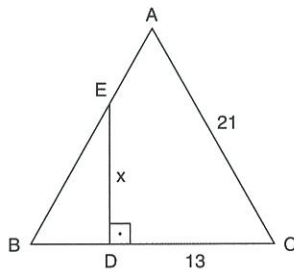
3.



ABC eşkenar üçgen
ABC equilateral triangle
 $[DE] \perp [AB]$
 $|AE| = 6$ br
 $|BD| = 4$ br
 $|DC| = x$
 $\Rightarrow x = ?$

- A) 2 B) 4 C) 6 D) 8 E) 10

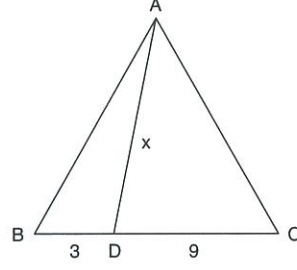
4.



ABC eşkenar üçgen
ABC equilateral triangle
 $[ED] \perp [BC]$
 $|AC| = 21$ br
 $|DC| = 13$ br
 $|ED| = x$
 $\Rightarrow x = ?$

- A) 8 B) 12 C) $8\sqrt{3}$ D) $9\sqrt{3}$ E) $16\sqrt{3}$

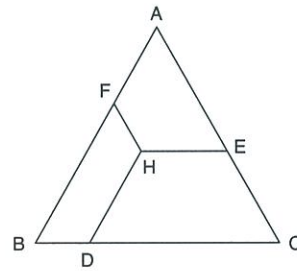
5.



ABC eşkenar üçgen
ABC equilateral triangle
 $|BD| = 3$ br
 $|DC| = 9$ br
 $|AD| = x$
 $\Rightarrow x = ?$

- A) $\sqrt{13}$ B) $2\sqrt{13}$ C) $3\sqrt{13}$ D) 6 E) $\sqrt{15}$

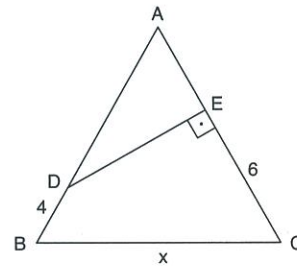
6.



ABC eşkenar üçgen
ABC equilateral triangle
 $[HE] \parallel [BC]$
 $[DH] \parallel [AB]$
 $[FH] \parallel [AC]$
 $|HE| = 4$ br
 $|HD| = 8$ br
 $|FH| = 2$ br
 $\Rightarrow \angle(ABC) = ?$

- A) 39 B) 42 C) 44 D) 48 E) 52

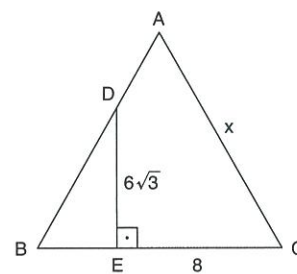
7.



ABC eşkenar üçgen
ABC equilateral triangle
 $[DE] \perp [AC]$
 $|DB| = 4$ br
 $|EC| = 6$ br
 $|BC| = x$
 $\Rightarrow x = ?$

- A) 7 B) 8 C) 9 D) 10 E) 12

8.

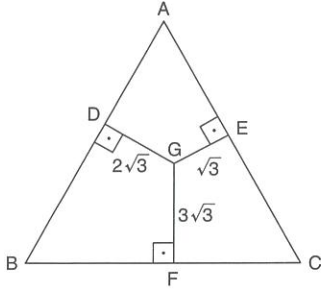


ABC eşkenar üçgen
ABC equilateral triangle
 $[DE] \perp [BC]$
 $|DE| = 6\sqrt{3}$ br
 $|EC| = 8$ br
 $|AC| = x$
 $\Rightarrow x = ?$

- A) $8\sqrt{3}$ B) $12\sqrt{3}$ C) 12 D) 13 E) 14



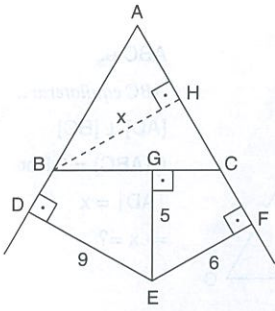
9.



- A) 6 B) 9 C) 12 D) 14 E) 16

ABC eşkenar üçgen
ABC equilateral triangle
[GE] ⊥ [AC]
[GD] ⊥ [AB]
[GF] ⊥ [BC]
|DG| = $2\sqrt{3}$ br
|GE| = $\sqrt{3}$ br
|GF| = $3\sqrt{3}$ br
⇒ |AB| = ?

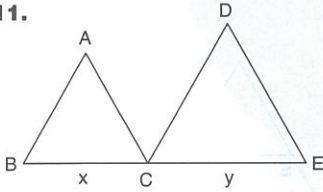
10.



- A) 15 B) 12 C) 10 D) 9 E) 6

ABC eşkenar üçgen
ABC equilateral triangle
[ED] ⊥ [DA]
[EG] ⊥ [BC]
[EF] ⊥ [FA]
[BH] ⊥ [AC]
|DE| = 9 br
|EF| = 6 br
|EG| = 5 br
|BH| = x
⇒ x = ?

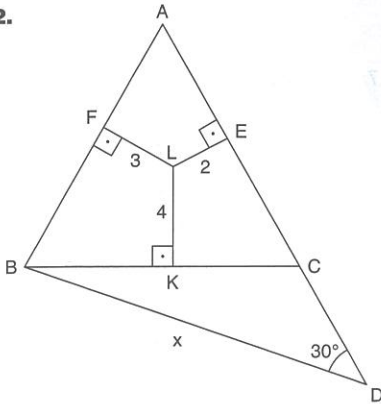
11.



- A) 24 B) 27 C) 30 D) 33 E) 36

ABC DCE eşkenar üçgen
ABC DCE equilateral triangle
|BC| = x
|CE| = y
x + y = 12 br
⇒ Ç(ABC) + Ç(DEC) = ?

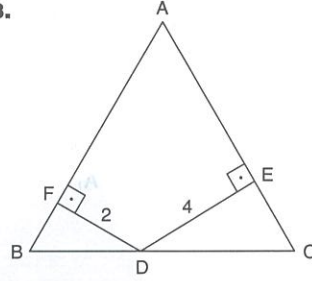
12.



- A) 9 B) 18 C) $9\sqrt{3}$ D) $18\sqrt{3}$ E) 12

ABC eşkenar üçgen
ABC equilateral triangle
[LE] ⊥ [AC]
[LF] ⊥ [AB]
[LK] ⊥ [BC]
|LE| = 2 br
|LF| = 3 br
|LK| = 4 br
 $m(\widehat{BDA}) = 30^\circ$
|BD| = x
⇒ x = ?

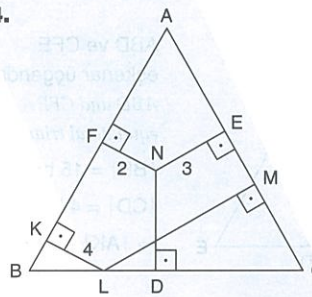
13.



- A) $2\sqrt{3}$ B) 6 C) $4\sqrt{3}$ D) $6\sqrt{3}$ E) 12

ABC eşkenar üçgen
ABC equilateral triangle
[DF] ⊥ [AB]
[DE] ⊥ [AC]
|DF| = 2 br
|DE| = 4 br
⇒ |AC| = ?

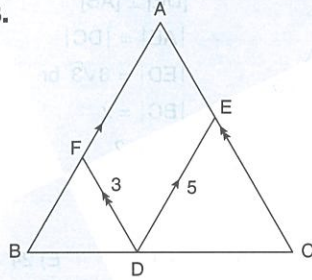
14.



- A) 3 B) 4 C) 6 D) 7 E) 2

ABC eşkenar üçgen
ABC equilateral triangle
[NE] ⊥ [AC]
[NF] ⊥ [AB]
[ND] ⊥ [BC]
[KL] ⊥ [AB]
[LM] ⊥ [AC]
|LM| = 7 br
|KL| = 4 br
|NF| = 2 br
|NE| = 3 br
⇒ |ND| = ?

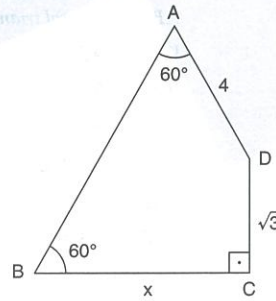
15.



- A) 8 B) 16 C) 24 D) 32 E) 36

ABC eşkenar üçgen
ABC equilateral triangle
[DE] || [AB]
[DF] || [AC]
|FD| = 3 br
|DE| = 5 br
⇒ Ç(ABC) = ?

16.

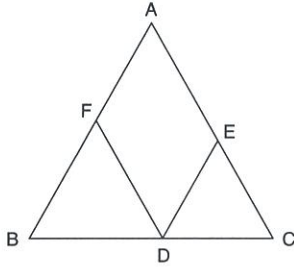


- A) 3 B) 4 C) 5 D) 6 E) 7

$m(\widehat{BAD}) = m(\widehat{ABC}) = 60^\circ$
[DC] ⊥ [BC]
|AD| = 4 br
|DC| = $\sqrt{3}$ br
|BC| = x
⇒ x = ?



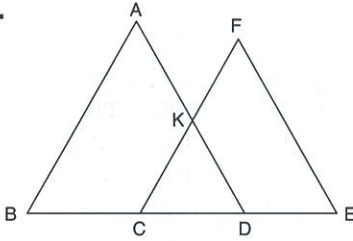
1.



ABC, BFD, EDC
eşkenar üçgendir.
ABC, BFD, EDC
equilateral triangle
 $|BC| = 16$ br
 $\Rightarrow \angle(FDE) = ?$

- A) 16 B) 24 C) 32 D) 48 E) 52

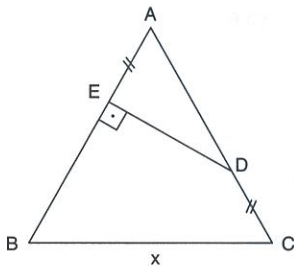
2.



ABD ve CFE
eşkenar üçgendir.
ABD and CFE
equilateral triangle
 $|BE| = 15$ br
 $|CD| = 4$ br
 $\Rightarrow |AK| + |KF| = ?$

- A) 10 B) 11 C) 9 D) 8 E) 7

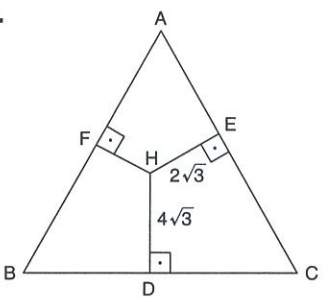
3.



ABC eşkenar üçgen
ABC equilateral triangle
 $[DE] \perp [AB]$
 $|AE| = |DC|$
 $|ED| = 8\sqrt{3}$ br
 $|BC| = x$
 $\Rightarrow x = ?$

- A) 8 B) 12 C) 16 D) 21 E) 24

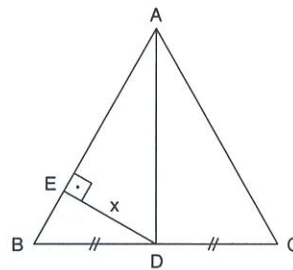
4.



ABC eşkenar üçgen
ABC equilateral triangle
 $[HE] \perp [AC]$
 $[HF] \perp [AB]$
 $[HD] \perp [BC]$
 $|HE| = 2\sqrt{3}$ br
 $|HD| = 4\sqrt{3}$ br
 $|AC| = 16$ br
 $\Rightarrow |FH| = ?$

- A) $2\sqrt{3}$ B) $\sqrt{3}$ C) $\sqrt{6}$ D) $4\sqrt{3}$ E) $2\sqrt{6}$

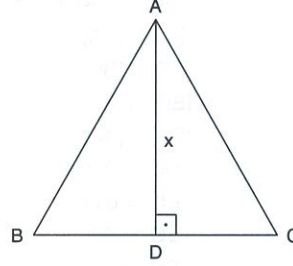
5.



ABC eşkenar üçgen
ABC equilateral triangle
 $[DE] \perp [AB]$
 $|BD| = |DC|$
 $|BC| = 6\sqrt{3}$ br
 $|DE| = x$
 $\Rightarrow x = ?$

- A) $\frac{1}{2}$ B) $\frac{5}{2}$ C) 3 D) 6 E) $\frac{9}{2}$

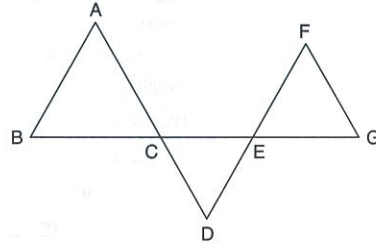
6.



ABC eşkenar üçgen
ABC equilateral triangle
 $[AD] \perp [BC]$
 $\angle(ABC) = 24$ br
 $|AD| = x$
 $\Rightarrow x = ?$

- A) 4 B) $4\sqrt{3}$ C) 8 D) $8\sqrt{3}$ E) 6

7.

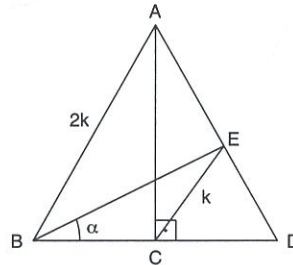


ABC, CDE,
EFG eşkenar
üçgendir.
ABC, CDE,
EFG equilateral
triangle

$\angle(ABC) + \angle(DEC) + \angle(EFG) = 24$ br
 $\Rightarrow |BG| = ?$

- A) 6 B) 7 C) 8 D) 9 E) 12

8.

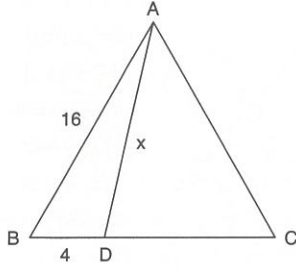


ABD eşkenar üçgen
ABC equilateral triangle
 $[AC] \perp [BD]$
 $2|CE| = |AB| = 2k$
 $m(\widehat{EBD}) = \alpha$
 $\Rightarrow \alpha = ?$

- A) 15 B) 25 C) 30 D) 35 E) 40



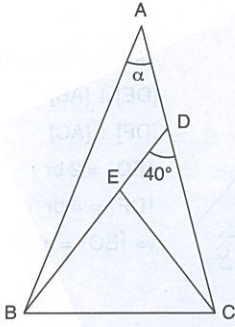
9.



ABC eşkenar üçgen
ABC equilateral triangle
 $|AB| = 16 \text{ br}$
 $|BD| = 4 \text{ br}$
 $|AD| = x$
 $\Rightarrow x = ?$

- A) $\sqrt{10}$ B) $2\sqrt{11}$ C) $\sqrt{11}$ D) $\sqrt{13}$ E) $4\sqrt{13}$

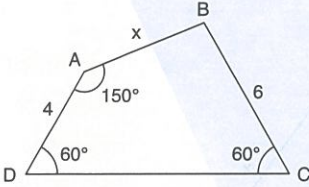
10.



BEC eşkenar üçgen
BEC equilateral triangle
 $|AB| = |AC|$
 $m(\widehat{BDC}) = 40^\circ$
 $m(\widehat{BAC}) = \alpha$
 $\Rightarrow \alpha = ?$

- A) 10 B) 15 C) 20 D) 25 E) 30

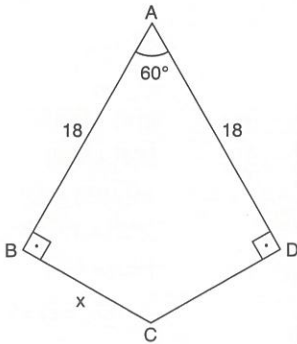
11.



$m(\widehat{ADC}) = 60^\circ$
 $m(\widehat{DCB}) = 60^\circ$
 $m(\widehat{DAB}) = 150^\circ$
 $|AD| = 4 \text{ br}$
 $|BC| = 6 \text{ br}$
 $|AB| = x$
 $\Rightarrow x = ?$

- A) 2 B) $\sqrt{3}$ C) $2\sqrt{3}$ D) $\sqrt{2}$ E) $2\sqrt{2}$

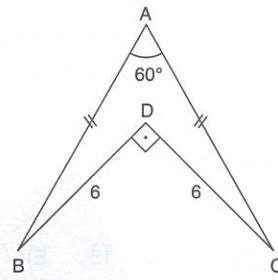
12.



$m(\widehat{BAD}) = 60^\circ$
 $[AB] \perp [BC]$
 $[AD] \perp [DC]$
 $|AB| = |AD| = 18 \text{ br}$
 $|BC| = x$
 $\Rightarrow x = ?$

- A) 8 B) 12 C) 6 D) $6\sqrt{3}$ E) $6\sqrt{2}$

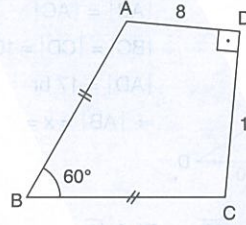
13.



$m(\widehat{BAC}) = 60^\circ$
 $[BD] \perp [DC]$
 $|BD| = |DC| = 6 \text{ br}$
 $|AB| = |AC| = x$
 $\Rightarrow x = ?$

- A) 6 B) $6\sqrt{2}$ C) 8 D) 10 E) 12

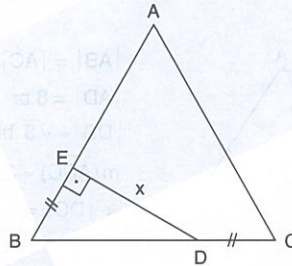
14.



$m(\widehat{ABC}) = 60^\circ$
 $[AD] \perp [BC]$
 $|AD| = 8 \text{ br}$
 $|BC| = 15 \text{ br}$
 $|AB| = |BC| = x$
 $\Rightarrow x = ?$

- A) $4\sqrt{3}$ B) 15 C) 16 D) 17 E) 25

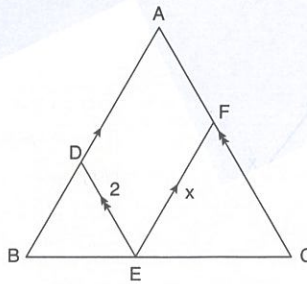
15.



ABC eşkenar üçgen
ABC equilateral triangle
 $[DE] \perp [AB]$
 $|EB| = |DC|$
 $|AC| = 6 \text{ br}$
 $|ED| = x$
 $\Rightarrow x = ?$

- A) 2 B) 4 C) $2\sqrt{3}$ D) $4\sqrt{3}$ E) 5

16.

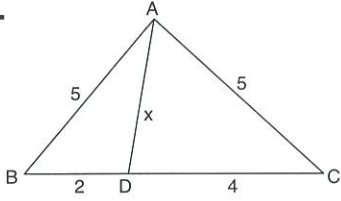


ABC eşkenar üçgen
ABC equilateral triangle
 $[EF] \parallel [AB]$
 $[DE] \parallel [AC]$
 $|DE| = 2 \text{ br}$
 $\angle(ABC) = 18 \text{ br}$
 $|EF| = x$
 $\Rightarrow x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5



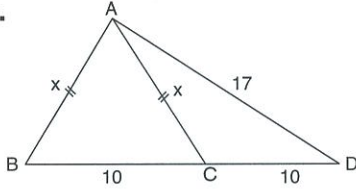
1.



$$\begin{aligned} |AB| &= |AC| = 5 \text{ br} \\ 2|BD| &= |DC| = 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 5 B) $\sqrt{17}$ C) 4 D) $\sqrt{15}$ E) $\sqrt{10}$

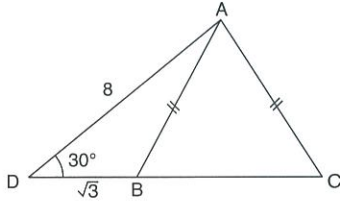
2.



$$\begin{aligned} |AB| &= |AC| \\ |BC| &= |CD| = 10 \text{ br} \\ |AD| &= 17 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 12 B) 10 C) $\sqrt{89}$ D) $6\sqrt{2}$ E) $3\sqrt{6}$

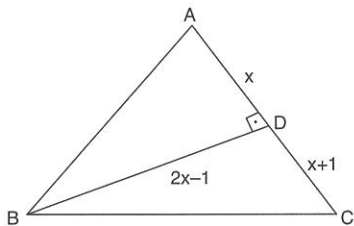
3.



$$\begin{aligned} |AB| &= |AC| \\ |AD| &= 8 \text{ br} \\ |DB| &= \sqrt{3} \text{ br} \\ m(\widehat{ADC}) &= 30^\circ \\ \Rightarrow |DC| &= ? \end{aligned}$$

- A) $\sqrt{3}$ B) 4 C) $4\sqrt{3}$ D) 8 E) $7\sqrt{3}$

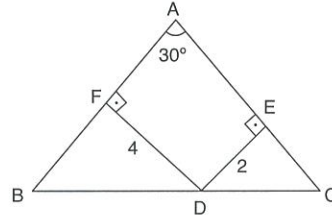
4.



$$\begin{aligned} [BD] &\perp [AC] \\ |AB| &= |AC| \\ |AD| &= x \\ |DC| &= x+1 \\ |BD| &= 2x-1 \\ \Rightarrow x &= ? \end{aligned}$$

- A) 3 B) 4 C) 6 D) 7 E) 8

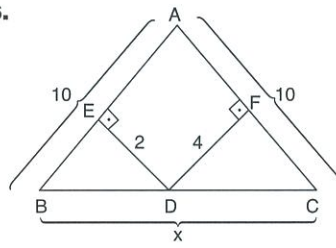
5.



$$\begin{aligned} |AB| &= |AC| \\ [DF] &\perp [AB] \\ [DE] &\perp [AC] \\ m(\widehat{BAC}) &= 30^\circ \\ |FD| &= 4 \text{ br} \\ |DE| &= 2 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 12 B) $6\sqrt{3}$ C) 6 D) 4 E) 3

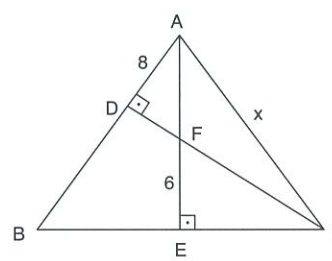
6.



$$\begin{aligned} |AB| &= |AC| = 10 \text{ br} \\ [DE] &\perp [AB] \\ [DF] &\perp [AC] \\ |ED| &= 2 \text{ br} \\ |DF| &= 4 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) $2\sqrt{10}$ B) 6 C) $6\sqrt{2}$ D) 8 E) 10

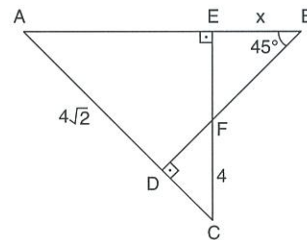
7.



$$\begin{aligned} |AB| &= |BC| \\ |AD| &= 8 \text{ br} \\ |EF| &= 6 \text{ br} \\ [CD] &\perp [AB] \\ [AE] &\perp [BC] \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $16\sqrt{5}$ B) $8\sqrt{5}$ C) 10 D) 8 E) 6

8.

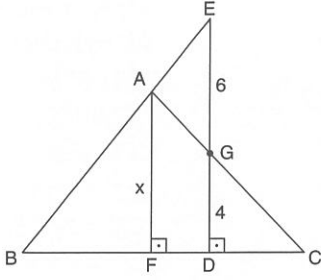


$$\begin{aligned} [CE] &\perp [AB] \\ [BD] &\perp [AC] \\ m(\widehat{ABD}) &= 45^\circ \\ |AD| &= 4\sqrt{2} \text{ br} \\ |FC| &= 4 \text{ br} \\ \Rightarrow |EB| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 6



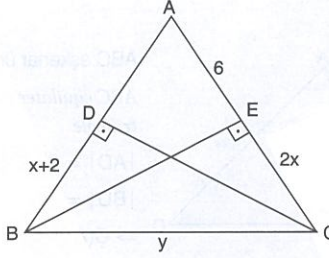
9.



$|AB| = |AC|$
 $[AF] \perp [BC]$
 $[ED] \perp [BC]$
 $|EG| = 6 \text{ br}$
 $|GD| = 4 \text{ br}$
 $\Rightarrow |AF| = x = ?$

- A) 4 B) 6 C) 7 D) 8 E) 10

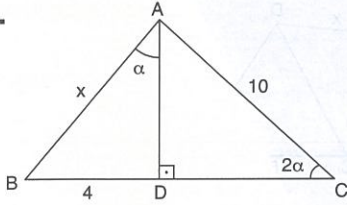
10.



$|AB| = |AC|$
 $[CD] \perp [AB]$
 $[BE] \perp [AC]$
 $|AE| = 6 \text{ br}$
 $|EC| = 2x$
 $|BD| = x + 2$
 $\Rightarrow |BC| = y = ?$

- A) $2\sqrt{5}$ B) $4\sqrt{3}$ C) $4\sqrt{5}$ D) $8\sqrt{3}$ E) $8\sqrt{5}$

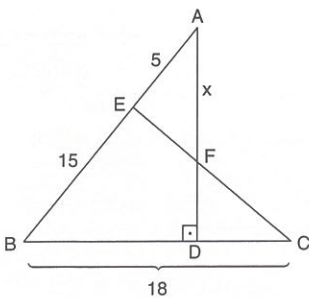
11.



$[AD] \perp [BC]$
 $2m(\widehat{BAD}) = m(\widehat{ACB})$
 $|AC| = 10 \text{ br}$
 $|BD| = 4 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) 20 B) $10\sqrt{2}$ C) 10 D) $8\sqrt{5}$ E) $4\sqrt{5}$

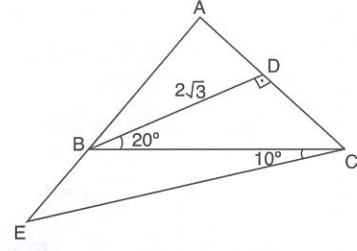
12.



$[AD] \perp [BC]$
 $|EB| = |EC|$
 $|FD| = 8 \text{ br}$
 $|AE| = 5 \text{ br}$
 $|EB| = 15 \text{ br}$
 $|BC| = 18 \text{ br}$
 $\Rightarrow |AF| = x = ?$

- A) 3 B) 4 C) 6 D) 8 E) 10

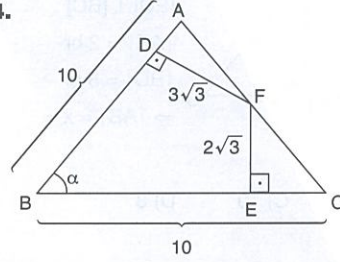
13.



$[BD] \perp [AC]$
 $|AB| = |AC|$
 $m(\widehat{DBC}) = 20^\circ$
 $m(\widehat{BCE}) = 10^\circ$
 $\Rightarrow |EC| = ?$

- A) 2 B) $\sqrt{6}$ C) $2\sqrt{3}$ D) 4 E) $4\sqrt{3}$

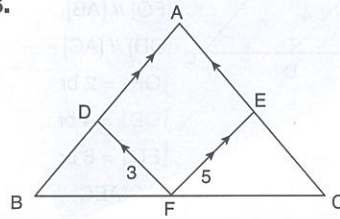
14.



$[DF] \perp [AB]$
 $[EF] \perp [BC]$
 $|AB| = |BC| = 10 \text{ br}$
 $|DF| = 3\sqrt{3} \text{ br}$
 $|FE| = 2\sqrt{3} \text{ br}$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 15 B) 30 C) 45 D) 60 E) 90

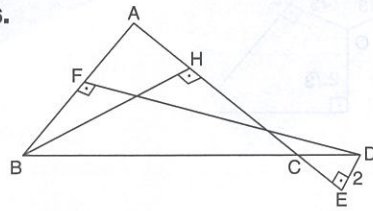
15.



$|AB| = |AC|$
 $[DF] \parallel [AC]$
 $[FE] \parallel [AB]$
 $|DF| = 3 \text{ br}$
 $|FE| = 5 \text{ br}$
 $\Rightarrow |BD| + |EC| = ?$

- A) $32\sqrt{2}$ B) 32 C) 8 D) 16 E) $8\sqrt{2}$

16.

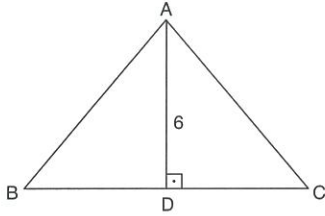


$[BH] \perp [AE]$
 $[DF] \perp [AB]$
 $[AE] \perp [DE]$
 $|AB| = |AC|$
 $|FD| = 6 \text{ br}$
 $|ED| = 2 \text{ br}$
 $\Rightarrow |BH| = ?$

- A) 24 B) 16 C) 12 D) 8 E) 4



1.



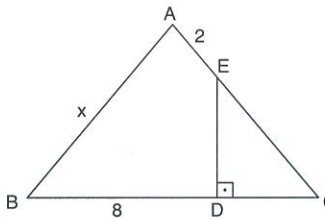
ABC eşkenar üçgen

ABC equilateral triangle

 $[AD] \perp [BC]$ $|AD| = 6 \text{ br}$ $\Rightarrow |BC| = ?$

- A) $12\sqrt{3}$ B) 12 C) $4\sqrt{3}$ D) 4 E) $2\sqrt{3}$

2.



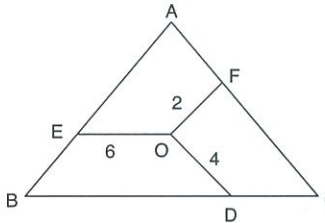
ABC eşkenar üçgen

ABC equilateral triangle

 $[ED] \perp [BC]$ $|AE| = 2 \text{ br}$ $|BD| = 8 \text{ br}$ $\Rightarrow |AB| = x = ?$

- A) 14 B) 12 C) 10 D) 8 E) 6

3.



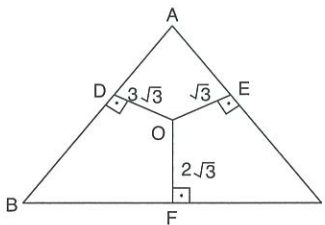
ABC eşkenar üçgen

ABC equilateral triangle

 $[EO] \parallel [BC]$ $[FO] \parallel [AB]$ $[OD] \parallel [AC]$ $|OF| = 2 \text{ br}$ $|OD| = 4 \text{ br}$ $|EO| = 6 \text{ br}$ $\Rightarrow \angle(ABC) = ?$

- A) $\sqrt{37}$ B) 12 C) 7 D) $2\sqrt{37}$ E) 36

4.



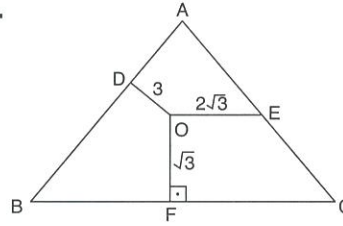
ABC eşkenar üçgen

ABC equilateral triangle

 $[OE] \perp [AC]$ $[OF] \perp [BC]$ $[OD] \perp [AB]$ $|OD| = 3\sqrt{3} \text{ br}$ $|OE| = \sqrt{3} \text{ br}$ $|OF| = 2\sqrt{3} \text{ br}$ $\Rightarrow \angle(ABC) = ?$

- A) $72\sqrt{3}$ B) 72 C) $36\sqrt{3}$ D) 36 E) $18\sqrt{3}$

5.



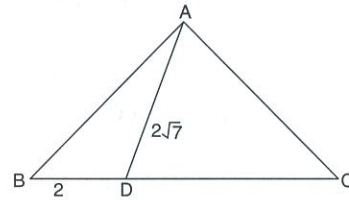
ABC eşkenar üçgen

ABC equilateral triangle

 $[OE] \parallel [BC]$ $[OD] \parallel [AC]$ $[OF] \perp [BC]$ $|OD| = 3 \text{ br}$ $|OE| = 2\sqrt{3} \text{ br}$ $|OF| = \sqrt{3} \text{ br}$ $\Rightarrow \angle(ABC) = ?$

- A) $5 + 2\sqrt{3}$ B) $15 + 6\sqrt{3}$ C) 14 D) $10 + 4\sqrt{3}$ E) 36

6.



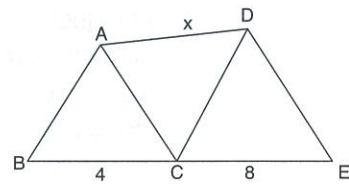
ABC eşkenar üçgen

ABC equilateral triangle

 $|AD| = 2\sqrt{7} \text{ br}$ $|BD| = 2 \text{ br}$ $\Rightarrow \angle(ABC) = ?$

- A) 4 B) 6 C) 12 D) 18 E) 36

7.



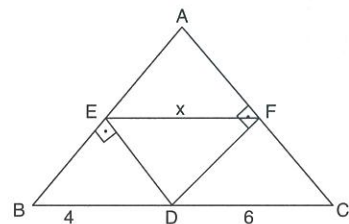
ABC, CDE eşkenar üçgen

ABC, CDE equilateral triangle

 $|BC| = 4 \text{ br}$ $|CE| = 8 \text{ br}$ $\Rightarrow |AD| = x = ?$

- A) 4 B) 6 C) $4\sqrt{3}$ D) 8 E) $8\sqrt{3}$

8.



ABC eşkenar üçgen

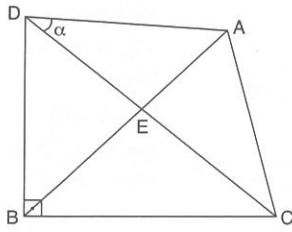
ABC equilateral triangle

 $[DE] \perp [AB]$ $[DF] \perp [AC]$ $|BD| = 4 \text{ br}$ $|DC| = 6 \text{ br}$ $\Rightarrow |EF| = x = ?$

- A) $4\sqrt{3}$ B) $\sqrt{47}$ C) 7 D) $\sqrt{57}$ E) 8



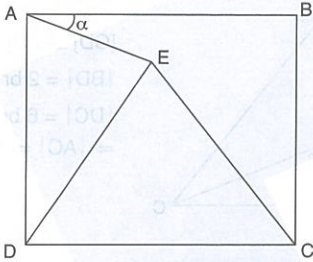
9.



ABC eşkenar üçgen
ABC equilateral triangle
DBC dik üçgen
 $|DB| = |BC|$
 $[DB] \perp [BC]$
 $\Rightarrow m(\widehat{ADC}) = \alpha = ?$

- A) 15 B) 30 C) 32,5 D) 45 E) 67,5

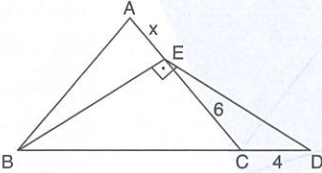
10.



ABCD kare
ABCD square
EDC eşkenar üçgen
EDC equilateral triangle
 $\Rightarrow m(\widehat{BAE}) = \alpha = ?$

- A) 15 B) 30 C) 32,5 D) 45 E) 67,5

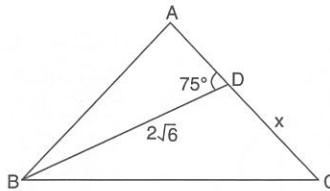
11.



ABC eşkenar üçgen
ABC equilateral triangle
 $[BE] \perp [ED]$
 $|EC| = 6$ br
 $|CD| = 4$ br
 $\Rightarrow |AE| = x = ?$

- A) 6 B) 4 C) 3 D) $\frac{6}{5}$ E) $\frac{6}{7}$

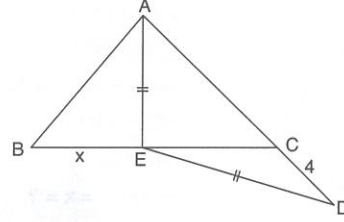
12.



ABC eşkenar üçgen
ABC equilateral triangle
 $|BD| = 2\sqrt{6}$ br
 $m(\widehat{ADB}) = 75^\circ$
 $\Rightarrow |DC| = x = ?$

- A) $\sqrt{3}-1$ B) $\sqrt{3}$ C) $2\sqrt{3}-2$
D) $2\sqrt{3}$ E) $2\sqrt{3}+2$

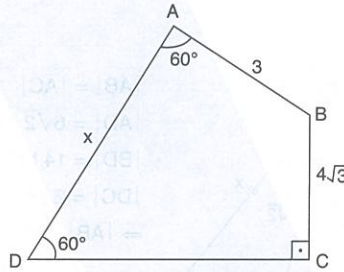
13.



ABC eşkenar üçgen
ABC equilateral triangle
 $|AE| = |ED|$
 $|CD| = 4$ br
 $\Rightarrow |BE| = x = ?$

- A) 2 B) $2\sqrt{3}$ C) 4 D) $4\sqrt{3}$ E) $4\sqrt{6}$

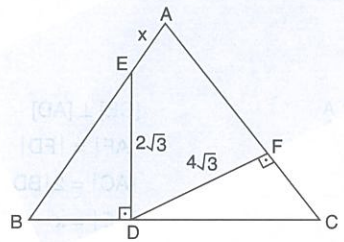
14.



$m(\widehat{BAD}) = 60^\circ$
 $m(\widehat{ADC}) = 60^\circ$
 $[BC] \perp [DC]$
 $|AB| = 3$ br
 $|BC| = 4\sqrt{3}$ br
 $\Rightarrow |AD| = x = ?$

- A) 3 B) 4 C) 7 D) 11 E) 14

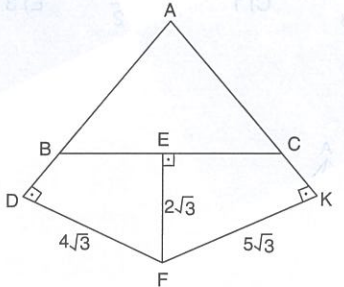
15.



ABC eşkenar üçgen
ABC equilateral triangle
 $[ED] \perp [BC]$
 $[DF] \perp [AC]$
 $|ED| = 2\sqrt{3}$ br
 $|DF| = 4\sqrt{3}$ br
 $\Rightarrow |EA| = x = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

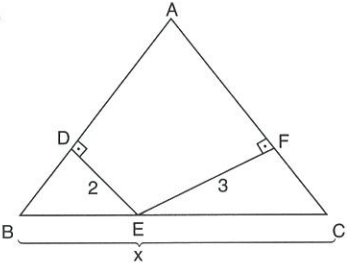
16.

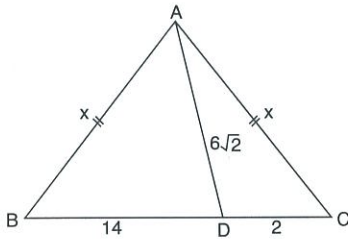


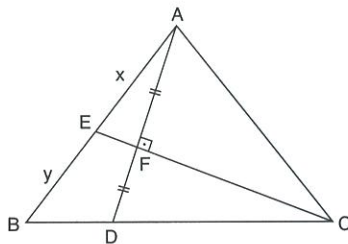
ABC eşkenar üçgen
ABC equilateral triangle
 $[FD] \perp [AB]$
 $[FE] \perp [BC]$
 $[FK] \perp [KA]$
 $|EF| = 2\sqrt{3}$ br
 $|FK| = 5\sqrt{3}$ br
 $|DF| = 4\sqrt{3}$ br
 $\Rightarrow \angle(ABC) = ?$

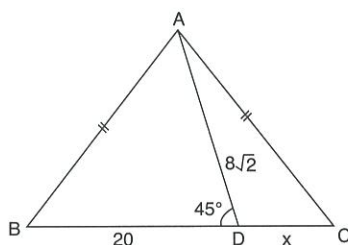
- A) 11 B) $11\sqrt{3}$ C) 22 D) 33 E) 42



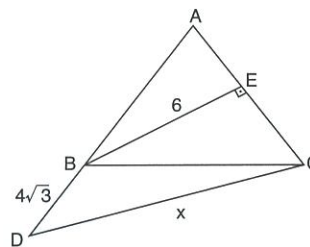
1.  $[DE] \perp [AB]$
 $[EF] \perp [AC]$
 $|AB| = |AC| = 13 \text{ br}$
 $|DE| = 2 \text{ br}$
 $|EF| = 3 \text{ br}$
 $\Rightarrow |BC| = x = ?$
- A) $\sqrt{13}$ B) $2\sqrt{6}$ C) 5 D) $\sqrt{20}$ E) $\sqrt{26}$

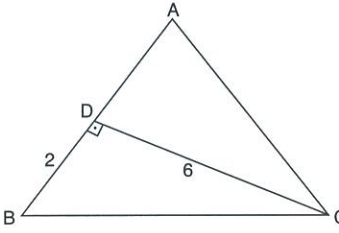
2.  $|AB| = |AC|$
 $|AD| = 6\sqrt{2} \text{ br}$
 $|BD| = 14 \text{ br}$
 $|DC| = 2 \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) 16 B) 12 C) 10 D) 8 E) 6

3.  $[CE] \perp [AD]$
 $|AF| = |FD|$
 $|AC| = 2|BD|$
 $|AE| = x$
 $|BE| = y$
 $\Rightarrow \frac{x}{y} = ?$
- A) $\frac{1}{3}$ B) $\frac{2}{3}$ C) 1 D) $\frac{3}{2}$ E) 3

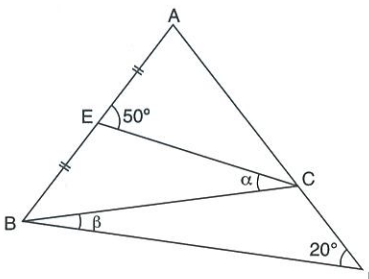
4.  $|AB| = |AC|$
 $|AD| = 8\sqrt{2} \text{ br}$
 $|BD| = 20 \text{ br}$
 $m(\widehat{ADB}) = 45^\circ$
 $\Rightarrow |DC| = x = ?$
- A) 4 B) 6 C) 10 D) 12 E) 20

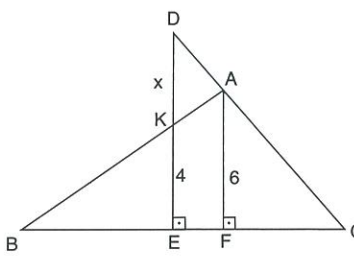
PUZA YAYINLARI

5.  ABC eşkenar üçgen
ABC equilateral triangle
 $[BE] \perp [AC]$
 $|BD| = 4\sqrt{3} \text{ br}$
 $|BE| = 6 \text{ br}$
 $\Rightarrow |DC| = x = ?$
- A) 14 B) 20 C) 15 D) 12 E) 10

6.  $|AB| = |AC|$
 $[CD] \perp [AB]$
 $|BD| = 2 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow |AC| = ?$
- A) $15\sqrt{2}$ B) 15 C) $10\sqrt{2}$ D) 10 E) $8\sqrt{2}$

PUZA YAYINLARI

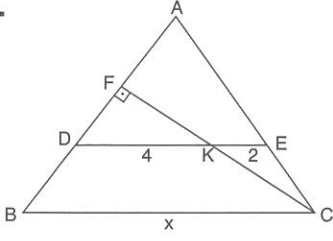
7.  $|AB| = |AC|$
 $|AE| = |EB|$
 $m(\widehat{AEC}) = 50^\circ$
 $m(\widehat{ADB}) = 20^\circ$
 $m(\widehat{CBD}) = \beta$
 $m(\widehat{ECB}) = \alpha$
 $\Rightarrow \alpha + \beta = ?$
- A) 10 B) 20 C) 30 D) 50 E) 70

8.  $|AB| = |AC|$
 $[AF] \perp [BC]$
 $[DE] \perp [BC]$
 $|AF| = 6 \text{ br}$
 $|KE| = 4 \text{ br}$
 $\Rightarrow |DK| = x = ?$
- A) 2 B) 4 C) 6 D) 8 E) 12

PUZA YAYINLARI



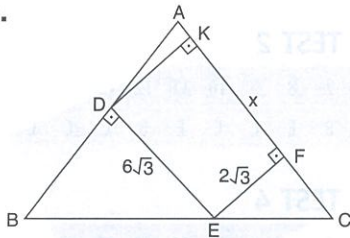
9.



ABC eşkenar üçgen
ABC equilateral triangle
[DE] // [BC]
[CF] ⊥ [AB]
 $2|KE| = |DK| = 4$ br
 $\Rightarrow |BC| = x = ?$

- A) 12 B) 10 C) 8 D) 6 E) 4

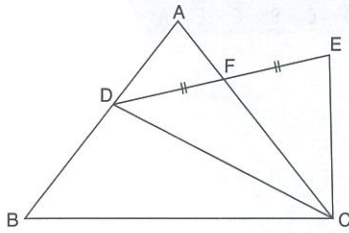
10.



ABC eşkenar üçgen
ABC equilateral triangle
[ED] ⊥ [AB]
[EF] ⊥ [AC]
[DK] ⊥ [AC]
 $|DE| = 6\sqrt{3}$ br
 $|EF| = 2\sqrt{3}$ br
 $\Rightarrow |KF| = x = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9

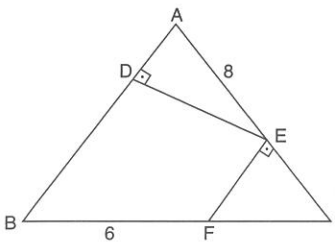
11.



ABC, DEC eşkenar üçgen
ABC, DEC equilateral triangle
 $|DF| = |FE|$
 $\Rightarrow \frac{|BD|}{|FC|} = ?$

- A) $\frac{2}{3}$ B) $\frac{6}{5}$ C) $\frac{5}{6}$ D) $\frac{3}{2}$ E) $\frac{5}{3}$

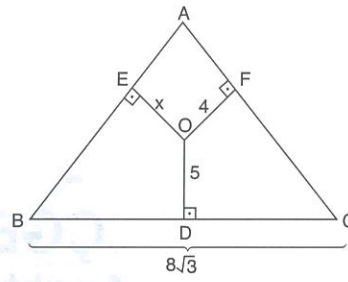
12.



ABC eşkenar üçgen
ABC equilateral triangle
[FE] ⊥ [AC]
[ED] ⊥ [AB]
 $|AE| = 8$ br
 $|BF| = 6$ br
 $\Rightarrow \angle(DEFB) = ?$

- A) $6 + 7\sqrt{3}$ B) $6(1 + 2\sqrt{3})$ C) $6(2 + \sqrt{3})$
D) $12(1 + \sqrt{3})$ E) $36\sqrt{3}$

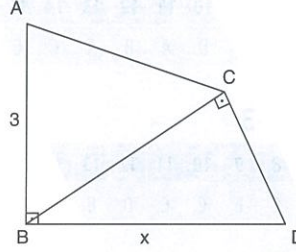
13.



ABC eşkenar üçgen
ABC equilateral triangle
[OE] ⊥ [AB]
[OF] ⊥ [AC]
[OD] ⊥ [BC]
 $|OF| = 4$ br
 $|OD| = 5$ br
 $|BC| = 8\sqrt{3}$ br
 $\Rightarrow |OE| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

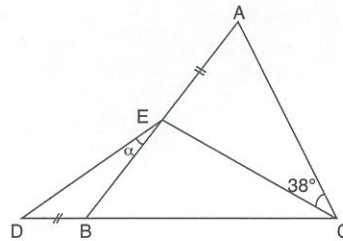
14.



ABC eşkenar üçgen
ABC equilateral triangle
[AB] ⊥ [BD]
[BC] ⊥ [CD]
 $|AB| = 3$ br
 $\Rightarrow |BD| = x = ?$

- A) 2 B) $2\sqrt{3}$ C) 4 D) $4\sqrt{3}$ E) 8

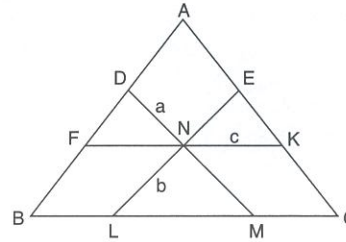
15.



ABC eşkenar üçgen
ABC equilateral triangle
 $|AE| = |DB|$
 $m(\widehat{ACE}) = 38^\circ$
 $\Rightarrow m(\widehat{DEB}) = \alpha = ?$

- A) 19 B) 22 C) 38 D) 54 E) 56

16.



ABC eşkenar üçgen
ABC equilateral triangle
 $\angle(ABC) = 36^\circ$
[EL] // [AB]
[FK] // [BC]
[DM] // [AC]
 $|DN| = a$
 $|LN| = b$
 $|KN| = c$
 $\Rightarrow a + b + c = ?$

- A) 6 B) $6\sqrt{3}$ C) 12 D) 18 E) 36



İKİZKENAR-EŞKENAR ÜÇGEN

Yanıt Anahtarı

ISOSCELES-EQUILATERAL TRIANGLE

Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	B	A	D	E	A	C	C	C	D	A	B	A	C	C	C

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	E	A	E	B	C	C	E	C	C	D	B	D	C	D

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	A	E	D	B	D	C	D	B	A	E	C	C	D	E	E

TEST 2

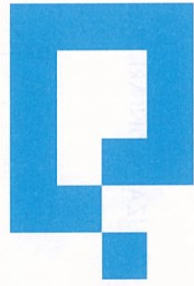
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	A	B	C	C	B	B	E	C	C	E	B	C	C	C	C

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	E	E	A	A	B	B	C	C	E	D	D	D	C	E

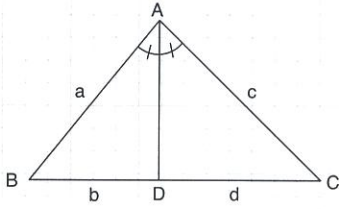
TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	C	B	A	D	D	C	B	C	E	A	C	C	B	C	C



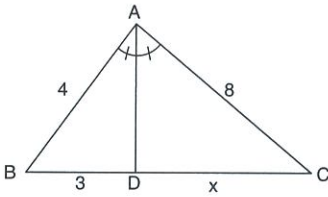
AÇIORTAY BISECTOR

ÖZELLİK | Property 1



$$\frac{a}{b} = \frac{c}{d}$$

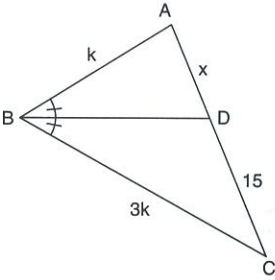
1.



$$\Rightarrow x = ?$$

6

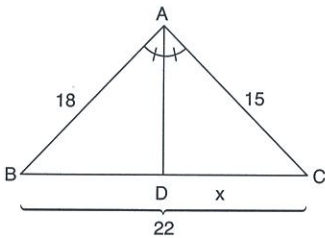
2.



$$\Rightarrow x = ?$$

5

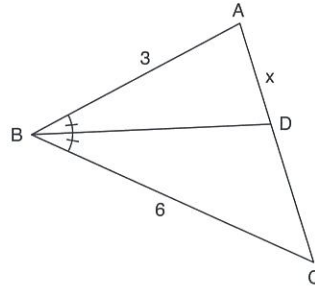
3.



$$\Rightarrow x = ?$$

10

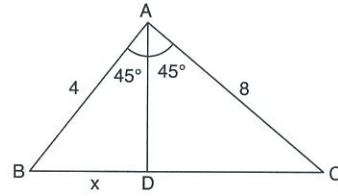
4.



$$\begin{aligned} \angle(ABC) &= 15 \text{ br} \\ \Rightarrow x &= ? \end{aligned}$$

2

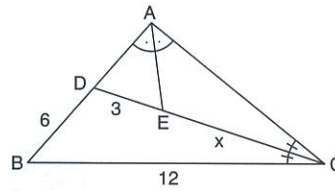
5.



$$\Rightarrow x = ?$$

$$\frac{4\sqrt{5}}{3}$$

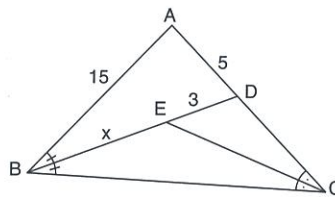
6.



$$\Rightarrow x = ?$$

6

7.

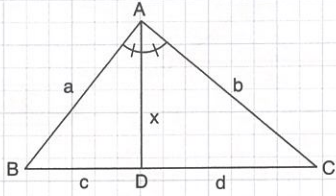


$$\Rightarrow x = ?$$

9

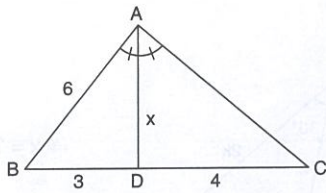


ÖZELLİK | Property 2



$$x^2 = a \cdot b - c \cdot d$$

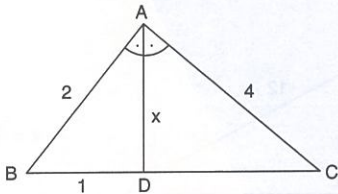
1.



$$\Rightarrow x = ?$$

6

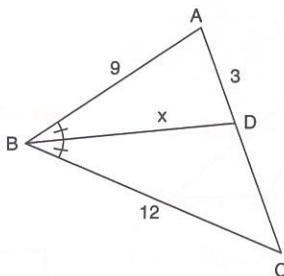
2.



$$\Rightarrow x = ?$$

$\sqrt{6}$

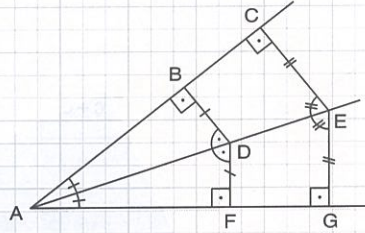
3.



$$\Rightarrow x = ?$$

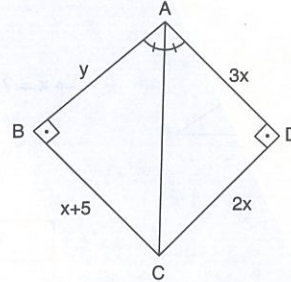
$4\sqrt{6}$

ÖZELLİK | Property 3



$$\begin{aligned} |AB| &= |AF| \\ |AC| &= |AG| \end{aligned}$$

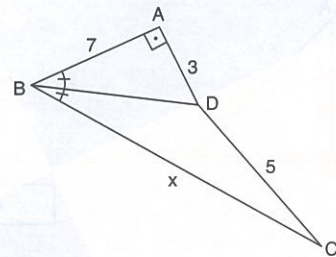
1.



$$\Rightarrow y = ?$$

15

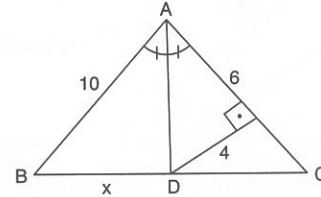
2.



$$\Rightarrow x = ?$$

11

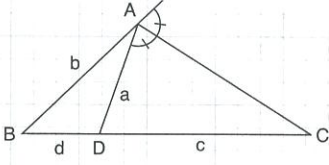
3.



$$\Rightarrow x = ?$$

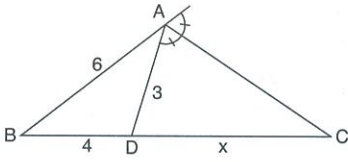
$4\sqrt{2}$

ÖZELLİK | Property 4



$$\frac{a}{b} = \frac{c}{c+d}$$

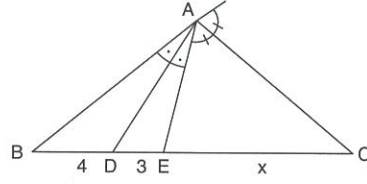
1.



$$\Rightarrow x = ?$$

4

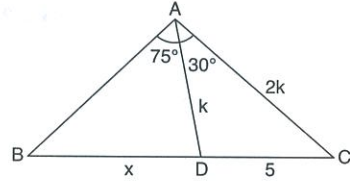
4.



$$\Rightarrow x = ?$$

21

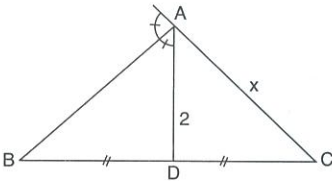
5.



$$\Rightarrow x = ?$$

5

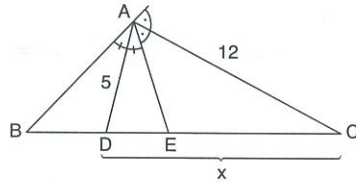
2.



$$\Rightarrow x = ?$$

4

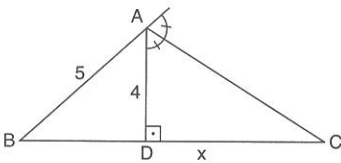
6.



$$\Rightarrow x = ?$$

13

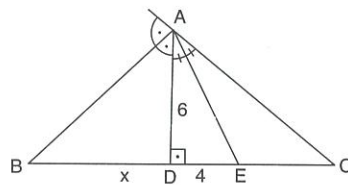
3.



$$\Rightarrow x = ?$$

12

7.

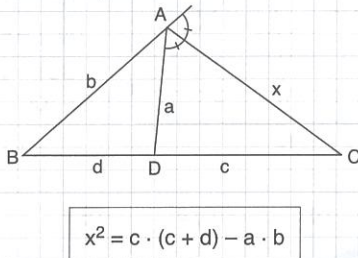


$$\Rightarrow x = ?$$

9

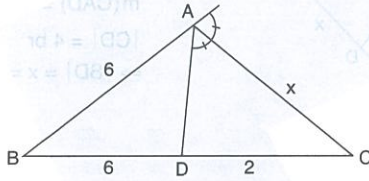


ÖZELLİK | Property 5



$$x^2 = c \cdot (c + d) - a \cdot b$$

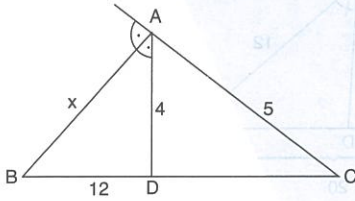
1.



$$\Rightarrow x = ?$$

$$\boxed{\sqrt{7}}$$

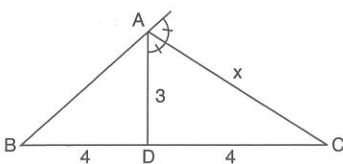
2.



$$\Rightarrow x = ?$$

$$\boxed{4\sqrt{10}}$$

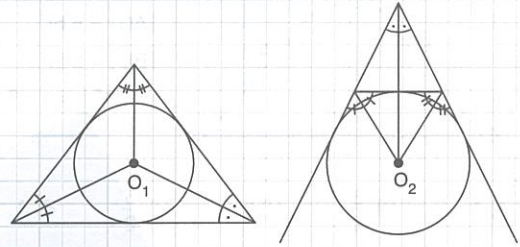
3.



$$\Rightarrow x = ?$$

$$\boxed{\sqrt{14}}$$

ÖZELLİK | Property 6



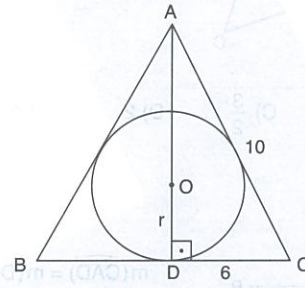
İç açıortayların kesim noktası, iç teğet çemberinin merkezi, O_1 dir.

The intersection point of the interior angle bisectors is the center O_1 of the incircle.

Dış açıortayların kesim noktası, dış teğet çemberinin merkezi, O_2 dir.

The intersection point of the exterior angle bisectors is the center O_2 of the excircle.

1.



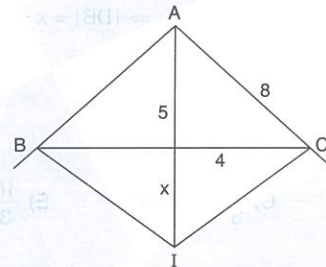
O, iç teğet çemberin merkezi

The central point of the incircle

$$\Rightarrow r = ?$$

$$\boxed{3}$$

2.



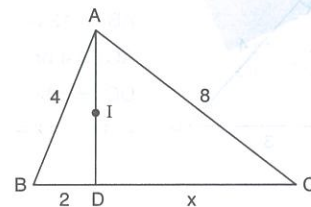
I dış teğet çemberin merkezi

Central point of the excircle

$$\Rightarrow x = ?$$

$$\boxed{5}$$

3.



I iç teğet çemberin merkezi

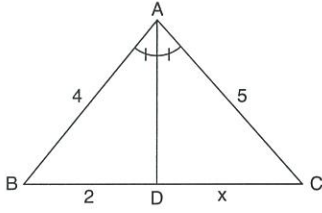
The central point of the incircle

$$\Rightarrow x = ?$$

$$\boxed{4}$$



1.



$$m(\widehat{BAD}) = m(\widehat{DAC})$$

$$|AB| = 4 \text{ br}$$

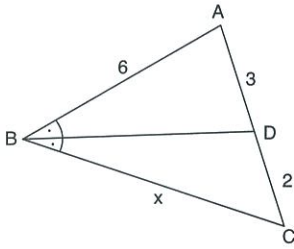
$$|AC| = 5 \text{ br}$$

$$|BD| = 2 \text{ br}$$

$$\Rightarrow |DC| = x = ?$$

- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 3

2.



$$m(\widehat{ABD}) = m(\widehat{DBC})$$

$$|AB| = 6 \text{ br}$$

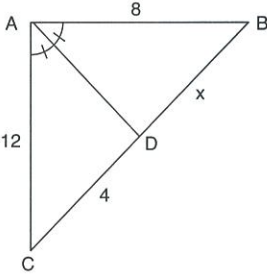
$$|AD| = 3 \text{ br}$$

$$|DC| = 2 \text{ br}$$

$$\Rightarrow |BC| = x = ?$$

- A) 4 B) 3 C) $\frac{3}{2}$ D) 2 E) 1

3.



$$m(\widehat{CAD}) = m(\widehat{DAB})$$

$$|AB| = 8 \text{ br}$$

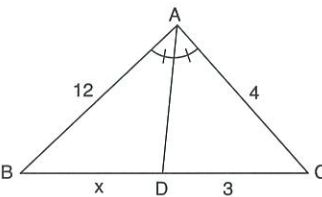
$$|AC| = 12 \text{ br}$$

$$|DC| = 4 \text{ br}$$

$$\Rightarrow |DB| = x = ?$$

- A) 1 B) 2 C) $\frac{8}{3}$ D) 3 E) $\frac{10}{3}$

4.



$$m(\widehat{BAD}) = m(\widehat{DAC})$$

$$|AB| = 12 \text{ br}$$

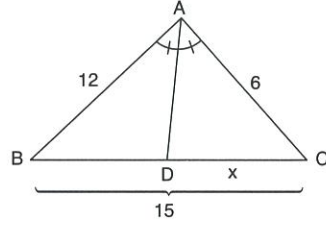
$$|AC| = 4 \text{ br}$$

$$|DC| = 3 \text{ br}$$

$$\Rightarrow |BD| = x = ?$$

- A) 6 B) 7 C) 8 D) 9 E) 10

5.



$$m(\widehat{BAD}) = m(\widehat{DAC})$$

$$|AB| = 12 \text{ br}$$

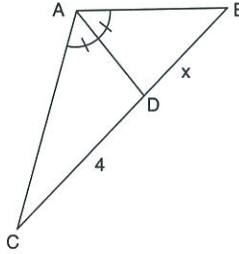
$$|AC| = 6 \text{ br}$$

$$|BC| = 15 \text{ br}$$

$$\Rightarrow |DC| = x = ?$$

- A) 5 B) 6 C) 8 D) 9 E) 10

6.



$$|AB| = 3|AC|$$

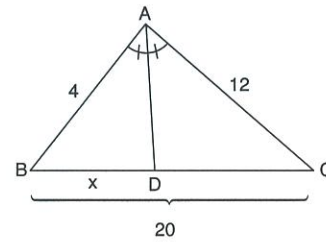
$$m(\widehat{CAD}) = m(\widehat{DAB})$$

$$|CD| = 4 \text{ br}$$

$$\Rightarrow |BD| = x = ?$$

- A) $\frac{4}{3}$ B) 4 C) 6 D) 8 E) 12

7.



$$m(\widehat{BAD}) = m(\widehat{DAC})$$

$$|AB| = 4 \text{ br}$$

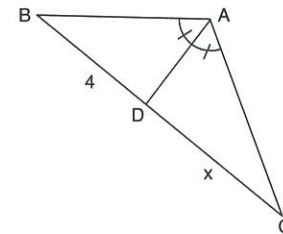
$$|AC| = 12 \text{ br}$$

$$|BC| = 20 \text{ br}$$

$$\Rightarrow |BD| = x = ?$$

- A) 5 B) 6 C) 7 D) 8 E) 10

8.



$$2|AC| = 3|AB|$$

$$m(\widehat{BAD}) = m(\widehat{DAC})$$

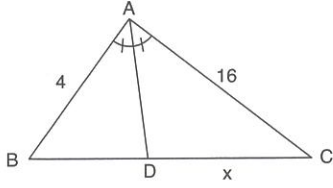
$$|BD| = 4 \text{ br}$$

$$\Rightarrow |DC| = x = ?$$

- A) $\frac{8}{3}$ B) 5 C) 6 D) 8 E) 10



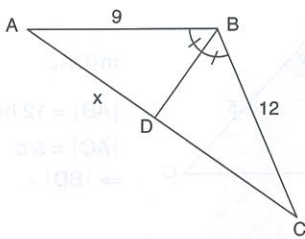
9.



$$\begin{aligned} \angle(ABC) &= 35 \\ m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AB| &= 4 \text{ br} \\ |AC| &= 16 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 3 B) 6 C) 9 D) 12 E) 15

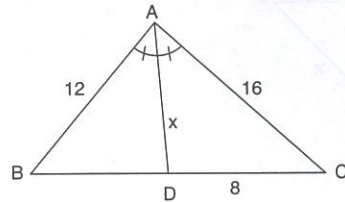
10.



$$\begin{aligned} \angle(ABC) &= 35 \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ |AB| &= 9 \text{ br} \\ |BC| &= 12 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 3 B) 4 C) 6 D) 7 E) 8

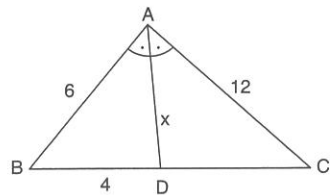
11.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AB| &= 12 \text{ br} \\ |AC| &= 16 \text{ br} \\ |DC| &= 8 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 6 B) $6\sqrt{5}$ C) 12 D) $12\sqrt{5}$ E) 16

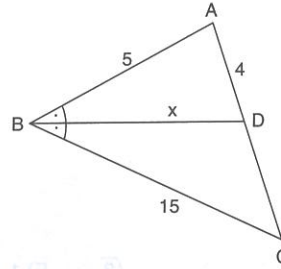
12.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AB| &= 6 \text{ br} \\ |AC| &= 12 \text{ br} \\ |BD| &= 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) $2\sqrt{10}$ B) $4\sqrt{3}$ C) $2\sqrt{15}$ D) 8 E) 16

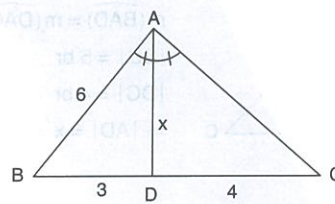
13.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DBC}) \\ |AD| &= 4 \text{ br} \\ |AB| &= 5 \text{ br} \\ |BC| &= 15 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) $\sqrt{7}$ B) $3\sqrt{3}$ C) $5\sqrt{3}$ D) 10 E) 12

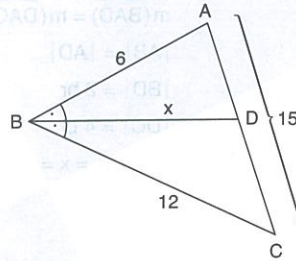
14.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AB| &= 6 \text{ br} \\ |BD| &= 3 \text{ br} \\ |DC| &= 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 3 B) 4 C) $2\sqrt{3}$ D) $3\sqrt{3}$ E) 6

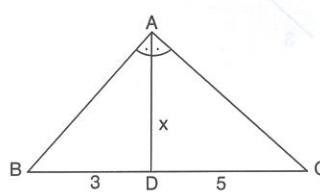
15.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DBC}) \\ |AB| &= 6 \text{ br} \\ |AC| &= 15 \text{ br} \\ |BC| &= 12 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) $\sqrt{10}$ B) $\sqrt{11}$ C) $3\sqrt{2}$ D) $\sqrt{22}$ E) $2\sqrt{11}$

16.

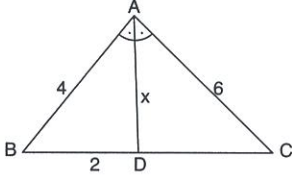


$$\begin{aligned} \angle(ABC) &= 32 \\ m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |BD| &= 3 \text{ br} \\ |DC| &= 5 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) $2\sqrt{5}$ B) $\sqrt{10}$ C) $\sqrt{30}$ D) $2\sqrt{30}$ E) $2\sqrt{33}$



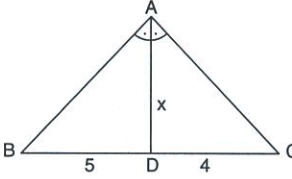
1.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AB| &= 4 \text{ br} \\ |AC| &= 6 \text{ br} \\ |BD| &= 2 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 6 B) $3\sqrt{2}$ C) $2\sqrt{2}$ D) $\sqrt{3}$ E) 1

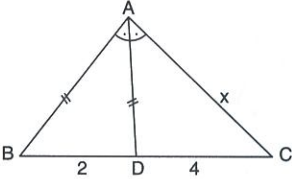
2.



$$\begin{aligned} \angle(ABC) &= 27 \\ m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |BD| &= 5 \text{ br} \\ |DC| &= 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) $2\sqrt{15}$ D) $\sqrt{17}$ E) $2\sqrt{17}$

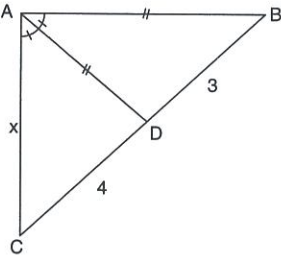
3.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AB| &= |AC| \\ |BD| &= 2 \text{ br} \\ |DC| &= 4 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 1 B) $\sqrt{2}$ C) 2 D) $2\sqrt{2}$ E) $4\sqrt{2}$

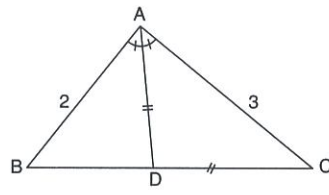
4.



$$\begin{aligned} m(\widehat{CAD}) &= m(\widehat{DAB}) \\ |AD| &= |AB| \\ |BD| &= 3 \text{ br} \\ |DC| &= 4 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) 6 D) 8 E) 12

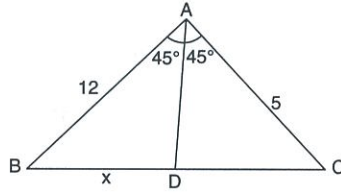
5.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AD| &= |DC| \\ |AB| &= 2 \text{ br} \\ |AC| &= 3 \text{ br} \\ \Rightarrow |BC| &= ? \end{aligned}$$

- A) $\sqrt{5}$ B) $\sqrt{10}$ C) $\sqrt{15}$ D) 5 E) 10

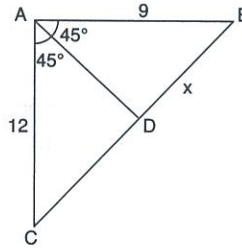
6.



$$\begin{aligned} m(\widehat{BAD}) &= 45^\circ \\ m(\widehat{DAC}) &= 45^\circ \\ |AB| &= 12 \text{ br} \\ |AC| &= 5 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 13 B) $\frac{156}{17}$ C) $\frac{65}{17}$ D) 5 E) 3

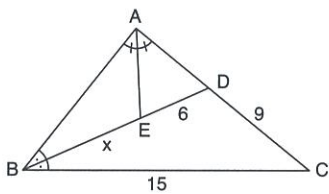
7.



$$\begin{aligned} m(\widehat{CAD}) &= 45^\circ \\ m(\widehat{DAB}) &= 45^\circ \\ |AB| &= 9 \text{ br} \\ |AC| &= 12 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 6 B) $\frac{45}{7}$ C) $\frac{60}{7}$ D) 9 E) 12

8.

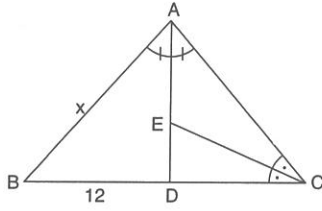


$$\begin{aligned} m(\widehat{BAE}) &= m(\widehat{EAD}) \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ |ED| &= 6 \text{ br} \\ |DC| &= 9 \text{ br} \\ |BC| &= 15 \text{ br} \\ \Rightarrow |BE| &= x = ? \end{aligned}$$

- A) 3 B) 5 C) 6 D) 8 E) 10



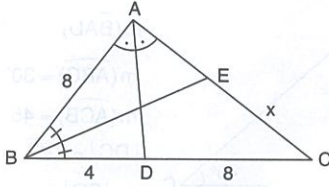
9.



$$\begin{aligned} 2|AE| &= 3|ED| \\ m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ACE}) &= m(\widehat{ECB}) \\ |BD| &= 12 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 24 B) 18 C) 12 D) 8 E) 6

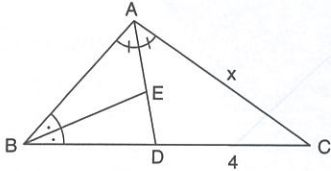
10.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABE}) &= m(\widehat{ECB}) \\ |AB| &= 8 \text{ br} \\ |BD| &= 4 \text{ br} \\ |DC| &= 8 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

- A) 4 B) $\frac{36}{5}$ C) $\frac{48}{5}$ D) 12 E) 16

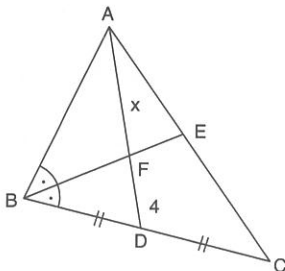
11.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABE}) &= m(\widehat{ECB}) \\ 2|AE| &= 3|ED| \\ |DC| &= 4 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) 6 D) 8 E) 12

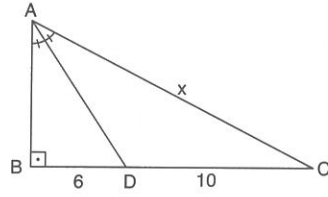
12.



$$\begin{aligned} |BD| &= |DC| \\ 4|AE| &= 5|EC| \\ m(\widehat{CBE}) &= m(\widehat{EBA}) \\ |FD| &= 4 \text{ br} \\ \Rightarrow |AF| &= x = ? \end{aligned}$$

- A) 4 B) 6 C) 9 D) 10 E) 12

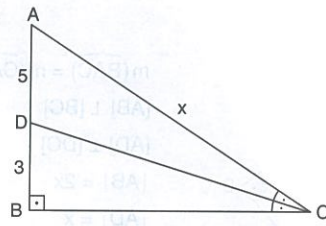
13.



$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |BD| &= 6 \text{ br} \\ |DC| &= 10 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 10 B) 15 C) 20 D) 25 E) 30

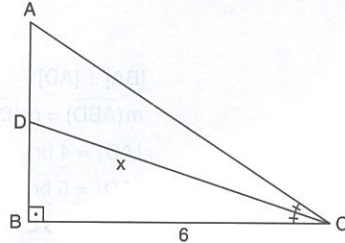
14.



$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ |AD| &= 5 \text{ br} \\ |DB| &= 3 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 5 B) $5\sqrt{2}$ C) $5\sqrt{3}$ D) 10 E) 15

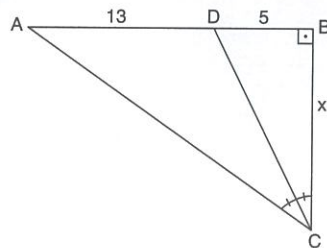
15.



$$\begin{aligned} 3|AD| &= 5|DB| \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ [BC] &\perp [AB] \\ |BC| &= 6 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) $\sqrt{5}$ B) $2\sqrt{5}$ C) $3\sqrt{5}$ D) $6\sqrt{5}$ E) $8\sqrt{5}$

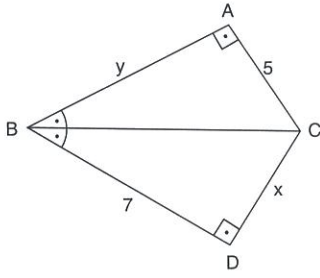
16.



$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ |AD| &= 13 \text{ br} \\ |DB| &= 5 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 5 B) $\frac{15}{2}$ C) 8 D) 10 E) $\frac{13}{2}$

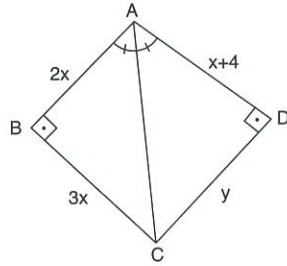
1.



$$\begin{aligned} m(\widehat{ABC}) &= m(\widehat{CBD}) \\ [BA] &\perp [AC] \\ [BD] &\perp [DC] \\ |BD| &= 7 \text{ br} \\ |AC| &= 5 \text{ br} \\ |DC| &= x \\ |AB| &= y \\ \Rightarrow y - x &= ? \end{aligned}$$

- A) 1 B) 2 C) 5 D) 7 E) 12

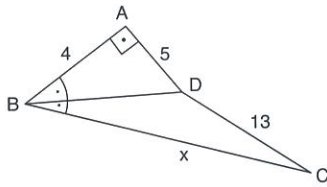
2.



$$\begin{aligned} m(\widehat{BAC}) &= m(\widehat{CAD}) \\ [AB] &\perp [BC] \\ [AD] &\perp [DC] \\ |AB| &= 2x \\ |AD| &= x + 4 \\ |BC| &= 3x \\ \Rightarrow |DC| &= y = ? \end{aligned}$$

- A) 4 B) 8 C) 12 D) 16 E) 20

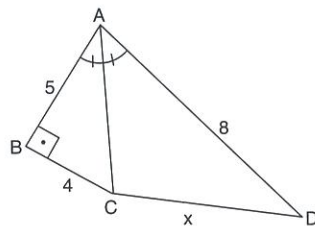
3.



$$\begin{aligned} [BA] &\perp [AD] \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ |AB| &= 4 \text{ br} \\ |AD| &= 5 \text{ br} \\ |DC| &= 13 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 4 B) 5 C) 12 D) 16 E) 20

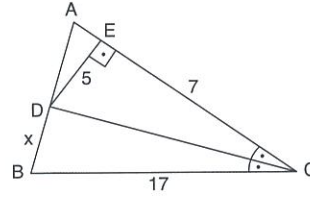
4.



$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{BAC}) &= m(\widehat{CAD}) \\ |AB| &= 5 \text{ br} \\ |BC| &= 4 \text{ br} \\ |AD| &= 8 \text{ br} \\ \Rightarrow |CD| &= x = ? \end{aligned}$$

- A) 3 B) 4 C) 5 D) $4\sqrt{2}$ E) 8

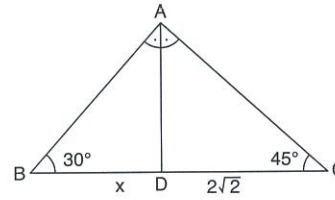
5.



$$\begin{aligned} [DE] &\perp [AC] \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ |BC| &= 17 \text{ br} \\ |EC| &= 7 \text{ br} \\ |DE| &= 5 \text{ br} \\ \Rightarrow |DB| &= x = ? \end{aligned}$$

- A) 5 B) $5\sqrt{2}$ C) $5\sqrt{5}$ D) 10 E) 13

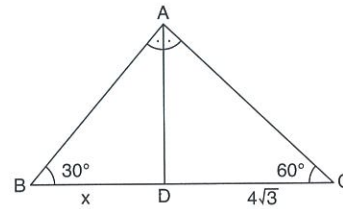
6.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABC}) &= 30^\circ \\ m(\widehat{ACB}) &= 45^\circ \\ |DC| &= 2\sqrt{2} \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 1 B) $\sqrt{2}$ C) 2 D) $\sqrt{6}$ E) 4

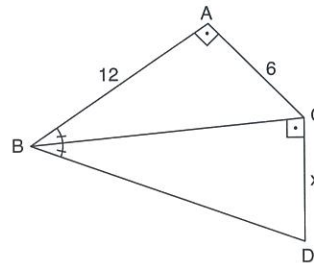
7.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABC}) &= 30^\circ \\ m(\widehat{ACB}) &= 60^\circ \\ |DC| &= 4\sqrt{3} \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 4 B) $4\sqrt{3}$ C) 8 D) 12 E) $8\sqrt{3}$

8.

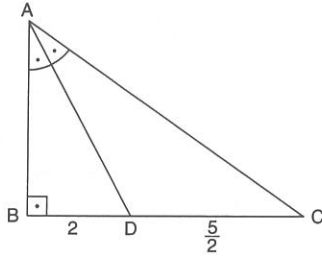


$$\begin{aligned} [BA] &\perp [AC] \\ [BC] &\perp [CD] \\ |AB| &= 12 \text{ br} \\ |AC| &= 6 \text{ br} \\ \Rightarrow |CD| &= x = ? \end{aligned}$$

- A) 3 B) $3\sqrt{2}$ C) $3\sqrt{5}$ D) 6 E) $6\sqrt{5}$



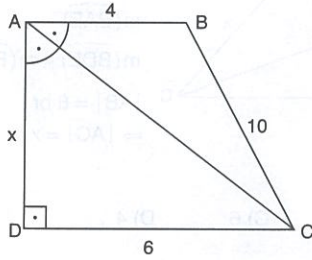
9.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ [AB] &\perp [BC] \\ |BD| &= 2 \text{ br} \\ |DC| &= \frac{5}{2} \text{ br} \\ \Rightarrow |AB| &= ? \end{aligned}$$

- A) $\frac{9}{2}$ B) 6 C) 8 D) 9 E) 18

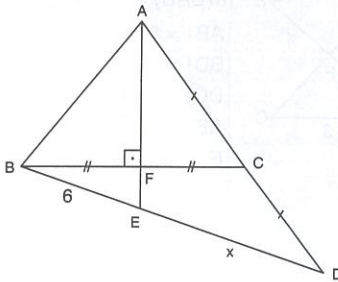
10.



$$\begin{aligned} m(\widehat{DAC}) &= m(\widehat{CAB}) \\ [AD] &\perp [DC] \\ |AB| &= 4 \text{ br} \\ |BC| &= 10 \text{ br} \\ |DC| &= 6 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 6 B) 8 C) 10 D) 12 E) 14

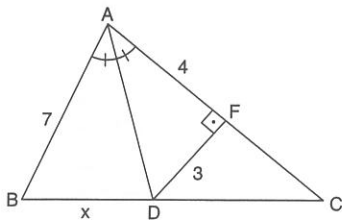
11.



$$\begin{aligned} [AF] &\perp [BC] \\ |BF| &= |FC| \\ |AC| &= |CD| \\ |BE| &= 6 \text{ br} \\ |ED| &= x \\ \Rightarrow x &= ? \end{aligned}$$

- A) 3 B) 6 C) 9 D) 12 E) 15

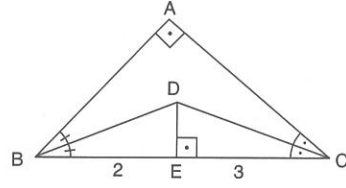
12.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ [DF] &\perp [AC] \\ |AF| &= 4 \text{ br} \\ |DF| &= 3 \text{ br} \\ |AB| &= 7 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 3 B) $3\sqrt{2}$ C) 4 D) 5 E) $5\sqrt{2}$

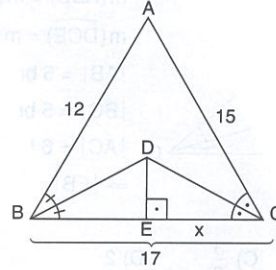
13.



$$\begin{aligned} [DE] &\perp [BC] \\ [BA] &\perp [AC] \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ |BE| &= 2 \text{ br} \\ |EC| &= 3 \text{ br} \\ \Rightarrow |DE| &= ? \end{aligned}$$

- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 3

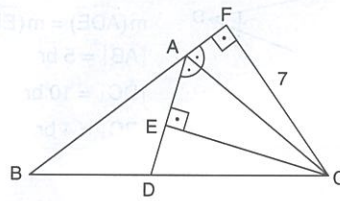
14.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ [DE] &\perp [BC] \\ |AB| &= 12 \text{ br} \\ |AC| &= 15 \text{ br} \\ |BC| &= 17 \text{ br} \\ |EC| &= x \\ \Rightarrow x &= ? \end{aligned}$$

- A) 9 B) 10 C) 12 D) 14 E) 16

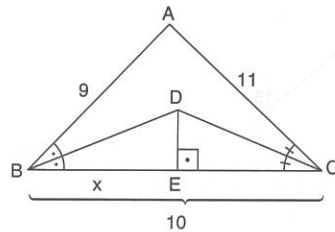
15.



$$\begin{aligned} [BF] &\perp [FC] \\ [AD] &\perp [CE] \\ m(\widehat{DAC}) &= m(\widehat{FAC}) \\ |DC| &= 14 \text{ br} \\ |FC| &= 7 \text{ br} \\ \Rightarrow |ED| &= ? \end{aligned}$$

- A) $4\sqrt{3}$ B) $7\sqrt{3}$ C) $14\sqrt{3}$ D) $\frac{7}{2}$ E) $\sqrt{7}$

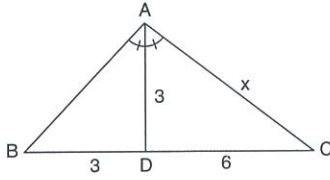
16.



$$\begin{aligned} [DE] &\perp [BC] \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ |AB| &= 9 \text{ br} \\ |AC| &= 11 \text{ br} \\ |BC| &= 10 \text{ br} \\ \Rightarrow |BE| &= x = ? \end{aligned}$$

- A) 3 B) 4 C) 5 D) 6 E) 8

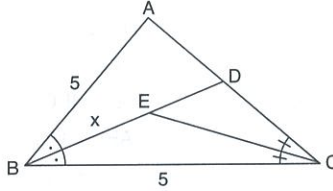
1.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AD| &= 3 \text{ br} \\ |BD| &= 3 \text{ br} \\ |DC| &= 6 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $3\sqrt{6}$ B) $2\sqrt{6}$ C) $\sqrt{6}$ D) $\sqrt{3}$ E) $\sqrt{2}$

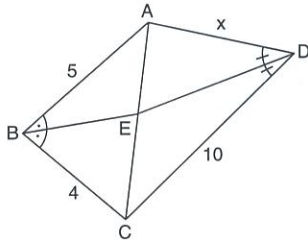
2.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DCE}) \\ m(\widehat{DCE}) &= m(\widehat{ECB}) \\ |AB| &= 5 \text{ br} \\ |BC| &= 5 \text{ br} \\ |AC| &= 6 \text{ br} \\ \Rightarrow |EB| &= x = ? \end{aligned}$$

- A) $\frac{1}{2}$ B) 1 C) $\frac{3}{2}$ D) 2 E) $\frac{5}{2}$

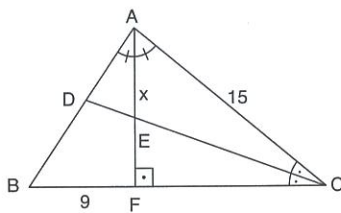
3.



$$\begin{aligned} m(\widehat{ABE}) &= m(\widehat{ECB}) \\ m(\widehat{ADE}) &= m(\widehat{EDC}) \\ |AB| &= 5 \text{ br} \\ |DC| &= 10 \text{ br} \\ |BC| &= 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) 8 D) $\frac{25}{2}$ E) 25

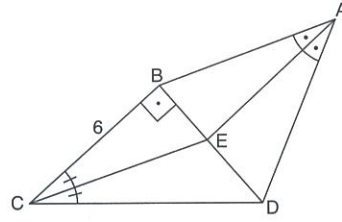
4.



$$\begin{aligned} [AF] &\perp [BC] \\ m(\widehat{BAF}) &= m(\widehat{FAC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ |AC| &= 15 \text{ br} \\ |BF| &= 9 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) $\frac{15}{2}$ B) 6 C) 5 D) $\frac{5}{2}$ E) 2

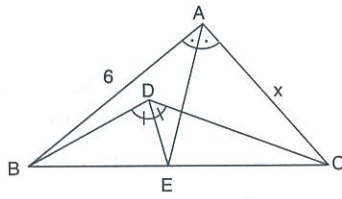
5.



$$\begin{aligned} [CB] &\perp [DB] \\ m(\widehat{BAE}) &= m(\widehat{EAD}) \\ m(\widehat{BCE}) &= m(\widehat{ECD}) \\ 4|AB| &= 3|AD| \\ |BC| &= 6 \text{ br} \\ \Rightarrow |BD| &= ? \end{aligned}$$

- A) $6\sqrt{6}$ B) $2\sqrt{6}$ C) $\sqrt{21}$ D) $2\sqrt{7}$ E) $\sqrt{7}$

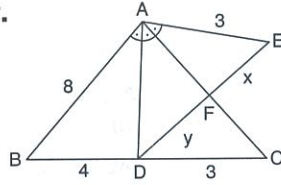
6.



$$\begin{aligned} \frac{|BD|}{|DC|} &= \frac{3}{4} \\ m(\widehat{BAE}) &= m(\widehat{EAC}) \\ m(\widehat{BDE}) &= m(\widehat{EDC}) \\ |AB| &= 6 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 16 B) 8 C) 6 D) 4 E) 2

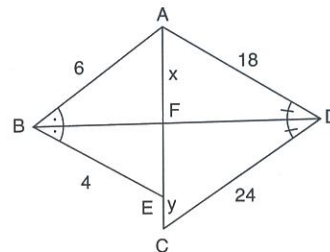
7.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) = m(\widehat{CAE}) \\ |AB| &= 8 \text{ br} \\ |BD| &= 4 \text{ br} \\ |DC| &= 3 \text{ br} \\ |AE| &= 3 \text{ br} \\ |EF| &= x \\ |DF| &= y \\ \Rightarrow \frac{x}{y} &= ? \end{aligned}$$

- A) $\frac{1}{2}$ B) 1 C) 2 D) $\frac{5}{2}$ E) 3

8.

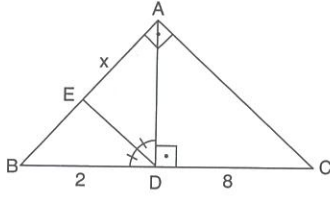


$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DBE}) \\ m(\widehat{ADB}) &= m(\widehat{BDC}) \\ |AB| &= 6 \text{ br} \\ |AD| &= 18 \text{ br} \\ |DC| &= 24 \text{ br} \\ |BE| &= 4 \text{ br} \\ |AF| &= x \\ |EC| &= y \\ \Rightarrow \frac{x}{y} &= ? \end{aligned}$$

- A) 2 B) 1 C) $\frac{3}{2}$ D) 2 E) $\frac{5}{2}$



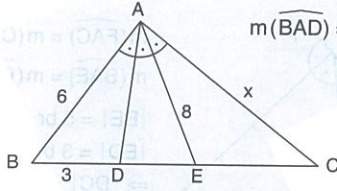
9.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [BC] \\ m(\widehat{BDE}) &= m(\widehat{EDA}) \\ |DC| &= 8 \text{ br} \\ |BD| &= 2 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) $\frac{4\sqrt{5}}{3}$ B) $2\sqrt{10}$ C) $\frac{4\sqrt{10}}{3}$ D) 10 E) 20

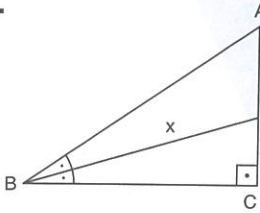
10.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAE}) = m(\widehat{EAC}) \\ |AB| &= 6 \text{ br} \\ |BD| &= 3 \text{ br} \\ |AE| &= 8 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 6,4 B) 12,8 C) 19,2 D) 20 E) 22

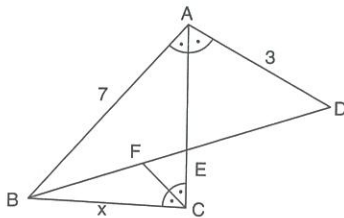
11.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DBC}) \\ |AD| &= 5 \text{ br} \\ |DC| &= 3 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) $3\sqrt{5}$ B) 6 C) $6\sqrt{5}$ D) 8 E) 12

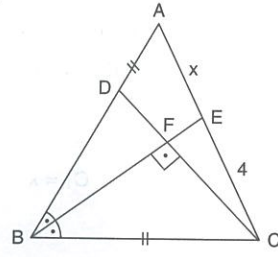
12.



$$\begin{aligned} m(\widehat{ACF}) &= m(\widehat{FCB}) \\ m(\widehat{BAC}) &= m(\widehat{CAD}) \\ |BF| &= |FD| \\ |BA| &= 7 \text{ br} \\ |AD| &= 3 \text{ br} \\ |EC| &= 6 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 12 B) 15 C) 16 D) 18 E) 20

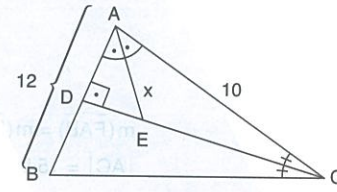
13.



$$\begin{aligned} [BF] &\perp [DC] \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ |AD| &= |BC| \\ |EC| &= 4 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) 8 B) 4 C) 2 D) 1 E) $\frac{1}{2}$

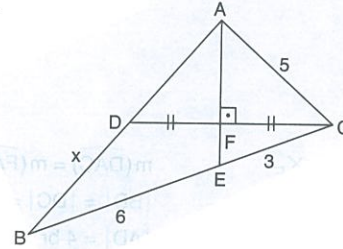
14.



$$\begin{aligned} [AB] &\perp [DC] \\ m(\widehat{DAE}) &= m(\widehat{EAC}) \\ m(\widehat{ACD}) &= m(\widehat{DCB}) \\ |AB| &= 12 \text{ br} \\ |AC| &= 10 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) 3 B) 5 C) $3\sqrt{5}$ D) 6 E) $6\sqrt{5}$

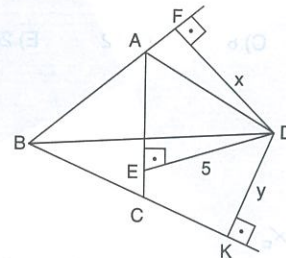
15.



$$\begin{aligned} [AF] &\perp [DC] \\ |DF| &= |FC| \\ |AC| &= 5 \text{ br} \\ |EC| &= 3 \text{ br} \\ |BE| &= 6 \text{ br} \\ \Rightarrow |DB| &= x = ? \end{aligned}$$

- A) 3 B) 5 C) 6 D) 8 E) 10

16.

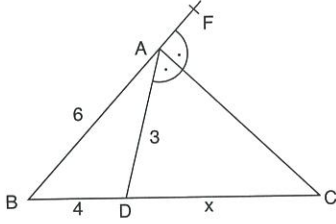


$$\begin{aligned} D &\text{ dış teğet çemberin merkezi} \\ D, &\text{ central point of the tangential circle} \\ [ED] &\perp [AC] \\ [DF] &\perp [BF] \\ [DK] &\perp [BK] \\ |ED| &= 5 \text{ br} \\ |FD| &= x \\ |DK| &= y \\ \Rightarrow x + y &= ? \end{aligned}$$

- A) 5 B) $5\sqrt{2}$ C) 10 D) $10\sqrt{2}$ E) $10\sqrt{3}$



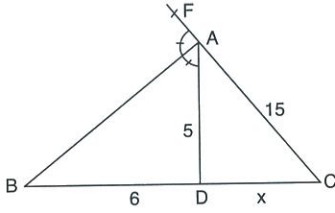
1.



$$\begin{aligned} m(\widehat{DAC}) &= m(\widehat{CAF}) \\ |AD| &= 3 \text{ br} \\ |AB| &= 6 \text{ br} \\ |BD| &= 4 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 2 B) $\frac{7}{2}$ C) 4 D) 6 E) $\frac{13}{2}$

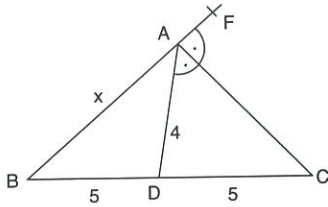
2.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ |AC| &= 15 \text{ br} \\ |BD| &= 6 \text{ br} \\ |AD| &= 5 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 8 B) 9 C) 10 D) 11 E) 12

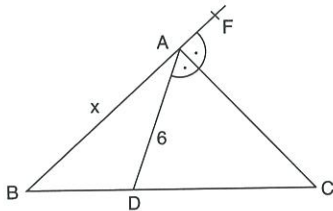
3.



$$\begin{aligned} m(\widehat{DAC}) &= m(\widehat{FAC}) \\ |BD| &= |DC| = 5 \text{ br} \\ |AD| &= 4 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 4 B) 6 C) 8 D) 12 E) 20

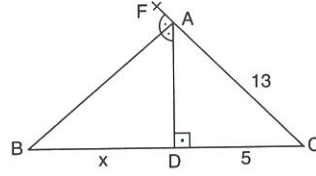
4.



$$\begin{aligned} m(\widehat{FAC}) &= m(\widehat{DAC}) \\ 3|BD| &= 4|DC| \\ |AD| &= 6 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 7 B) 10 C) 14 D) 21 E) 28

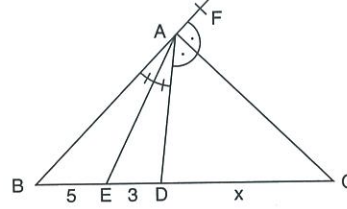
5.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ [AD] &\perp [BC] \\ |AC| &= 13 \text{ br} \\ |DC| &= 5 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 5 B) 12 C) 17 D) 30 E) 60

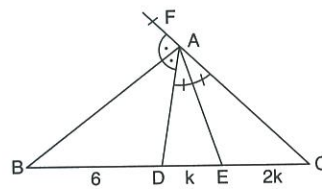
6.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{CAD}) \\ m(\widehat{BAE}) &= m(\widehat{EAD}) \\ |BE| &= 5 \text{ br} \\ |ED| &= 3 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 3 B) 5 C) 6 D) 8 E) 12

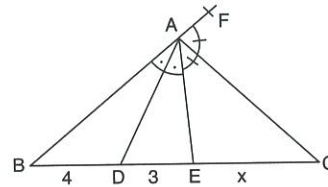
7.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ m(\widehat{DAE}) &= m(\widehat{EAC}) \\ 2|DE| &= |EC| \\ |BD| &= 6 \text{ br} \\ \Rightarrow |BE| &= ? \end{aligned}$$

- A) 2 B) 6 C) 8 D) 10 E) 12

8.

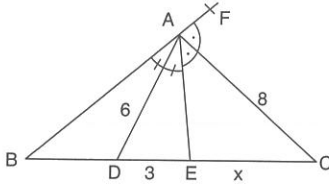


$$\begin{aligned} m(\widehat{FAC}) &= m(\widehat{CAE}) \\ m(\widehat{BAD}) &= m(\widehat{DAE}) \\ |BD| &= 4 \text{ br} \\ |DE| &= 3 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

- A) 7 B) 14 C) 21 D) 28 E) 35



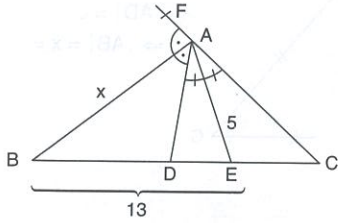
9.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAE}) \\ m(\widehat{FAC}) &= m(\widehat{CAE}) \\ |AC| &= 8 \text{ br} \\ |AD| &= 6 \text{ br} \\ |DE| &= 3 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

- A) 3 B) 4 C) 7 D) 10 E) 13

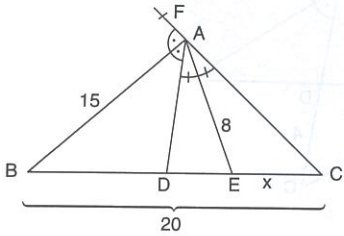
10.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ m(\widehat{DAE}) &= m(\widehat{EAC}) \\ |AE| &= 5 \text{ br} \\ |BE| &= 13 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 5 B) 7 C) 8 D) 10 E) 12

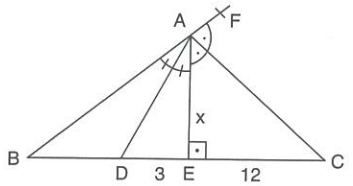
11.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ m(\widehat{DAE}) &= m(\widehat{EAC}) \\ |AB| &= 15 \text{ br} \\ |AE| &= 8 \text{ br} \\ |BC| &= 20 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

- A) 3 B) 8 C) 17 D) 20 E) 37

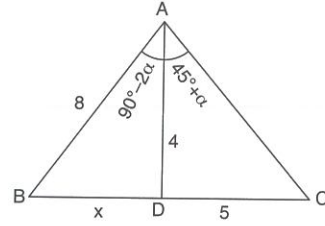
12.



$$\begin{aligned} m(\widehat{FAC}) &= m(\widehat{CAE}) \\ m(\widehat{EAD}) &= m(\widehat{DAB}) \\ [AE] &\perp [BC] \\ |DE| &= 3 \text{ br} \\ |EC| &= 12 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) 3 B) 6 C) 12 D) $6\sqrt{2}$ E) $6\sqrt{5}$

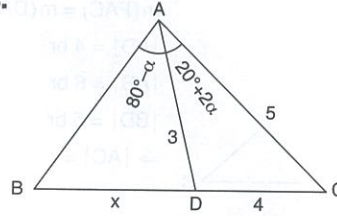
13.



$$\begin{aligned} m(\widehat{BAD}) &= 90^\circ - 2\alpha \\ m(\widehat{DAC}) &= 45^\circ + \alpha \\ |AD| &= 4 \text{ br} \\ |DC| &= 5 \text{ br} \\ |AB| &= 8 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 2 B) $2\sqrt{3}$ C) 4 D) 5 E) 10

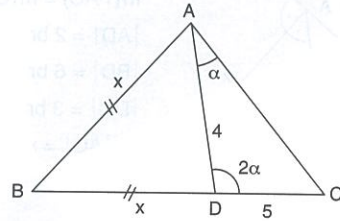
14.



$$\begin{aligned} m(\widehat{BAD}) &= 80^\circ - \alpha \\ m(\widehat{DAC}) &= 20^\circ + 2\alpha \\ |AD| &= 3 \text{ br} \\ |DC| &= 4 \text{ br} \\ |AC| &= 5 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 3 B) 4 C) 6 D) 8 E) 12

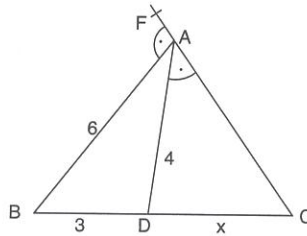
15.



$$\begin{aligned} 2m(\widehat{DAC}) &= m(\widehat{ADC}) \\ |AB| &= |BD| \\ |AD| &= 4 \text{ br} \\ |DC| &= 5 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 5 B) 10 C) 15 D) 20 E) 25

16.

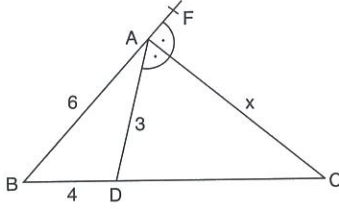


$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{DAC}) \\ |AD| &= 4 \text{ br} \\ |AB| &= 6 \text{ br} \\ |BD| &= 3 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 6



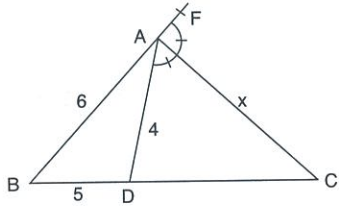
1.



$$\begin{aligned} m(\widehat{FAC}) &= m(\widehat{DAC}) \\ |AD| &= 3 \text{ br} \\ |BD| &= 4 \text{ br} \\ |AB| &= 6 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $\sqrt{7}$ B) $\sqrt{14}$ C) $2\sqrt{7}$ D) 7 E) 49

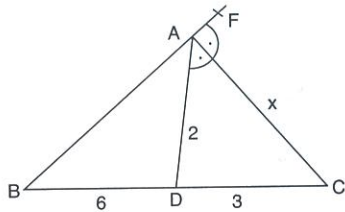
2.



$$\begin{aligned} m(\widehat{FAC}) &= m(\widehat{DAC}) \\ |AD| &= 4 \text{ br} \\ |AB| &= 6 \text{ br} \\ |BD| &= 5 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $\sqrt{7}$ B) 3 C) $3\sqrt{7}$ D) $3\sqrt{14}$ E) 12

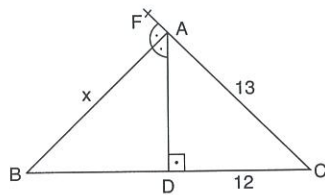
3.



$$\begin{aligned} m(\widehat{FAC}) &= m(\widehat{CAD}) \\ |AD| &= 2 \text{ br} \\ |BD| &= 6 \text{ br} \\ |DC| &= 3 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $\sqrt{3}$ B) $\sqrt{5}$ C) $\sqrt{14}$ D) $\sqrt{15}$ E) 6

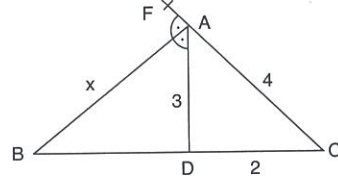
4.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ [AD] &\perp [BC] \\ |AC| &= 13 \text{ br} \\ |DC| &= 12 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) $\frac{5\sqrt{13}}{2}$ B) $5\sqrt{13}$ C) 13 D) $13\sqrt{2}$ E) 26

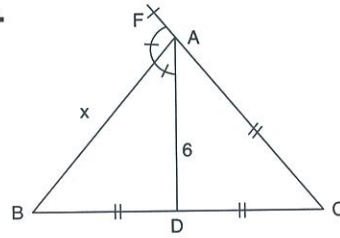
5.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ |AC| &= 4 \text{ br} \\ |DC| &= 2 \text{ br} \\ |AD| &= 3 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 4 B) 6 C) $6\sqrt{2}$ D) 10 E) 12

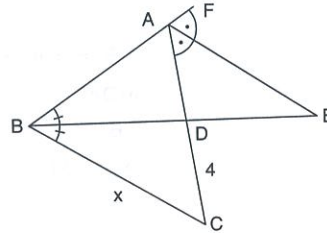
6.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ |AC| &= |DC| = |BD| \\ |AD| &= 6 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) $6\sqrt{6}$ B) $6\sqrt{3}$ C) $6\sqrt{2}$ D) 6 E) 3

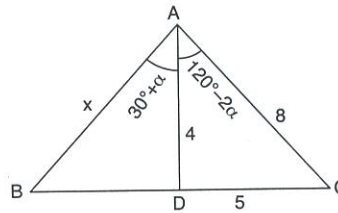
7.



$$\begin{aligned} m(\widehat{FAE}) &= m(\widehat{EAC}) \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ 3|DE| &= |BD| \\ |DC| &= 4 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 4 B) 8 C) 12 D) 16 E) 20

8.

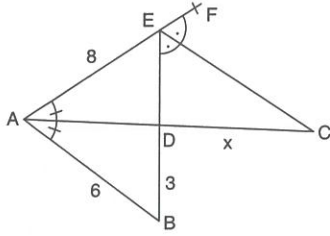


$$\begin{aligned} m(\widehat{BAD}) &= 30^\circ + \alpha \\ m(\widehat{DAC}) &= 120^\circ - 2\alpha \\ |AC| &= 8 \text{ br} \\ |DC| &= 5 \text{ br} \\ |AD| &= 4 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) $\sqrt{6}$ B) 3 C) $3\sqrt{2}$ D) 6 E) 12



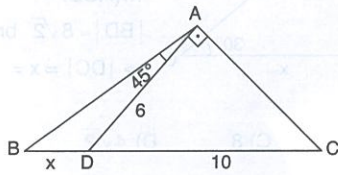
9.



$$\begin{aligned} m(\widehat{FEC}) &= m(\widehat{BEC}) \\ m(\widehat{FAC}) &= m(\widehat{CAB}) \\ |AE| &= 8 \text{ br} \\ |AB| &= 6 \text{ br} \\ |DB| &= 3 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 3 B) 4 C) 6 D) 8 E) 12

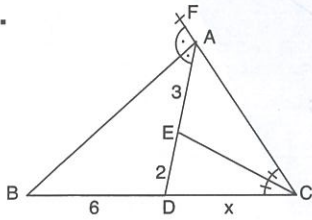
10.



$$\begin{aligned} [DA] &\perp [AC] \\ m(\widehat{BAD}) &= 45^\circ \\ |AD| &= 6 \text{ br} \\ |DC| &= 10 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 10 B) 15 C) 30 D) 45 E) 60

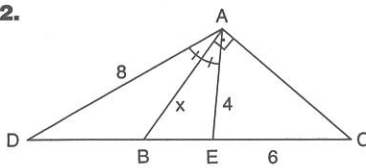
11.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ m(\widehat{ACE}) &= m(\widehat{ECB}) \\ |AE| &= 3 \text{ br} \\ |ED| &= 2 \text{ br} \\ |BD| &= 6 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) $\frac{5}{2}$ B) 5 C) 8 D) $\frac{15}{2}$ E) $\frac{15}{14}$

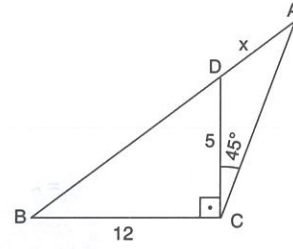
12.



$$\begin{aligned} m(\widehat{DAB}) &= m(\widehat{BAE}) \\ [BA] &\perp [AC] \\ |AE| &= 4 \text{ br} \\ |EC| &= 6 \text{ br} \\ |AD| &= 8 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 2 B) $2\sqrt{3}$ C) $3\sqrt{2}$ D) $2\sqrt{6}$ E) $3\sqrt{6}$

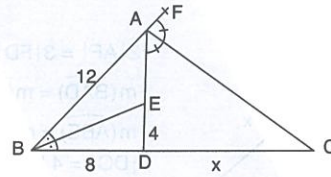
13.



$$\begin{aligned} [BC] &\perp [CD] \\ m(\widehat{DCA}) &= 45^\circ \\ |BC| &= 12 \text{ br} \\ |DC| &= 5 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) $\frac{65}{17}$ B) $\frac{65}{7}$ C) 12 D) 13 E) 15

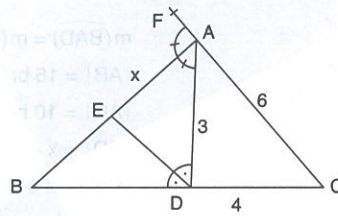
14.



$$\begin{aligned} m(\widehat{FAC}) &= m(\widehat{CAD}) \\ m(\widehat{FBE}) &= m(\widehat{EBC}) \\ |ED| &= 4 \text{ br} \\ |AB| &= 12 \text{ br} \\ |BD| &= 8 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 5 B) 10 C) 20 D) 30 E) 40

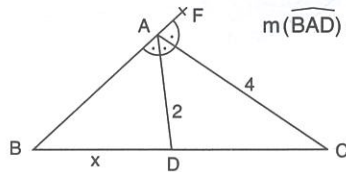
15.



$$\begin{aligned} m(\widehat{FAB}) &= m(\widehat{BAD}) \\ m(\widehat{ADE}) &= m(\widehat{EDB}) \\ |AC| &= 6 \text{ br} \\ |DC| &= 4 \text{ br} \\ |AD| &= 3 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) $\frac{\sqrt{7}}{2}$ B) $\frac{\sqrt{7}}{3}$ C) $\frac{\sqrt{14}}{2}$ D) $\frac{\sqrt{14}}{7}$ E) $\frac{3\sqrt{14}}{7}$

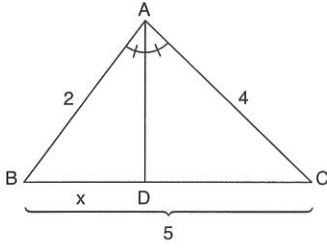
16.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) = m(\widehat{CAF}) \\ |AC| &= 4 \text{ br} \\ |AD| &= 2 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 1 B) $\sqrt{3}$ C) 2 D) $2\sqrt{3}$ E) $\sqrt{6}$

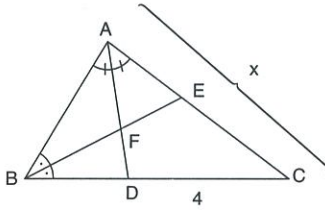
1.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AB| &= 2 \text{ br} \\ |AC| &= 4 \text{ br} \\ |BC| &= 5 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 1 B) $\frac{5}{3}$ C) 3 D) $\frac{10}{3}$ E) 4

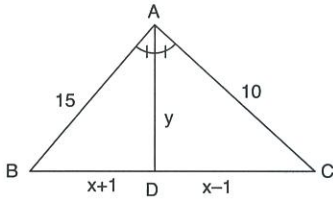
2.



$$\begin{aligned} 2|AF| &= 3|FD| \\ m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABE}) &= m(\widehat{ECB}) \\ |DC| &= 4 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 1 B) 3 C) 4 D) 6 E) 9

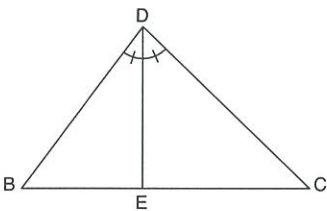
3.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AB| &= 15 \text{ br} \\ |AC| &= 10 \text{ br} \\ |BD| &= x + 1 \\ |DC| &= x - 1 \\ \Rightarrow |AD| &= y = ? \end{aligned}$$

- A) $\sqrt{7}$ B) $2\sqrt{7}$ C) $\sqrt{17}$ D) $3\sqrt{14}$ E) $9\sqrt{17}$

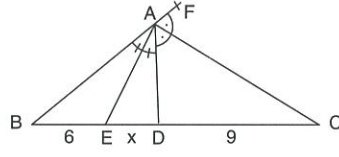
4.



$$\begin{aligned} m(\widehat{BDE}) &= m(\widehat{EDC}) \\ 2|BD| &= 3|DC| = 24 \\ |DE| &= 6\sqrt{2} \text{ br} \\ \Rightarrow |BC| &= ? \end{aligned}$$

- A) 8 B) 10 C) 12 D) 16 E) 20

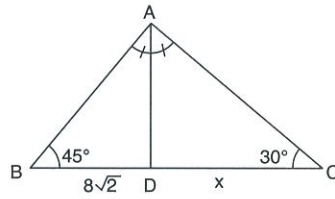
5.



$$\begin{aligned} m(\widehat{FAC}) &= m(\widehat{CAD}) \\ m(\widehat{DAE}) &= m(\widehat{EAB}) \\ |DC| &= 9 \text{ br} \\ |BE| &= 6 \text{ br} \\ \Rightarrow |ED| &= x = ? \end{aligned}$$

- A) 1 B) 3 C) 4 D) 6 E) 9

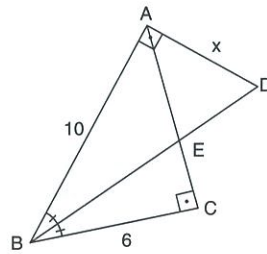
6.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABC}) &= 45^\circ \\ m(\widehat{ACB}) &= 30^\circ \\ |BD| &= 8\sqrt{2} \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 16 B) $8\sqrt{2}$ C) 8 D) $4\sqrt{2}$ E) 4

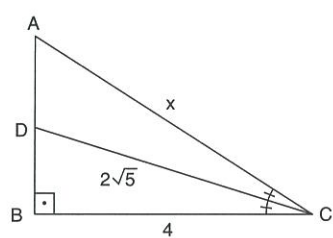
7.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{DBC}) \\ [BA] \perp [AD] \\ [AC] \perp [BC] \\ |AB| &= 10 \text{ br} \\ |BC| &= 6 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 5

8.

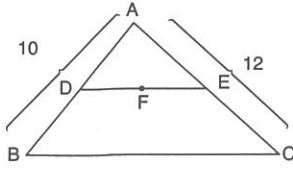


$$\begin{aligned} m(\widehat{ACD}) &= m(\widehat{DCB}) \\ [AB] \perp [BC] \\ |BC| &= 4 \text{ br} \\ |DC| &= 2\sqrt{5} \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 4 B) 6 C) $\frac{10}{3}$ D) $\frac{20}{3}$ E) 10



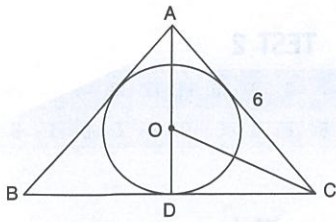
9.



F noktası iç teğet çemberin merkezi
F, the central point of the inner tangential circle
 $[DE] \parallel [BC]$
 $|AB| = 10$ br
 $|AC| = 12$ br
 $\Rightarrow \angle(ADE) = ?$

- A) 10 B) 12 C) 22 D) 44 E) 66

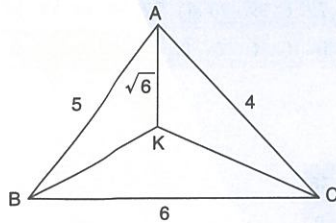
10.



ABC Eşkenar üçgen
ABC equilateral triangle
 O iç teğet çemberin merkezi
O, the central point of the inner tangential circle
 $|AC| = 6$ br
 $\Rightarrow |OC| = ?$

- A) $\sqrt{6}$ B) $\sqrt{3}$ C) $2\sqrt{3}$ D) 3 E) 6

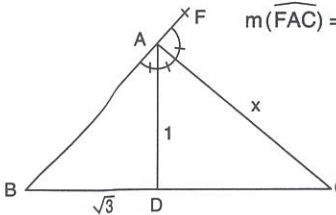
11.



K iç teğet çemberin merkezi
K, the central point of the inner tangential circle
 $|AK| = \sqrt{6}$
 $|AC| = 4$ br
 $|BC| = 6$ br
 $|AB| = 5$ br
 $\Rightarrow |KC| = ?$

- A) $2\sqrt{2}$ B) $\sqrt{3}$ C) $\sqrt{5}$ D) 3 E) 2

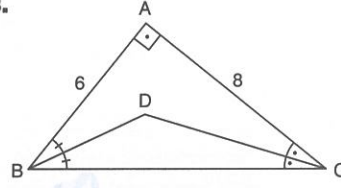
12.



$m(\widehat{FAC}) = m(\widehat{CAD}) = m(\widehat{DAB})$
 $|AD| = 1$ br
 $|BD| = \sqrt{3}$ br
 $\Rightarrow |AC| = x = ?$

- A) 1 B) $\sqrt{3}$ C) 2 D) $2\sqrt{3}$ E) 4

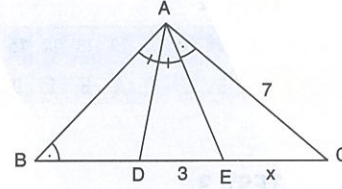
13.



$[AB] \perp [AC]$
 $|AB| = 6$ br
 $|AC| = 8$ br
 $m(\widehat{ABD}) = m(\widehat{DBC})$
 $m(\widehat{ACD}) = m(\widehat{DCB})$
 $\Rightarrow |BD| = ?$

- A) $\sqrt{3}$ B) $\sqrt{5}$ C) $2\sqrt{5}$ D) $3\sqrt{5}$ E) $2\sqrt{3}$

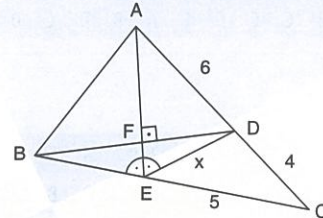
14.



$m(\widehat{BAD}) = m(\widehat{DAE})$
 $m(\widehat{ABC}) = m(\widehat{EAC})$
 $|AC| = 7$ br
 $|DE| = 3$ br
 $\Rightarrow |EC| = x = ?$

- A) 2 B) 3 C) 4 D) 7 E) 10

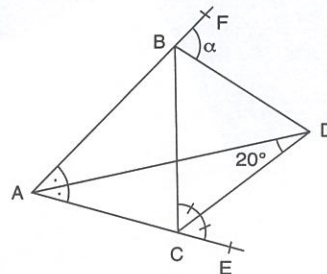
15.



$[AF] \perp [BD]$
 $m(\widehat{BEA}) = m(\widehat{AED})$
 $|AD| = 6$ br
 $|DC| = 4$ br
 $|EC| = 5$ br
 $\Rightarrow |ED| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

16.



$m(\widehat{FAD}) = m(\widehat{DAE})$
 $m(\widehat{BCD}) = m(\widehat{DCE})$
 $m(\widehat{ADC}) = 20^\circ$
 $\Rightarrow m(\widehat{FBD}) = \alpha = ?$

- A) 10 B) 20 C) 35 D) 70 E) 140



AÇIORTAY BISECTOR

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	A	C	D	A	E	A	C	D	C	C	A	B	E	D	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	E	D	B	B	B	E	B	C	C	D	C	D	C	B

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	D	C	C	E	D	C	B	D	D	B	A	B	B	B

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	E	D	A	D	B	A	C	A	C	A	B	A	C	B	C

TEST 5

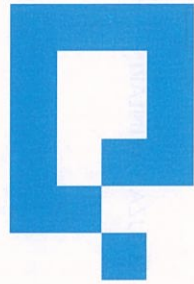
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	E	C	C	E	E	C	C	C	E	A	B	D	C	D	E

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	D	A	B	A	D	C	C	C	D	D	B	E	E	D

TEST 7

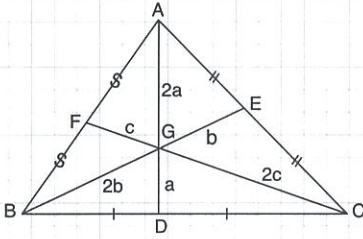
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	D	B	B	A	E	D	C	C	E	C	C	C	C	D



KENARORTAY MEDIAN



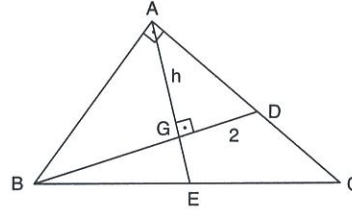
ÖZELLİK|Property 1



$|AD| = V_a$
 $|BE| = V_b$
 $|CF| = V_c$
 G ağırlık merkezi
 G, center of gravity

PUZA YAYINLARI

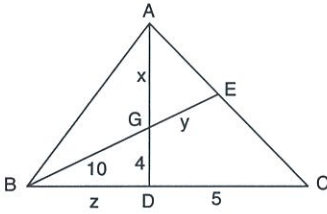
4.



G ağırlık merkezi
 G, center of gravity
 $\Rightarrow h = ?$

$$2\sqrt{2}$$

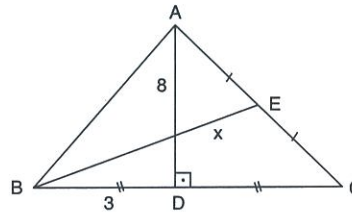
1.



G ağırlık merkezi
 G, center of gravity
 $\Rightarrow x + y + z = ?$

$$18$$

5.

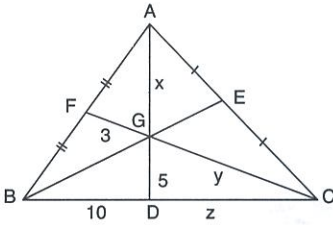


$$\Rightarrow x = ?$$

$$\frac{5}{2}$$

PUZA YAYINLARI

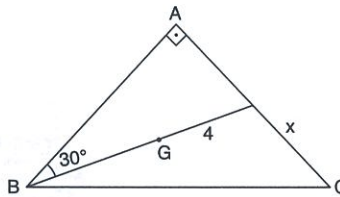
2.



$$\Rightarrow x + y + z = ?$$

$$26$$

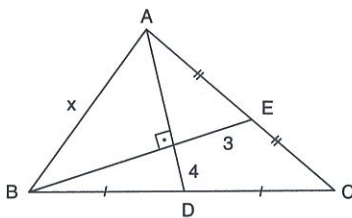
6.



G ağırlık merkezi
 G, center of gravity
 $\Rightarrow x = ?$

$$6$$

3.

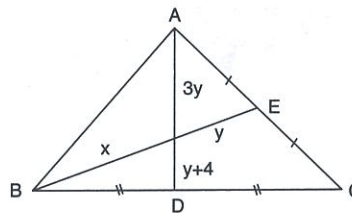


$$\Rightarrow x = ?$$

$$10$$

PUZA YAYINLARI

7.

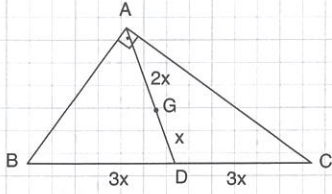


$$\Rightarrow x = ?$$

$$16$$

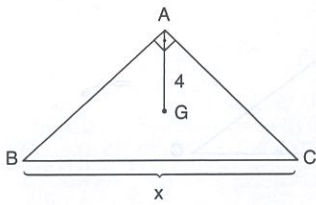


ÖZELLİK|Property 2



G ağırlık merkezi
G, center of gravity

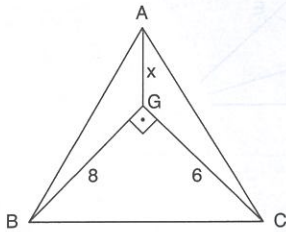
1.



G ağırlık merkezi
G, center of gravity
 $\Rightarrow x = ?$

12

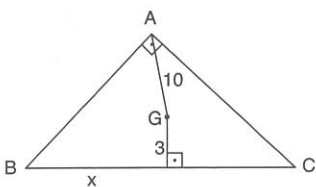
2.



G ağırlık merkezi
G, center of gravity
 $\Rightarrow x = ?$

10

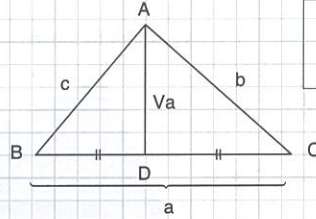
3.



G ağırlık merkezi
G, center of gravity
 $\Rightarrow x = ?$

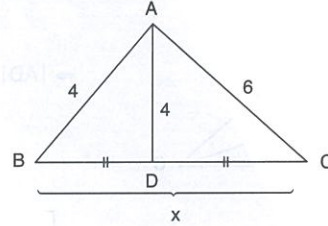
11

ÖZELLİK|Property 3



$$2(Va)^2 = b^2 + c^2 - \frac{a^2}{2}$$

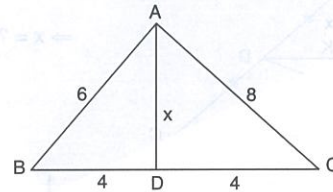
1.



$\Rightarrow x = ?$

$2\sqrt{10}$

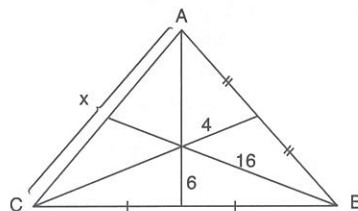
2.



$\Rightarrow x = ?$

$\sqrt{34}$

3.

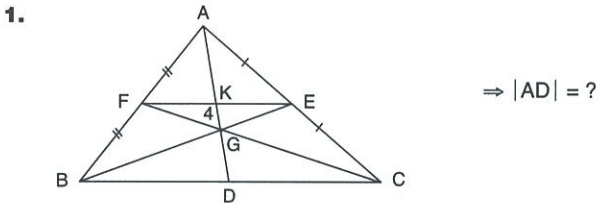
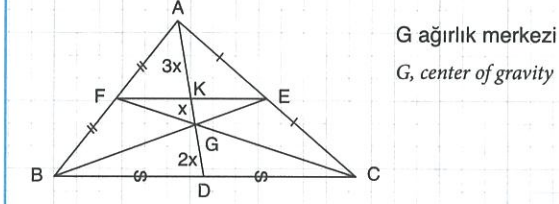


$\Rightarrow x = ?$

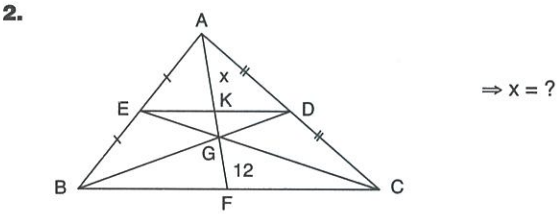
$4\sqrt{10}$



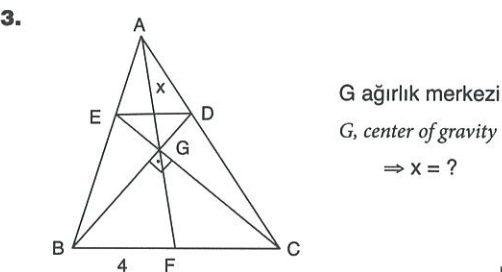
ÖZELLİK|Property 4



24

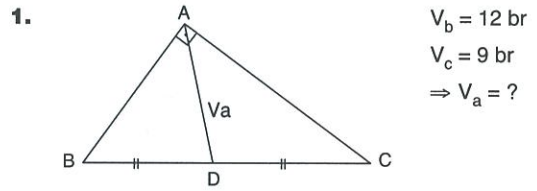
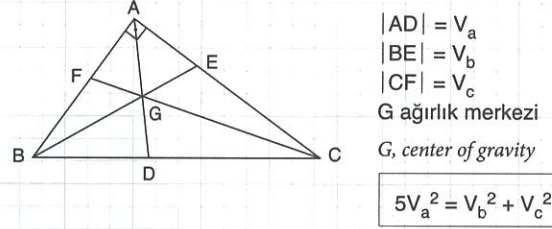
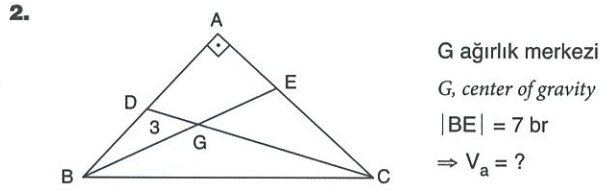
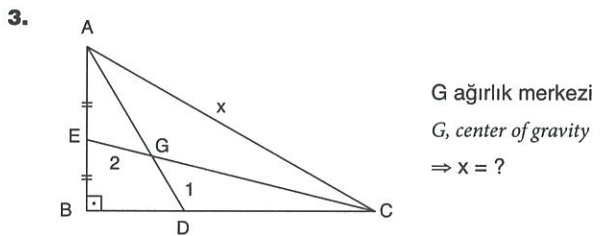


18



6

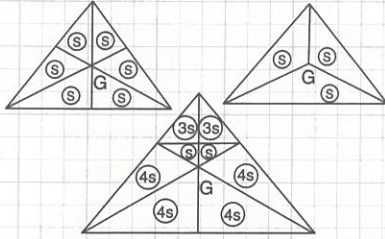
ÖZELLİK|Property 5

 $3\sqrt{5}$  $\sqrt{26}$ 

6

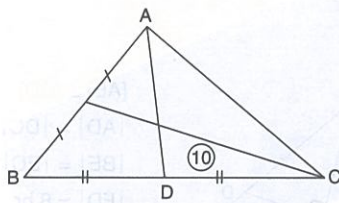


ÖZELLİK|Property 6



G ağırlık merkezi
G, center of gravity

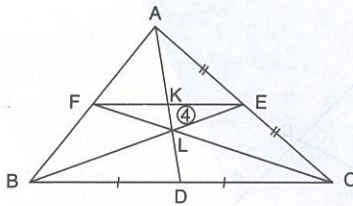
1.



$$\Rightarrow A(ABC) = ?$$

60

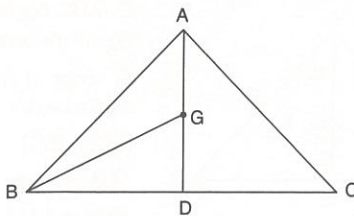
2.



$$A(KEL) = 4 \text{ br}^2 \\ \Rightarrow A(ABC) = ?$$

96

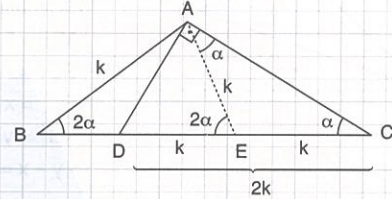
3.



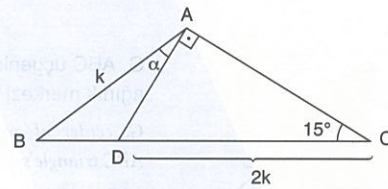
$$A(ABC) = 120 \text{ br}^2 \\ G \text{ ağırlık merkezi} \\ G, \text{ center of gravity} \\ \Rightarrow A(BGD) = ?$$

20

ÖZELLİK|Property 7



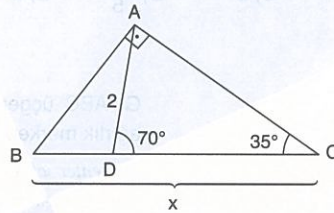
1.



$$\Rightarrow \alpha = ?$$

45

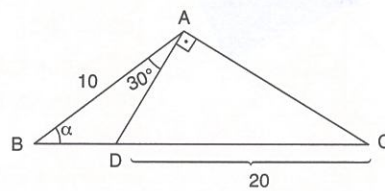
2.



$$\Rightarrow x = ?$$

4

3.

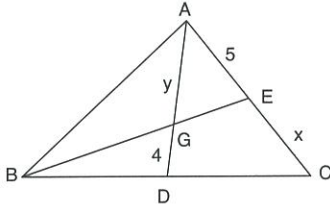


$$\Rightarrow \alpha = ?$$

40



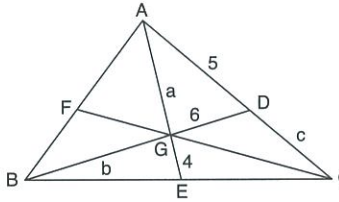
1.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
|AE| = 5 br
|GD| = 4 br
|EC| = x
|AG| = y
 $\Rightarrow y - x = ?$

- A) 1 B) 2 C) 3 D) 5 E) 9

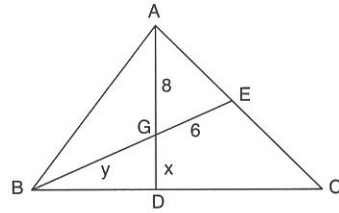
2.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
|AD| = 5 br
|GE| = 4 br
|GD| = 6 br
|AG| = a
|BG| = b
|DC| = c
 $\Rightarrow \frac{a+b}{c} = ?$

- A) 1 B) $\frac{7}{5}$ C) 2 D) $\frac{14}{5}$ E) 4

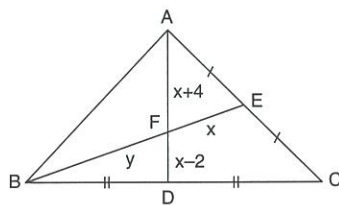
3.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
|AG| = 8 br
|GE| = 6 br
|BG| = y
|GD| = x
 $\Rightarrow y - x = ?$

- A) 1 B) 4 C) 6 D) 8 E) 10

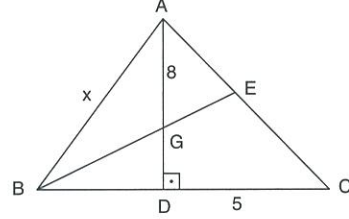
4.



|AE| = |EC|
|BD| = |DC|
|AF| = (x+4) br
|FD| = (x-2) br
|FE| = x br
 $\Rightarrow |BF| = y = ?$

- A) 16 B) 12 C) 10 D) 8 E) 4

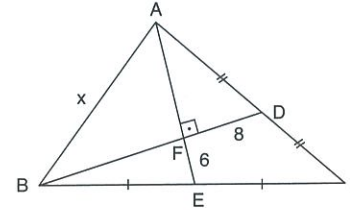
5.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[AD] $\perp$ [BC]
|AG| = 8 br
|DC| = 5 br
 $\Rightarrow |AB| = x = ?$

- A) 3 B) 5 C) 12 D) 13 E) 15

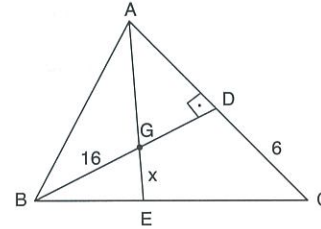
6.



[AE] $\perp$ [BD]
|AD| = |DC|
|BE| = |EC|
|FD| = 8 br
|FE| = 6 br
 $\Rightarrow |AB| = x = ?$

- A) 2 B) 4 C) 5 D) 10 E) 20

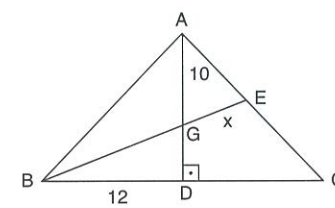
7.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[BD] $\perp$ [AC]
|BG| = 16 br
|DC| = 6 br
 $\Rightarrow |GE| = x = ?$

- A) 5 B) 10 C) 12 D) 13 E) 15

8.

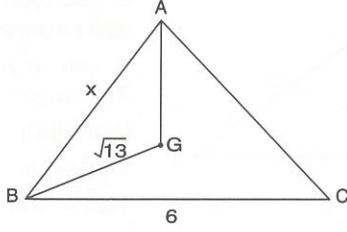


G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[AD] $\perp$ [BC]
|AG| = 10 br
|BD| = 12 br
 $\Rightarrow |GE| = x = ?$

- A) 26 B) 13 C) $\frac{13}{2}$ D) $\frac{13}{4}$ E) $\frac{13}{8}$



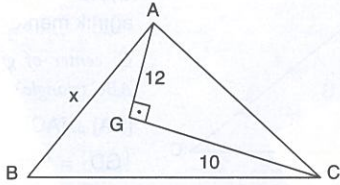
9.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $|AB| = |AC|$
 $|BC| = 6$ br
 $|BG| = \sqrt{13}$
 $\Rightarrow |AB| = x = ?$

- A) 13 B) 10 C) 8 D) $3\sqrt{5}$ E) $6\sqrt{5}$

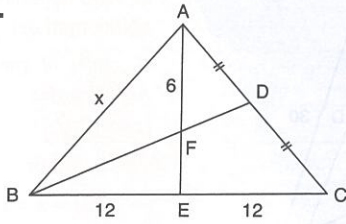
10.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[AG] \perp [GC]$
 $|AG| = 12$ br
 $|GC| = 10$ br
 $\Rightarrow |AB| = x = ?$

- A) 26 B) 20 C) 16 D) 13 E) 10

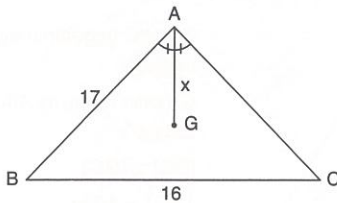
11.



$|AB| = |AC|$
 $|AD| = |DC|$
 $|BE| = |EC| = 12$ br
 $|AF| = 6$ br
 $\Rightarrow |AB| = x = ?$

- A) $15\sqrt{3}$ B) 15 C) $10\sqrt{3}$ D) 10 E) 5

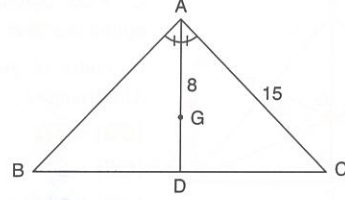
12.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $m(\widehat{BAG}) = m(\widehat{GAC})$
 $|AB| = 17$ br
 $|BC| = 16$ br
 $\Rightarrow |AG| = x = ?$

- A) 30 B) 20 C) 15 D) 10 E) 5

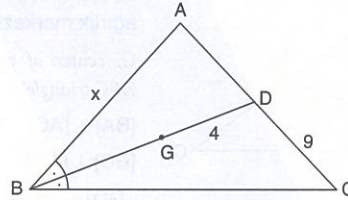
13.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $|AC| = 15$ br
 $|AG| = 8$ br
 $\Rightarrow |BC| = ?$

- A) 20 B) 18 C) 15 D) 12 E) 10

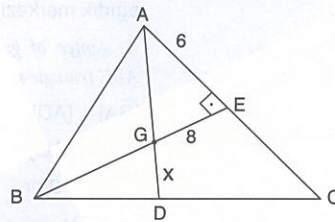
14.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $m(\widehat{ABD}) = m(\widehat{DBC})$
 $|DC| = 9$ br
 $|GD| = 4$ br
 $\Rightarrow |AB| = x = ?$

- A) 25 B) 20 C) 15 D) 10 E) 5

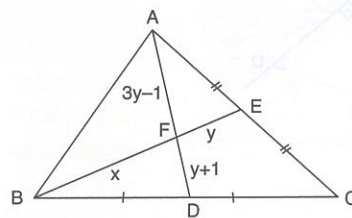
15.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $|AE| = 6$ br
 $|GE| = 8$ br
 $\Rightarrow |GD| = x = ?$

- A) 20 B) 10 C) $\frac{15}{2}$ D) 5 E) $\frac{5}{2}$

16.

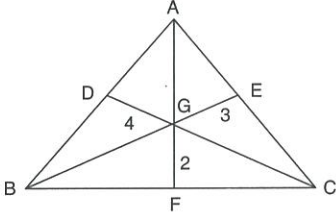


$|AE| = |EC|$
 $|BD| = |DC|$
 $|AF| = (3y-1)$ br
 $|FD| = (y+1)$ br
 $|FE| = y$ br
 $\Rightarrow |BF| = x = ?$

- A) 3 B) 6 C) 8 D) 9 E) 11



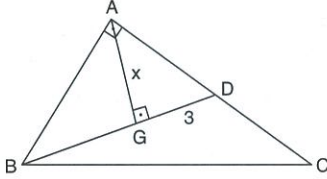
1.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $|DG| = 4$ br
 $|GE| = 3$ br
 $|GF| = 2$ br
 $\Rightarrow V_a + V_b + V_c = ?$

- A) 30 B) 27 C) 18 D) 9 E) $\frac{9}{2}$

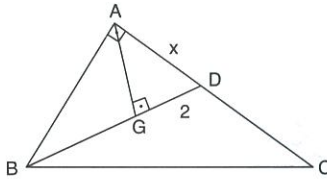
2.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[BA] \perp [AC]$
 $[BD] \perp [AG]$
 $|GD| = 3$ br
 $\Rightarrow |AG| = x = ?$

- A) $\sqrt{3}$ B) 3 C) $3\sqrt{2}$ D) $\sqrt{6}$ E) $6\sqrt{2}$

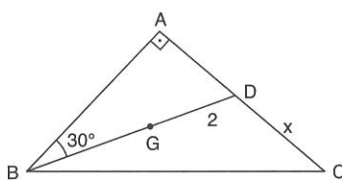
3.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[BA] \perp [AD]$
 $[BD] \perp [AG]$
 $|GD| = 2$ br
 $\Rightarrow |AD| = x = ?$

- A) $\sqrt{2}$ B) $\sqrt{3}$ C) $\sqrt{6}$ D) $2\sqrt{3}$ E) $3\sqrt{2}$

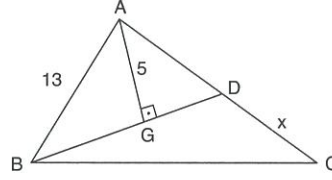
4.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[BA] \perp [AC]$
 $m(\angle ABD) = 30^\circ$
 $|GD| = 2$ br
 $\Rightarrow |DC| = x = ?$

- A) 1 B) 2 C) $2\sqrt{3}$ D) 3 E) $3\sqrt{3}$

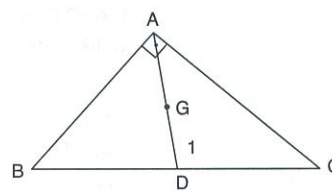
5.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[AG] \perp [BD]$
 $|AG| = 5$ br
 $|AB| = 13$ br
 $\Rightarrow |DC| = x = ?$

- A) 13 B) 10 C) $\sqrt{61}$ D) 7 E) $\sqrt{11}$

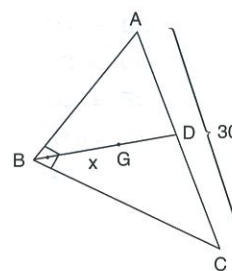
6.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[BA] \perp [AC]$
 $|GD| = 1$ br
 $\Rightarrow |BC| = ?$

- A) 1 B) 2 C) 3 D) 6 E) 9

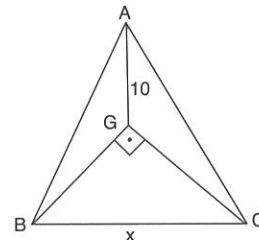
7.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[AB] \perp [BC]$
 $|AC| = 30$ br
 $\Rightarrow |BG| = x = ?$

- A) 5 B) 10 C) 15 D) 20 E) 30

8.

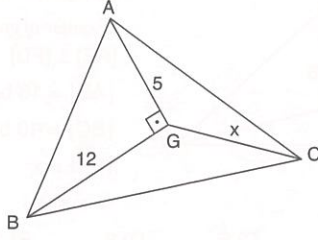


G, ABC üçgeninin ağırlık
merkezi
G, center of gravity
ABC triangle's
 $[BG] \perp [GC]$
 $|AG| = 10$ br
 $\Rightarrow |BC| = x = ?$

- A) 5 B) 10 C) 15 D) 20 E) 30



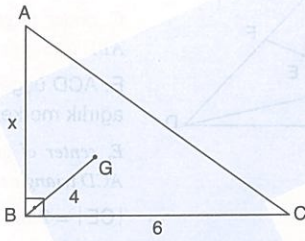
9.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[AG] ⊥ [GB]
|AG| = 5 br
|BG| = 12 br
⇒ |GC| = x = ?

- A) 5 B) 12 C) 13 D) 20 E) $\frac{26}{3}$

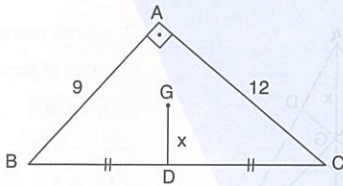
10.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[AB] ⊥ [BC]
|BG| = 4 br
|BC| = 6 br
⇒ |AB| = x = ?

- A) 6 B) 10 C) 12 D) $6\sqrt{3}$ E) 20

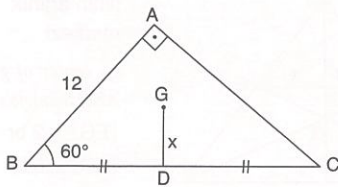
11.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
|AB| = 9 br
|AC| = 12 br
|BD| = |DC|
⇒ |GD| = x = ?

- A) 15 B) $\frac{15}{2}$ C) 5 D) $\frac{5}{2}$ E) 2

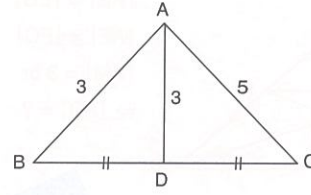
12.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[BA] ⊥ [AC]
|BD| = |DC|
|AB| = 12 br
 $m(\widehat{ABC}) = 60^\circ$
⇒ |GD| = x = ?

- A) $\sqrt{3}$ B) 4 C) 6 D) $6\sqrt{3}$ E) $12\sqrt{3}$

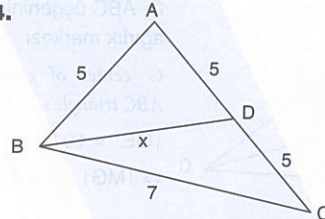
13.



|BD| = |DC|
|AB| = |AD| = 3 br
|AC| = 5 br
⇒ |BC| = ?

- A) $4\sqrt{2}$ B) 4 C) $3\sqrt{2}$ D) 3 E) 2

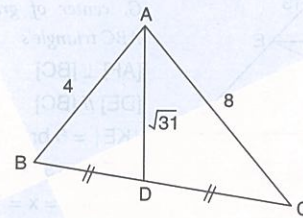
14.



|AB| = |AD| = |DC| = 5 br
|BC| = 7 br
⇒ |BD| = x = ?

- A) $2\sqrt{3}$ B) 8 C) $4\sqrt{3}$ D) 6 E) 2

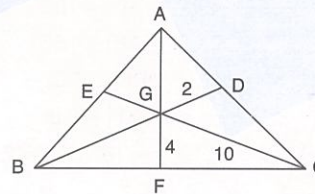
15.



|BD| = |DC|
 $2|AB| = |AC| = 8$ br
|AD| = $\sqrt{31}$ br
⇒ |BC| = ?

- A) 3 B) $3\sqrt{3}$ C) $4\sqrt{3}$ D) 6 E) 12

16.

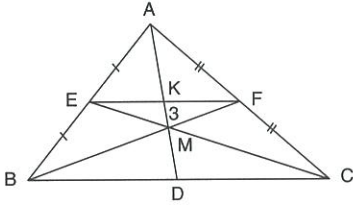


G, ABC üçgeninin
ağırlık merkezi
G, center of gravity ABC
triangle's
|GD| = 2 br
|GF| = 4 br
|GC| = 10 br
⇒ |AB| = ?

- A) $\sqrt{15}$ B) $2\sqrt{15}$ C) $4\sqrt{15}$ D) 15 E) 30



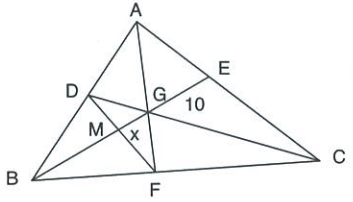
1.



$$\begin{aligned} |AE| &= |EB| \\ |AF| &= |FC| \\ |KM| &= 3 \text{ br} \\ \Rightarrow |AD| &= ? \end{aligned}$$

- A) 6 B) 9 C) 15 D) 18 E) 24

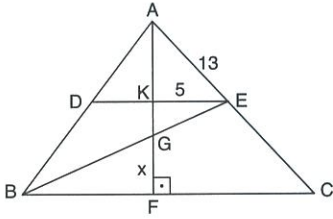
2.



$$\begin{aligned} G, \text{ABC üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{center of gravity} \\ \text{ABC triangle's} \\ |GE| &= 10 \text{ br} \\ \Rightarrow |MG| &= x = ? \end{aligned}$$

- A) 5 B) 10 C) 15 D) 25 E) 30

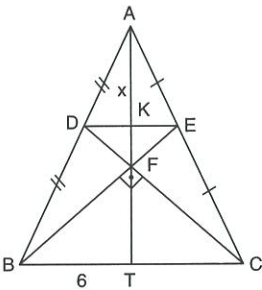
3.



$$\begin{aligned} G, \text{ABC üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{center of gravity} \\ \text{ABC triangle's} \\ [AF] \perp [BC] \\ [DE] \parallel [BC] \\ |KE| &= 5 \text{ br} \\ |AE| &= 13 \text{ br} \\ \Rightarrow |GF| &= x = ? \end{aligned}$$

- A) 4 B) 8 C) 12 D) 16 E) 20

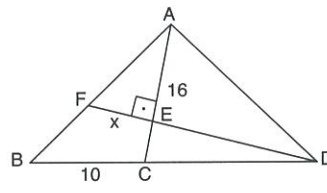
4.



$$\begin{aligned} |AD| &= |DB| \\ |AE| &= |EC| \\ [BF] \perp [FC] \\ |BT| &= 6 \text{ br} \\ \Rightarrow |AK| &= x = ? \end{aligned}$$

- A) 3 B) 6 C) 8 D) 9 E) 12

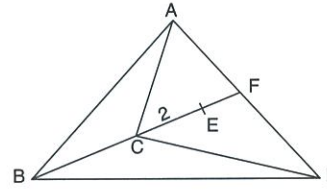
5.



$$\begin{aligned} E, \text{Ağırlık merkezi} \\ E, \text{center of gravity} \\ [AE] \perp [FD] \\ |AE| &= 16 \text{ br} \\ |BC| &= 10 \text{ br} \\ |FE| &= x \\ \Rightarrow x &= ? \end{aligned}$$

- A) 12 B) 6 C) 5 D) 3 E) 2

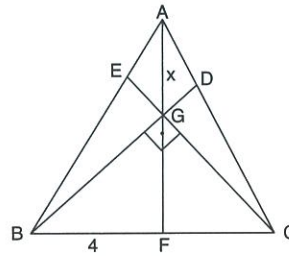
6.



$$\begin{aligned} C, \text{ABD üçgeninin} \\ \text{ağırlık merkezi} \\ C, \text{center of gravity} \\ \text{ABD triangle's} \\ E, \text{ACD üçgeninin} \\ \text{ağırlık merkezi} \\ E, \text{center of gravity} \\ \text{ACD triangle's} \\ |CE| &= 2 \text{ br} \\ \Rightarrow |BC| &= ? \end{aligned}$$

- A) 3 B) 6 C) 9 D) 10 E) 12

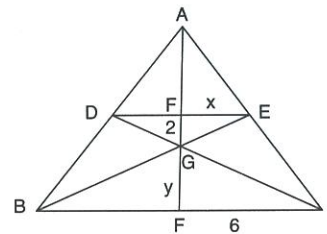
7.



$$\begin{aligned} G, \text{ağırlık merkezi} \\ G, \text{center of gravity} \\ [BG] \perp [EC] \\ |BF| &= 4 \text{ br} \\ |AG| &= x \\ \Rightarrow x &= ? \end{aligned}$$

- A) 1 B) 2 C) 4 D) 6 E) 8

8.

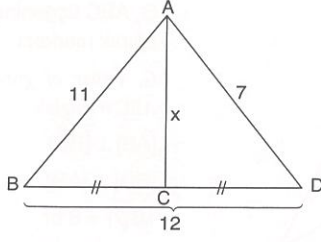


$$\begin{aligned} G, \text{ABC üçge-} \\ \text{ninin ağırlık} \\ \text{merkezi} \\ G, \text{center of gravity} \\ \text{ABC triangle's} \\ |FG| &= 2 \text{ br} \\ |FC| &= 6 \text{ br} \\ |FE| &= x \\ |GF| &= y \\ \Rightarrow x + y &= ? \end{aligned}$$

- A) 6 B) 7 C) 9 D) 10 E) 12



9.



- A) 7 B) 6 C) 5

[AC] kenarortay

[AC] median

$|BC| = |CD|$

$|AD| = 7$ br

$|AB| = 11$ br

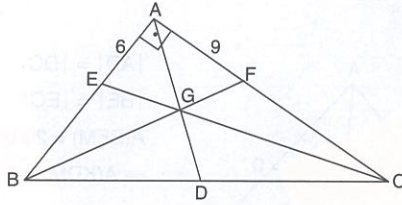
$|BD| = 12$ br

$|AC| = x$

$\Rightarrow x = ?$

- D) $2\sqrt{7}$ E) $2\sqrt{6}$

10.



- A) $\sqrt{13}$ B) $2\sqrt{13}$ C) $2\sqrt{3}$ D) 10 E) 15

G, ABC üçgeninin ağırlık merkezi

G, center of gravity ABC triangle's

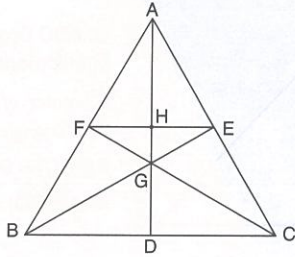
$[BA] \perp [AC]$

$|AE| = 6$ br

$|AF| = 9$ br

$\Rightarrow |DG| = ?$

11.



- A) 9 B) 8 C) 6 D) 4 E) 3

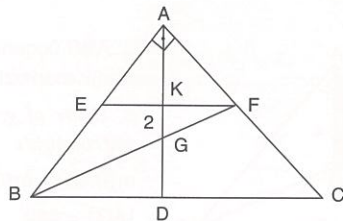
G, ağırlık merkezi

G, center of gravity

$|GD| = 3$ br

$\Rightarrow |AD| = ?$

12.



- A) 2 B) 3 C) 4 D) 6 E) 12

G, ABC üçgeninin ağırlık merkezi

G, center of gravity ABC triangle's

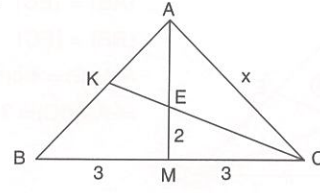
$[BA] \perp [AC]$

$[EF] \parallel [BC]$

$|KG| = 2$ br

$\Rightarrow |KF| = ?$

13.



- A) 4 B) $\sqrt{19}$ C) 5 D) $\sqrt{29}$ E) $\sqrt{65}$

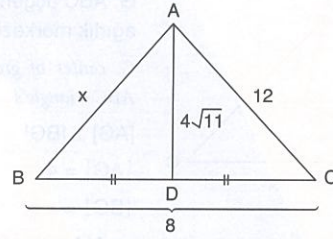
$2|AK| = 2|KB| = 5$ br

$|BM| = |MC| = 3$ br

$|EM| = 2$ br

$\Rightarrow |AC| = x = ?$

14.



- A) 4 B) $2\sqrt{15}$ C) 8 D) 10 E) $4\sqrt{15}$

$|BD| = |DC|$

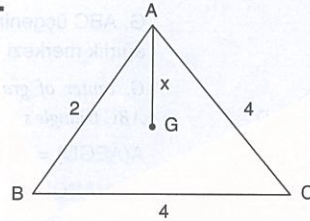
$|AC| = 12$ br

$|BC| = 8$ br

$|AD| = 4\sqrt{11}$ br

$\Rightarrow |AB| = x = ?$

15.



- A) $\frac{\sqrt{6}}{3}$ B) $\sqrt{6}$ C) $\frac{2\sqrt{6}}{3}$ D) $2\sqrt{6}$ E) 12

G, ABC üçgeninin ağırlık merkezi

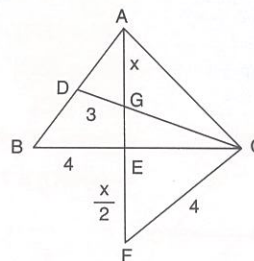
G, center of gravity ABC triangle's

$|AB| = 2$ br

$|AC| = |BC| = 4$ br

$\Rightarrow |AG| = x = ?$

16.



- A) $\sqrt{10}$ B) $2\sqrt{10}$ C) 7 D) 10 E) $4\sqrt{10}$

G, ABC üçgeninin ağırlık merkezi

G, center of gravity ABC triangle's

$|BE| = |FC| = 4$ br

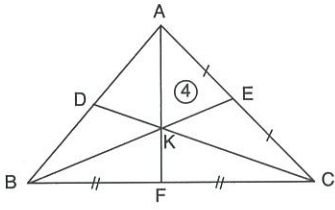
$|DG| = 3$ br

$|EF| = \frac{x}{2}$

$\Rightarrow |AG| = x = ?$



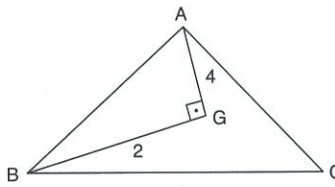
1.



$$\begin{aligned} |AE| &= |EC| \\ |BF| &= |FC| \\ A(AKE) &= 4 \text{ br}^2 \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 8 B) 16 C) 24 D) 48 E) 96

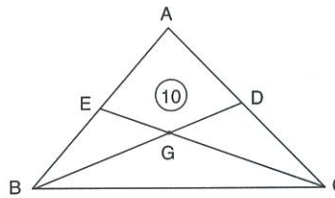
2.



$$\begin{aligned} G, ABC \text{ üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{ center of gravity} \\ ABC \text{ triangle's} \\ [AG] \perp [BG] \\ |AG| &= 4 \text{ br} \\ |BG| &= 2 \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 4 B) 8 C) 12 D) 16 E) 20

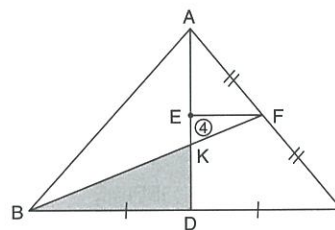
3.



$$\begin{aligned} G, ABC \text{ üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{ center of gravity} \\ ABC \text{ triangle's} \\ A(AEGD) &= 10 \text{ br}^2 \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 5 B) 10 C) 15 D) 30 E) 60

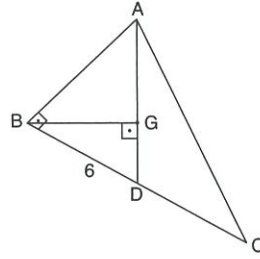
4.



$$\begin{aligned} |AF| &= |FC| \\ |BD| &= |DC| \\ [EF] \parallel [BC] \\ A(EKF) &= 4 \text{ br}^2 \\ \Rightarrow A(KBD) &= ? \end{aligned}$$

- A) 4 B) 8 C) 12 D) 16 E) 20

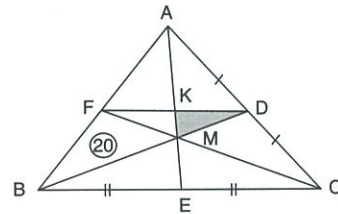
5.



$$\begin{aligned} G, ABC \text{ üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{ center of gravity} \\ ABC \text{ triangle's} \\ [AB] \perp [BC] \\ [BG] \perp [AD] \\ |BD| &= 6 \text{ br} \\ \Rightarrow |AB| &= ? \end{aligned}$$

- A) $4\sqrt{3}$ B) $2\sqrt{2}$ C) $6\sqrt{3}$ D) 36 E) $6\sqrt{2}$

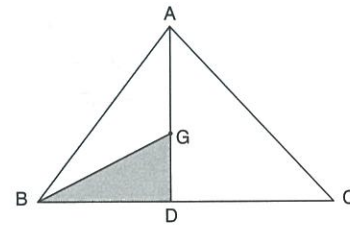
6.



$$\begin{aligned} |AD| &= |DC| \\ |BE| &= |EC| \\ A(BFM) &= 20 \text{ br}^2 \\ \Rightarrow A(KDM) &= ? \end{aligned}$$

- A) 5 B) 10 C) 15 D) 20 E) 40

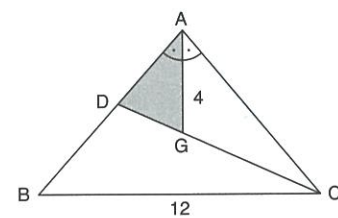
7.



$$\begin{aligned} G, ABC \text{ üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{ center of gravity} \\ ABC \text{ triangle's} \\ A(ABC) &= 90 \text{ br}^2 \\ \Rightarrow A(BGD) &= ? \end{aligned}$$

- A) 4 B) 5 C) 10 D) 12 E) 15

8.

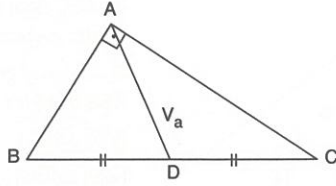


$$\begin{aligned} G, ABC \text{ üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{ center of gravity} \\ ABC \text{ triangle's} \\ m(\widehat{BAG}) &= m(\widehat{GAC}) \\ |AG| &= 4 \text{ br} \\ |BC| &= 12 \text{ br} \\ \Rightarrow A(ADG) &= ? \end{aligned}$$

- A) 2 B) 3 C) 6 D) 9 E) 12



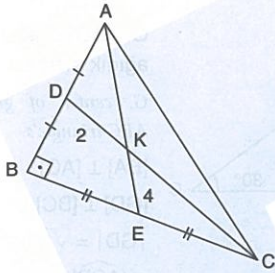
9.



$[BA] \perp [AC]$
 $|BD| = |DC|$
 $V_b = 4 \text{ br}$
 $V_c = 3 \text{ br}$
 $\Rightarrow |AD| = V_a = ?$

- A) $\frac{\sqrt{5}}{2}$ B) $\sqrt{5}$ C) $2\sqrt{5}$ D) 5 E) 10

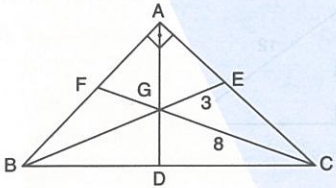
10.



$V_b, [AC]$ kenarına
 ait kenarortay
 V_b , median of $[AC]$
 $[AB] \perp [BC]$
 $|AD| = |BD|$
 $|BE| = |EC|$
 $|DK| = 2 \text{ br}$
 $|KE| = 4 \text{ br}$
 $\Rightarrow V_b = ?$

- A) $\sqrt{5}$ B) 6 C) $3\sqrt{5}$ D) 10 E) $10\sqrt{2}$

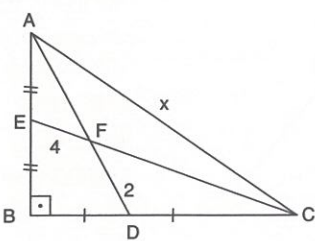
11.



G, ABC üçgeninin
 ağırlık merkezi
 G, center of gravity
 ABC triangle's
 $[BA] \perp [AC]$
 $|GE| = 3 \text{ br}$
 $|GC| = 8 \text{ br}$
 $\Rightarrow |BC| = x = ?$

- A) $\sqrt{5}$ B) $2\sqrt{5}$ C) $3\sqrt{5}$ D) $6\sqrt{5}$ E) 15

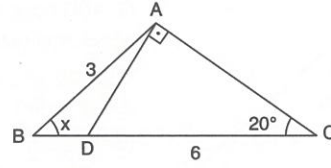
12.



$|AE| = |EB|$
 $|BD| = |DC|$
 $[AB] \perp [BC]$
 $|FD| = 2 \text{ br}$
 $|EF| = 4 \text{ br}$
 $\Rightarrow |AC| = x = ?$

- A) 15 B) 12 C) $6\sqrt{5}$ D) 10 E) 20

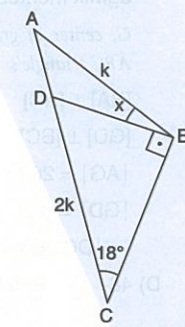
13.



$[DA] \perp [AC]$
 $2|AB| = |DC| = 6 \text{ br}$
 $m(\widehat{ACB}) = 20^\circ$
 $\Rightarrow m(\widehat{ABC}) = x = ?$

- A) 10 B) 20 C) 30 D) 40 E) 50

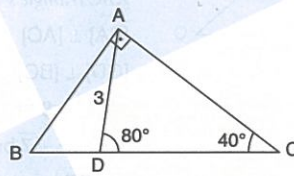
14.



$2|AB| = |DC|$
 $[DB] \perp [DC]$
 $m(\widehat{ACB}) = 18^\circ$
 $\Rightarrow m(\widehat{ABD}) = x = ?$

- A) 9 B) 18 C) 36 D) 48 E) 54

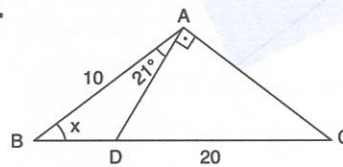
15.



$[BA] \perp [AC]$
 $m(\widehat{ADC}) = 80^\circ$
 $m(\widehat{ACB}) = 40^\circ$
 $|AD| = 3 \text{ br}$
 $\Rightarrow |BC| = ?$

- A) 3 B) 6 C) 9 D) 12 E) 15

16.

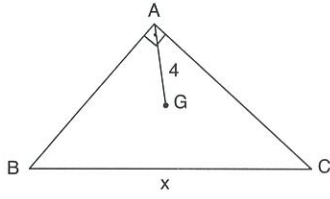


$[DA] \perp [AC]$
 $|AB| = 10 \text{ br}$
 $|DC| = 20 \text{ br}$
 $m(\widehat{BAD}) = 21^\circ$
 $\Rightarrow m(\widehat{ABC}) = x = ?$

- A) 42 B) 43 C) 44 D) 45 E) 46



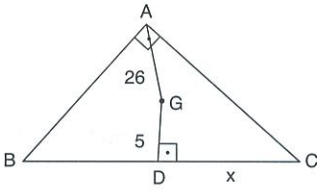
1.



- A) 12 B) 9 C) 6 D) 4 E) 3

G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[BA] $\perp$ [AC]
|AG| = 4 br
 $\Rightarrow$ |BC| = x = ?

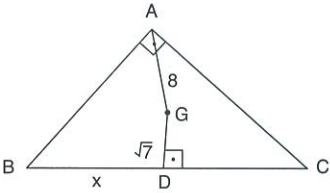
2.



- A) 13 B) 26 C) 39 D) 48 E) 51

G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[BA] $\perp$ [AC]
[GD] $\perp$ [BC]
|AG| = 26 br
|GD| = 5 br
 $\Rightarrow$ |DC| = x = ?

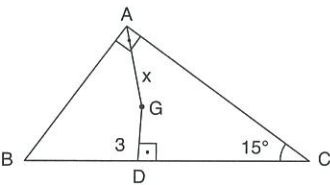
3.



- A) 3 B) 6 C) 9 D) 12 E) 16

G, ABC üçge-
ninin ağırlık
merkezi
G, center of gravity
ABC triangle's
[BA] $\perp$ [AC]
[GD] $\perp$ [BC]
|AG| = 8 br
|GD| = $\sqrt{7}$ br
 $\Rightarrow$ |BD| = x = ?

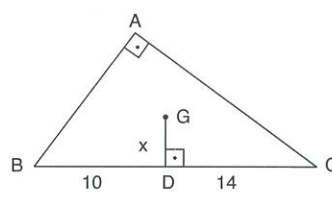
4.



- A) 12 B) 6 C) $\sqrt{6}$ D) $2\sqrt{3}$ E) $\sqrt{3}$

G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[BA] $\perp$ [AC]
[GD] $\perp$ [BC]
 $m(\widehat{ACB}) = 15^\circ$
|GD| = 3 br
 $\Rightarrow$ |AG| = x = ?

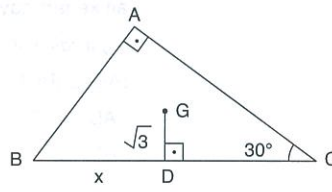
5.



- A) 1 B) 2 C) $\sqrt{3}$ D) 3 E) $2\sqrt{3}$

G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[BA] $\perp$ [AC]
[GD] $\perp$ [BC]
|BD| = 10 br
|DC| = 14 br
 $\Rightarrow$ |GD| = x = ?

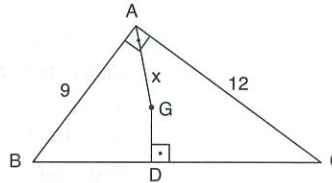
6.



- A) 1 B) 2 C) 5 D) 6 E) 12

G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[BA] $\perp$ [AC]
[GD] $\perp$ [BC]
|GD| = $\sqrt{3}$ br
 $m(\widehat{ACB}) = 30^\circ$
 $\Rightarrow$ |BD| = x = ?

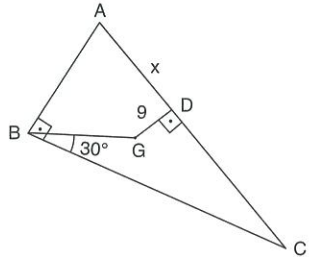
7.



- A) 5 B) $\frac{15}{2}$ C) 15 D) $\frac{5}{2}$ E) $\frac{5}{4}$

G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[BA] $\perp$ [AC]
[GD] $\perp$ [BC]
|AB| = 9 br
|AC| = 12 br
 $\Rightarrow$ |AG| = x = ?

8.

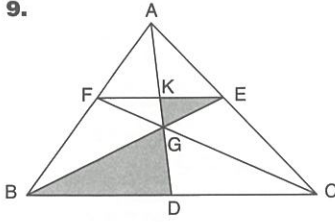


- A) $3\sqrt{3}$ B) $6\sqrt{3}$ C) $9\sqrt{3}$ D) $12\sqrt{3}$ E) $15\sqrt{3}$

G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
[AB] $\perp$ [BC]
[GD] $\perp$ [AC]
 $m(\widehat{GBC}) = 30^\circ$
|GD| = 9 br
 $\Rightarrow$ |AD| = x = ?



9.



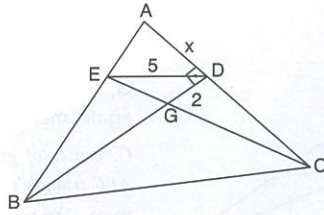
G, ABC üçgeninin ağırlık merkezi

G, center of gravity ABC triangle's

$$A(KEG) + A(BDG) = 15 \text{ br}^2 \\ \Rightarrow A(ABC) = ?$$

- A) 96 B) 72 C) 54 D) 36 E) 32

10.



G, ABC üçgeninin ağırlık merkezi

G, center of gravity ABC triangle's

$[AD] \perp [BE]$

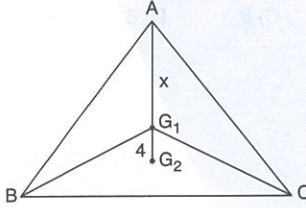
$$|ED| = 5 \text{ br}$$

$$|GD| = 2 \text{ br}$$

$$\Rightarrow |AD| = x = ?$$

- A) 5 B) 6 C) 8 D) 10 E) 12

11.



G₁, ABC üçgeninin ağırlık merkezi

G₁, center of gravity ABC triangle's

G₂, BCG₁ üçgeninin ağırlık merkezi

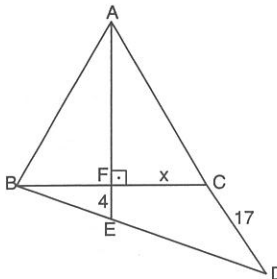
G₂, center of gravity BCG₁ triangle's

$$|G_1G_2| = 4 \text{ br}$$

$$\Rightarrow |AG_1| = x = ?$$

- A) 3 B) 6 C) 9 D) 12 E) 15

12.



$[AF] \perp [BC]$

F, ağırlık merkezi

F, center of gravity

$$|FE| = 4 \text{ br}$$

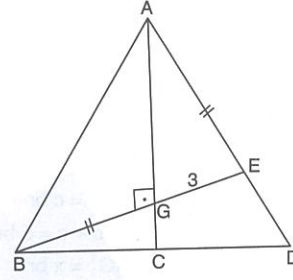
$$|DC| = 17 \text{ br}$$

$$|FC| = x$$

$$\Rightarrow x = ?$$

- A) 17 B) $\frac{15}{2}$ C) $\frac{17}{2}$ D) 8 E) 15

13.



G, ABD üçgeninin ağırlık merkezi

G, center of gravity ABD triangle's

$[AG] \perp [BE]$

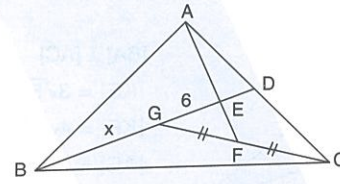
$$|AE| = |BG|$$

$$|GE| = 3 \text{ br}$$

$$\Rightarrow |BC| = ?$$

- A) $\frac{2}{3}\sqrt{3}$ B) $2\sqrt{13}$ C) $\sqrt{13}$
D) $\frac{3}{2}\sqrt{19}$ E) $\frac{\sqrt{19}}{2}$

14.



G, ABC üçgeninin ağırlık merkezi

G, center of gravity ABC triangle's

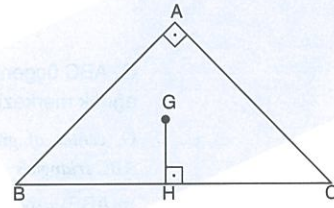
$$|GF| = |FC|$$

$$|GE| = 6 \text{ br}$$

$$\Rightarrow |BG| = x = ?$$

- A) 3 B) 6 C) 9 D) 12 E) 18

15.



G, ABC üçgeninin ağırlık merkezi

G, center of gravity ABC triangle's

$[GH] \perp [BC]$

$[BA] \perp [AC]$

$$|BH| = 15 \text{ br}$$

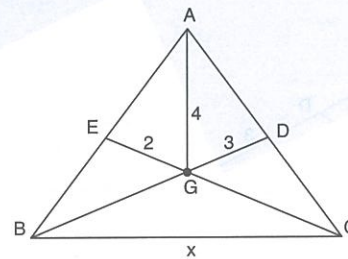
$$|HC| = 9 \text{ br}$$

$$|GH| = x$$

$$\Rightarrow x = ?$$

- A) $\sqrt{5}$ B) $\sqrt{7}$ C) 5 D) 8 E) 4

16.



G, ABC üçgeninin ağırlık merkezi

G, center of gravity ABC triangle's

$$|AG| = 4 \text{ br}$$

$$|GD| = 3 \text{ br}$$

$$|EG| = 2 \text{ br}$$

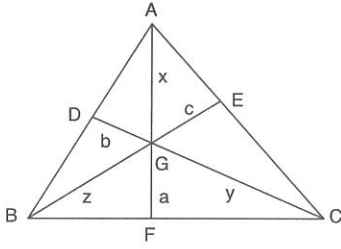
$$|BC| = x$$

$$\Rightarrow x = ?$$

- A) $4\sqrt{11}$ B) $2\sqrt{7}$ C) $\sqrt{17}$ D) $2\sqrt{22}$ E) $\sqrt{22}$



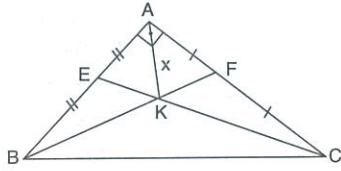
1.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $|GF| = a$ br
 $|GD| = b$ br
 $|GE| = c$ br
 $a + b + c = 5$ br
 $|AG| = x$ br
 $|GC| = y$ br
 $|BG| = z$ br
 $\Rightarrow x + y + z = ?$

- A) 5 B) 10 C) 15 D) 20 E) 25

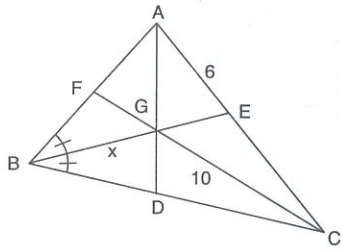
2.



$[BA] \perp [AC]$
 $|KE| = 3\sqrt{5}$ br
 $|KF| = 4\sqrt{5}$ br
 $|AE| = |EB|$
 $|AF| = |FC|$
 $\Rightarrow |AK| = x = ?$

- A) 5 B) 10 C) 15 D) 20 E) 25

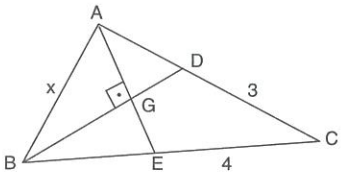
3.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $m(\widehat{ABE}) = m(\widehat{EBC})$
 $|GC| = 10$ br
 $|AE| = 6$ br
 $\Rightarrow |BG| = x = ?$

- A) 4 B) 8 C) 12 D) 16 E) 20

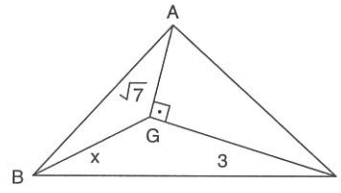
4.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[AG] \perp [BG]$
 $|DC| = 3$ br
 $|EC| = 4$ br
 $\Rightarrow |AB| = x = ?$

- A) $\sqrt{5}$ B) $2\sqrt{5}$ C) 5 D) $5\sqrt{2}$ E) 10

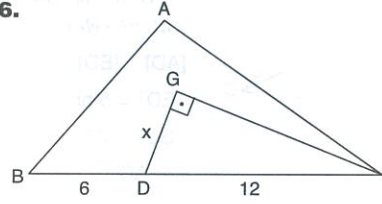
5.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[AG] \perp [GC]$
 $|AG| = \sqrt{7}$ br
 $|GC| = 3$ br
 $\Rightarrow |BG| = x = ?$

- A) 4 B) 5 C) $\sqrt{20}$ D) 6 E) $2\sqrt{29}$

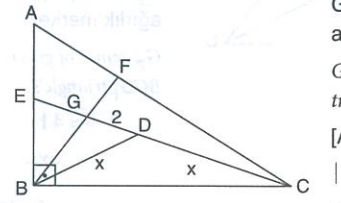
6.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[DG] \perp [GC]$
 $|AB| = |AC|$
 $|BD| = 6$ br
 $|DC| = 12$ br
 $\Rightarrow |GD| = x = ?$

- A) 12 B) 9 C) 8 D) 6 E) 4

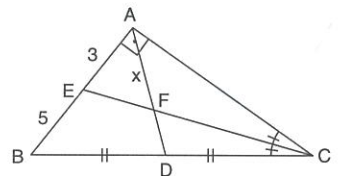
7.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity
ABC triangle's
 $[AB] \perp [BC]$
 $|GD| = 2$ br
 $\Rightarrow |BD| = |DC| = x = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

8.

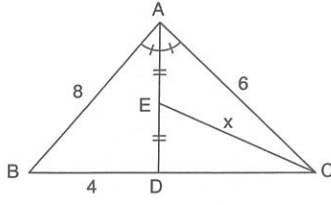


$[BA] \perp [AC]$
 $m(\widehat{ACE}) = m(\widehat{ECB})$
 $|BD| = |DC|$
 $|AE| = 3$ br
 $|EB| = 5$ br
 $\Rightarrow |AF| = x = ?$

- A) $\frac{10}{3}$ B) $\frac{30}{11}$ C) 2 D) 4 E) 5



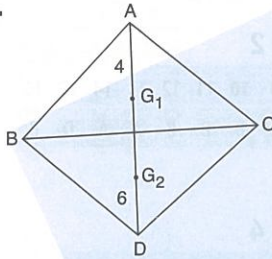
9.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ |AE| &= |ED| \\ |AB| &= 8 \text{ br} \\ |AC| &= 6 \text{ br} \\ |BD| &= 4 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) $\sqrt{10}$ D) $\frac{3\sqrt{6}}{2}$ E) 8

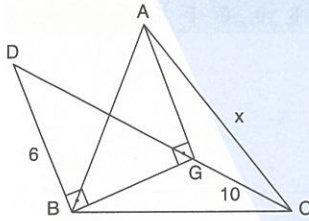
10.



$$\begin{aligned} G_1, \text{ ABC } \text{üçgeninin} \\ \text{ağırlık merkezi} \\ G_1 \text{ center of gravity } ABC \\ \text{triangle's} \\ G_2, \text{ BDC } \text{üçgeninin} \\ \text{ağırlık merkezi} \\ G_2 \text{ center of gravity } BDC \\ \text{triangle's} \\ |AG_1| &= 4 \text{ br} \\ |DG_2| &= 6 \text{ br} \\ \Rightarrow |G_1G_2| &= ? \end{aligned}$$

- A) 2 B) 3 C) 5 D) 10 E) 20

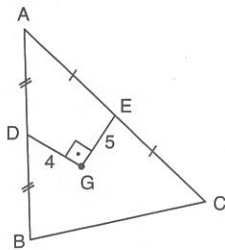
11.



$$\begin{aligned} G, \text{ ABC } \text{üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{ center of gravity } ABC \\ \text{triangle's} \\ [DB] \perp [BG] \\ [BG] \perp [GA] \\ |DB| &= 6 \text{ br} \\ |GC| &= 10 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 6 B) $2\sqrt{13}$ C) 8 D) 10 E) $4\sqrt{13}$

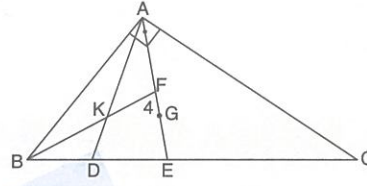
12.



$$\begin{aligned} G, \text{ ABC } \text{üçgeninin} \text{ ağırlık} \\ \text{merkezi} \\ G, \text{ center of gravity } ABC \\ \text{triangle's} \\ [DG] \perp [GE] \\ |AD| &= |DB| \\ |AE| &= |EC| \\ |DG| &= 4 \text{ br} \\ |GE| &= 5 \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 20 B) 60 C) 80 D) 100 E) 120

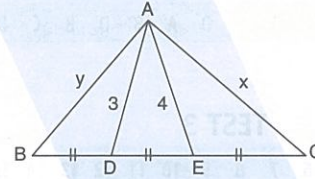
13.



$$\begin{aligned} G, \text{ ABC } \text{üçgeninin} \\ \text{ağırlık merkezi} \\ G \text{ center of gravity } ABC \\ \text{triangle's} \\ K, \text{ ABE } \text{üçgeninin} \\ \text{ağırlık merkezi} \\ G_2 \text{ center of gravity } ABE \\ \text{triangle's} \\ [BA] \perp [AC] \\ |FG| &= 4 \text{ br} \\ \Rightarrow |DE| &= ? \end{aligned}$$

- A) 4 B) 6 C) 8 D) 12 E) 16

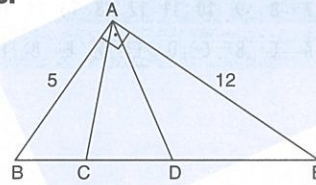
14.



$$\begin{aligned} |BD| &= |DE| = |EC| \\ |AD| &= 3 \text{ br} \\ |AE| &= 4 \text{ br} \\ |AC| &= x \\ |AB| &= y \\ \Rightarrow x^2 - y^2 &= ? \end{aligned}$$

- A) 7 B) 14 C) 21 D) 28 E) 35

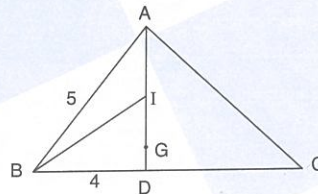
15.



$$\begin{aligned} [BA] \perp [AE] \\ |AB| &= 5 \text{ br} \\ |AE| &= 12 \text{ br} \\ m(\widehat{BAC}) &= 45^\circ \\ |BD| &= |DE| \\ \Rightarrow |BC| &= ? \end{aligned}$$

- A) $\frac{65}{13}$ B) $\frac{13}{2}$ C) $\frac{13}{7}$ D) $\frac{17}{3}$ E) $\frac{65}{17}$

16.



$$\begin{aligned} I, \text{ ABC } \text{üçgeninin} \text{ iç} \\ \text{teğet çemberinin} \\ \text{merkezi} \\ I \text{ is the inner tangential} \\ \text{circle of } ABC \text{ triangle} \\ G, \text{ ABC } \text{üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{ center of gravity } ABC \\ \text{triangle's} \\ \Rightarrow \frac{|IG|}{|GD|} &= ? \end{aligned}$$

- A) $\frac{1}{2}$ B) $\frac{1}{3}$ C) $\frac{2}{3}$ D) 1 E) 2



KENARORTAY MEDIAN

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	E	D	A	D	E	A	C	D	A	B	D	B	C	D	B

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	D	D	C	D	B	B	C	D	D	B	A	A	D	B

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	A	B	D	D	B	E	B	A	A	A	D	E	E	C	B

TEST 4

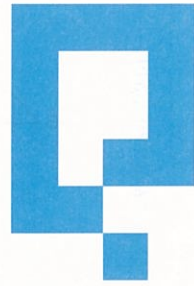
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	D	D	E	A	E	C	B	B	D	B	D	C	B	E

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	E	C	A	E	C	A	E	B	C	D	E	D	E	B	D

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	B	D	B	A	D	E	B	D	C	E	E	D	C	E	B

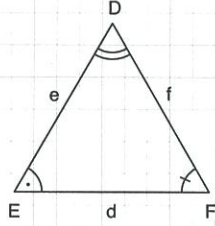
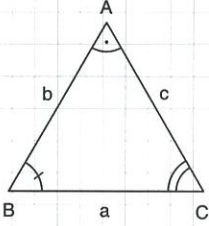


ÜÇGENDE BENZERLİK

TRIANGLE SIMILARITIES



ÖZELLİK|Property 1



$ABC \sim EFD$

$ABC \cong EFD$

$$\begin{aligned} 1. \quad & m(\widehat{A}) = m(\widehat{E}) \\ & m(\widehat{B}) = m(\widehat{F}) \\ & m(\widehat{C}) = m(\widehat{D}) \end{aligned}$$

$$\begin{aligned} 1. \quad & m(\widehat{A}) = m(\widehat{E}) \\ & m(\widehat{B}) = m(\widehat{F}) \\ & m(\widehat{C}) = m(\widehat{D}) \end{aligned}$$

$$2. \quad \frac{|AB|}{|EF|} = \frac{|BC|}{|FD|} = \frac{|AC|}{|ED|} = k$$

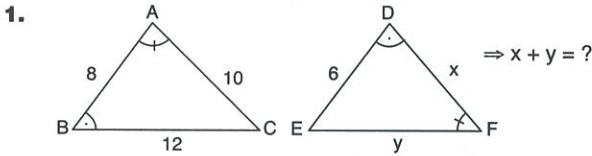
$$2. \quad \frac{|AB|}{|EF|} = \frac{|BC|}{|FD|} = \frac{|AC|}{|ED|} = 1$$

$$\frac{b}{d} = \frac{a}{f} = \frac{c}{e} = k$$

$$\frac{b}{d} = \frac{a}{f} = \frac{c}{e} = 1$$

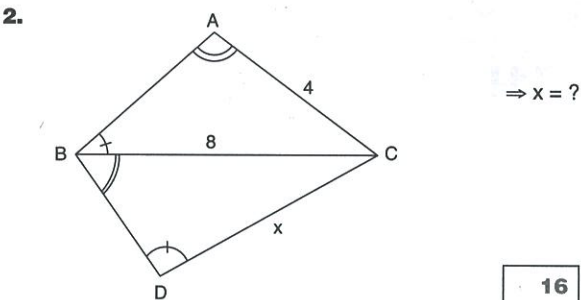
$k \in \mathbb{R}^+$ k, oran sabiti
k, ratio constant

$$b = d, a = f, c = e$$



$$\Rightarrow x + y = ?$$

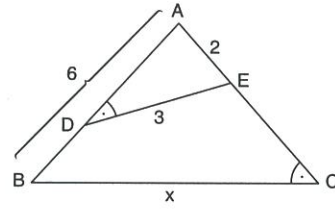
9



$$\Rightarrow x = ?$$

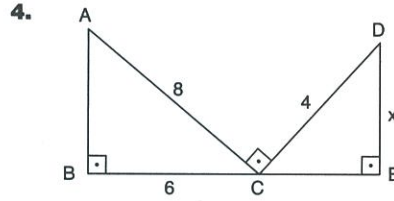
16

3. PUZA YAYINLARI



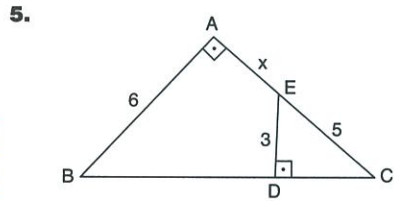
$$\Rightarrow x = ?$$

9



$$\Rightarrow x = ?$$

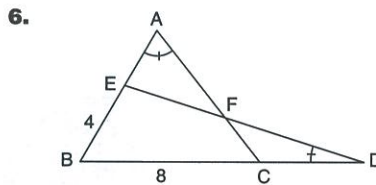
3



$$\Rightarrow x = ?$$

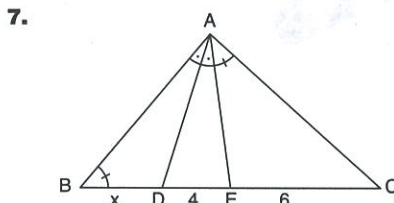
3

PUZA YAYINLARI



$$\begin{aligned} |ED| &= 10 \text{ br} \\ \Rightarrow |AC| &= ? \end{aligned}$$

20



$$\Rightarrow x = ?$$

$\frac{20}{3}$



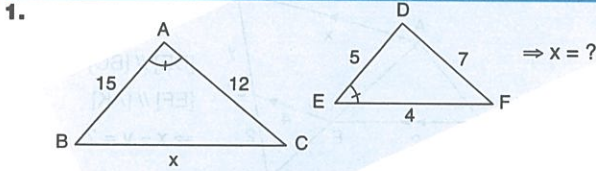
ÖZELLİK|Property 2

Kenar-Açı-Kenar Benzerliği
Line-Angle-Line Similarity

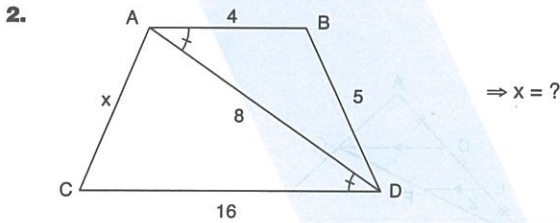


$$\frac{Ç(ABC)}{Ç(DEF)} = \frac{xk}{x} = \frac{yk}{y} = \frac{|BC|}{|EF|} = k$$

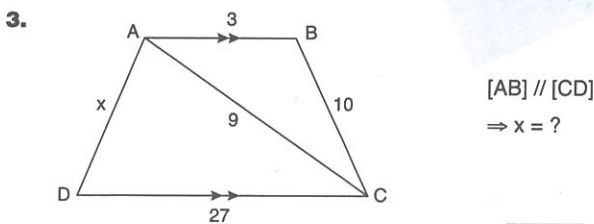
$$\frac{Ç(ABC)}{Ç(DEF)} = \frac{h_a}{h_d} = \frac{v_b}{v_e} = \frac{n_c}{n_f} = k, \quad \frac{A(ABC)}{A(DEF)} = k^2$$



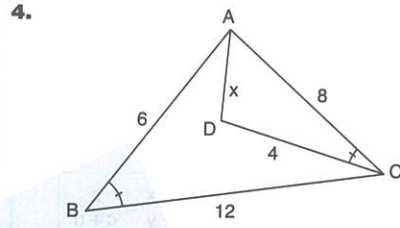
21



10

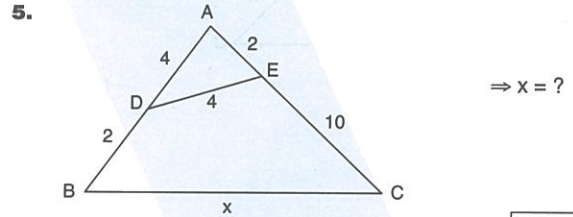


30



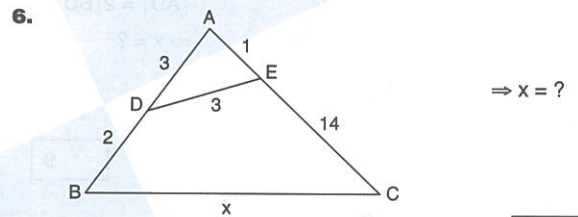
$\Rightarrow x = ?$

$\frac{16}{3}$



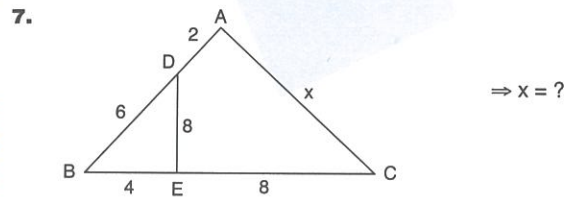
$\Rightarrow x = ?$

12



$\Rightarrow x = ?$

15

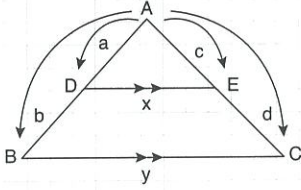


$\Rightarrow x = ?$

16



ÖZELLİK|Property 3

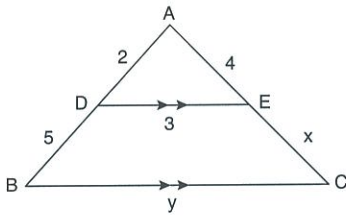


$[DE] \parallel [BC]$

$$\frac{a}{b} = \frac{c}{d}$$

$$\frac{a}{a+b} = \frac{x}{y} = \frac{c}{c+d}$$

1.

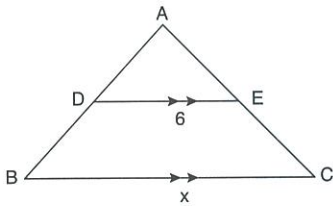


$[DE] \parallel [BC]$

$$\Rightarrow x + y = ?$$

$$\frac{41}{2}$$

2.



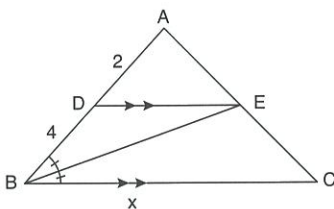
$[DE] \parallel [BC]$

$$|AD| = 2|BD|$$

$$\Rightarrow x = ?$$

$$9$$

3.



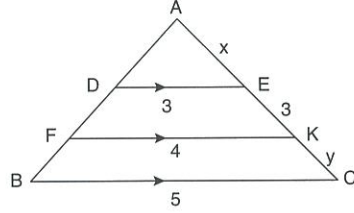
$[DE] \parallel [BC]$

$$\Rightarrow x = ?$$

$$12$$

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4.

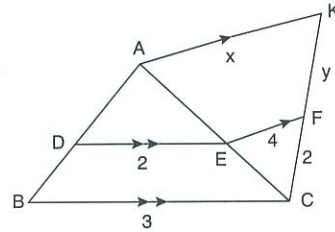


$[DE] \parallel [FK] \parallel [BC]$

$$\Rightarrow x - y = ?$$

$$6$$

5.



$[DE] \parallel [BC]$

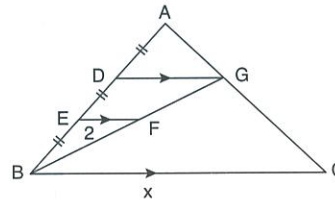
$[EF] \parallel [AK]$

$$\Rightarrow x - y = ?$$

$$8$$

PUZA YAYINLARI

6.

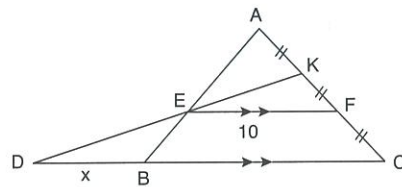


$[DG] \parallel [EF] \parallel [BC]$

$$\Rightarrow x = ?$$

$$12$$

7.



$[EF] \parallel [DC]$

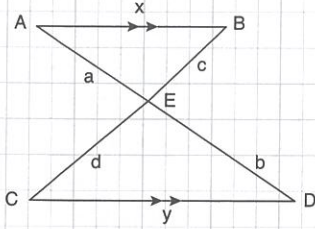
$$\Rightarrow x = ?$$

$$5$$

PUZA YAYINLARI

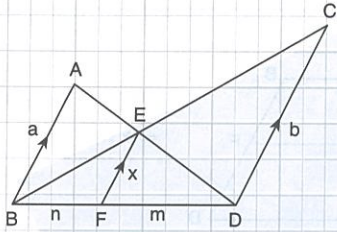


ÖZELLİK|Property 4



$[AB] \parallel [CD]$

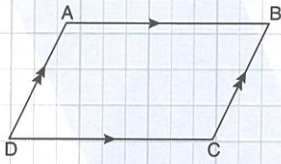
$$\frac{x}{y} = \frac{a}{b} = \frac{c}{d}$$



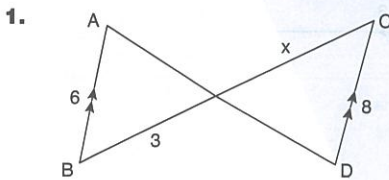
$[AB] \parallel [EF] \parallel [CD]$

$$\frac{1}{x} = \frac{1}{a} + \frac{1}{b}$$

$$b \cdot n = m \cdot a$$

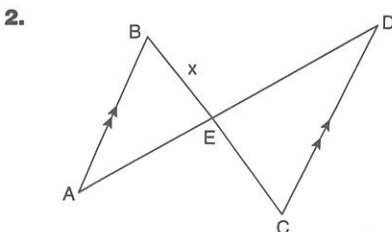


ABCD paralelkenar
 $[AB] \parallel [DC]$
 $[AD] \parallel [BC]$
 $|AB| = |DC|, |AD| = |BC|$



$[AB] \parallel [CD]$
 $\Rightarrow x = ?$

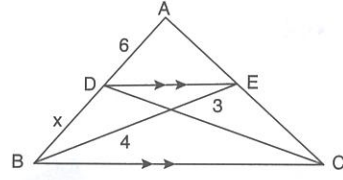
4



$[AB] \parallel [CD]$
 $|ED| = 3|AE|$
 $|BC| = 16$ br
 $\Rightarrow x = ?$

4

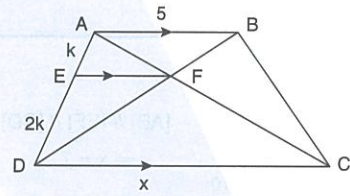
3.



$[DE] \parallel [BC]$
 $\Rightarrow x = ?$

2

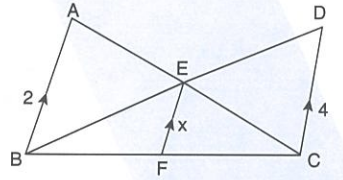
4.



$[AB] \parallel [CD] \parallel [EF]$
 $\Rightarrow x = ?$

10

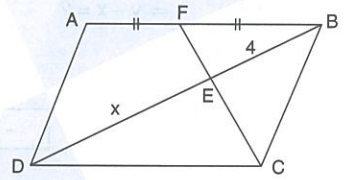
5.



$[AB] \parallel [EF] \parallel [CD]$
 $\Rightarrow x = ?$

$\frac{4}{3}$

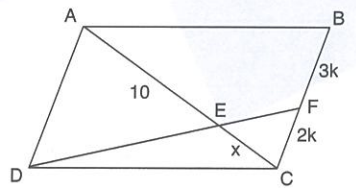
6.



ABCD paralelkenar
 ABCD parallelogram
 $\Rightarrow x = ?$

8

7.

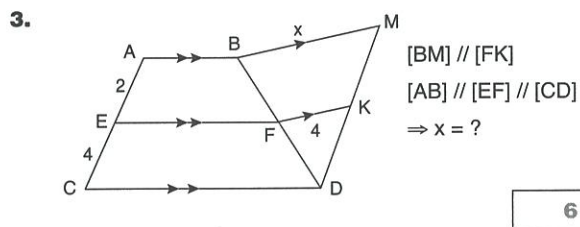
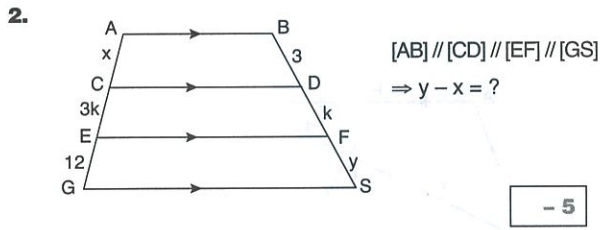
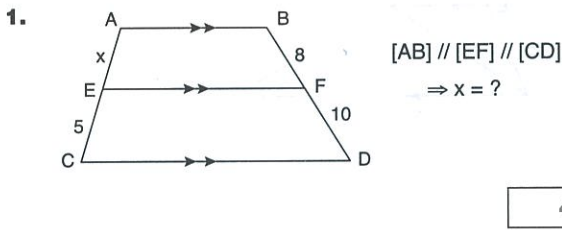
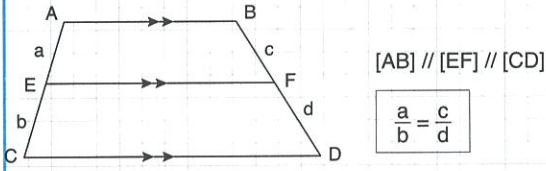


ABCD paralelkenar
 ABCD parallelogram
 $\Rightarrow x = ?$

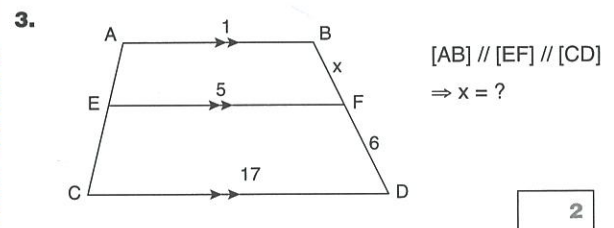
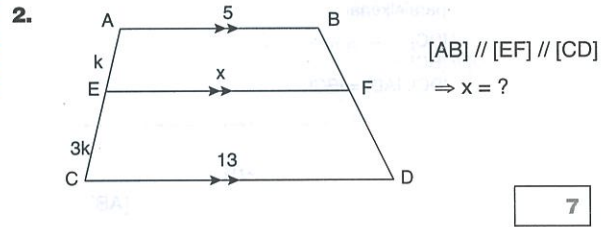
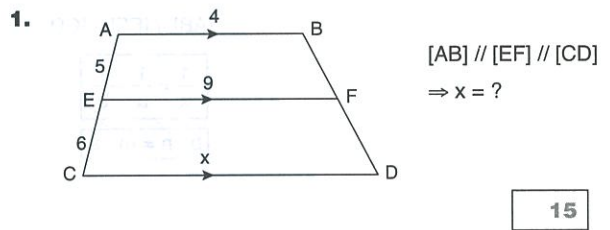
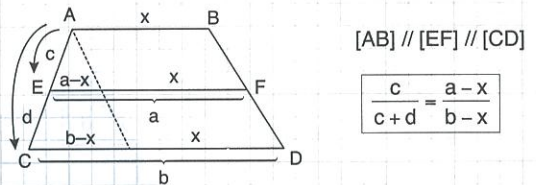
4



ÖZELLİK|Property 5

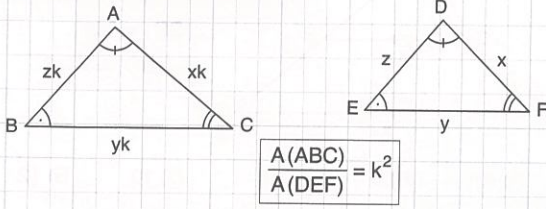


ÖZELLİK|Property 6

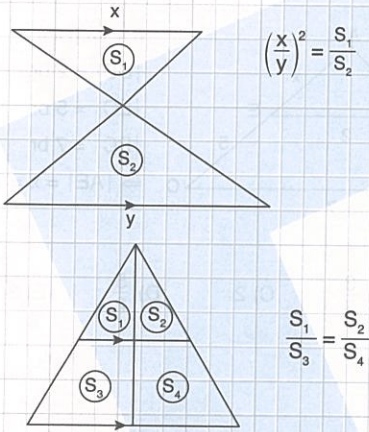




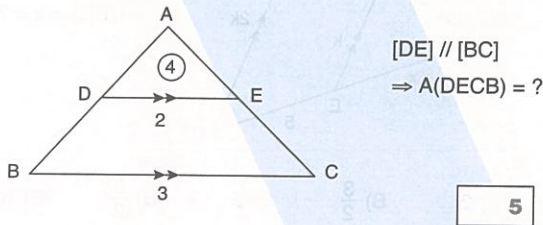
ÖZELLİK|Property 7



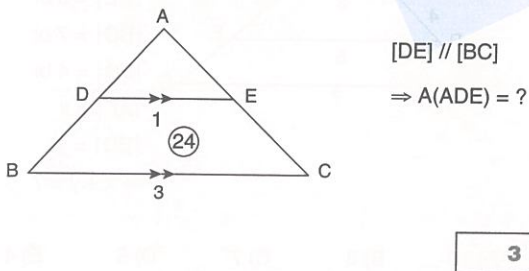
Benzerlik oranının karesi alanları oranını verir.
The square of the similarity ratio gives the ratio of the areas.



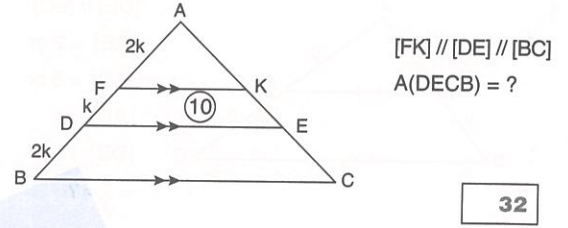
1.



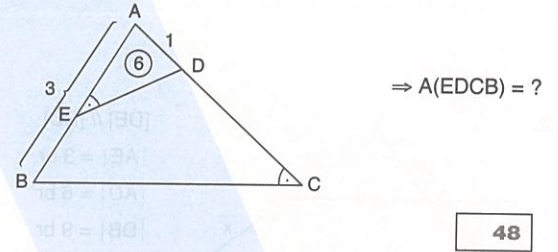
2.



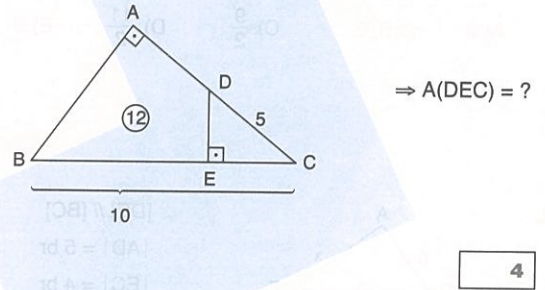
3.



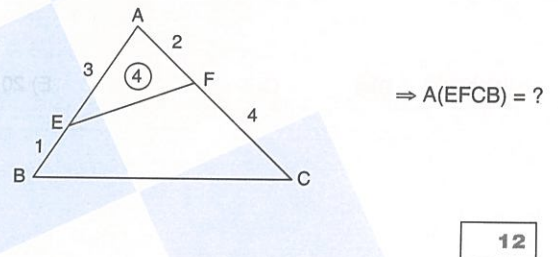
4.



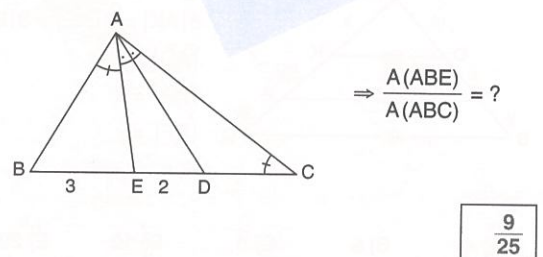
5.



6.



7.





1. $[DE] \parallel [BC]$
 $|AE| = 2 \text{ br}$
 $|EC| = 3 \text{ br}$
 $|AD| = x$
 $|DB| = y$
 $\Rightarrow \frac{x}{y} = ?$
- A) $\frac{1}{3}$ B) $\frac{2}{3}$ C) 1 D) $\frac{3}{2}$ E) 3

2. $[DE] \parallel [BC]$
 $|AE| = 3 \text{ br}$
 $|AD| = 6 \text{ br}$
 $|DB| = 9 \text{ br}$
 $\Rightarrow |EC| = x = ?$
- A) 2 B) 3 C) $\frac{9}{2}$ D) $\frac{11}{2}$ E) 6

3. $[DE] \parallel [BC]$
 $|AD| = 5 \text{ br}$
 $|EC| = 4 \text{ br}$
 $|AE| = x$
 $|DB| = y$
 $\Rightarrow x \cdot y = ?$
- A) 2 B) 4 C) 5 D) 10 E) 20

4. $[DK] \parallel [FE] \parallel [BC]$
 $6|AK| = 2|KE| = 3|EC|$
 $|AD| = 4 \text{ br}$
 $|FD| = x$
 $|BF| = y$
 $\Rightarrow x + y = ?$
- A) 4 B) 6 C) 8 D) 12 E) 20

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5. $[DE] \parallel [BC]$
 $2|AD| = |DE| = 4 \text{ br}$
 $|BD| = 3 \text{ br}$
 $\Rightarrow |BC| = x = ?$
- A) 5 B) 6 C) 8 D) 10 E) 12

6. $[DE] \parallel [BC]$
 $|DE| = 2 \text{ br}$
 $|EC| = 5 \text{ br}$
 $|BC| = 7 \text{ br}$
 $\Rightarrow |AE| = x = ?$
- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 3

7. $[DE] \parallel [AC]$
 $2|DE| = |AC|$
 $|EC| = 5 \text{ br}$
 $\Rightarrow |BE| = x = ?$
- A) 2 B) $\frac{3}{2}$ C) 5 D) $\frac{5}{2}$ E) 10

8. $[FK] \parallel [DE] \parallel [BC]$
 $|FK| = 3 \text{ br}$
 $|DE| = 5 \text{ br}$
 $|BC| = 7 \text{ br}$
 $|FD| = 4 \text{ br}$
 $|AF| = x$
 $|BD| = y$
 $\Rightarrow x + y = ?$
- A) 10 B) 8 C) 7 D) 5 E) 4



9. [DE] // [BC]
[EF] // [AK]
 $2|AD| = |KF| = 6 \text{ br}$
 $|BD| = 5 \text{ br}$
 $\Rightarrow |FC| = x = ?$
A) $\frac{5}{2}$ B) 5 C) $\frac{15}{2}$ D) 10 E) 15

10. [DE] // [BC]
[KE] // [FC]
 $|AK| = 2 \text{ br}$
 $|BD| = 6 \text{ br}$
 $|AD| = x$
 $|KF| = y$
 $\Rightarrow x \cdot y = ?$
A) 12 B) 8 C) 6 D) 3 E) 2

11. [DK] // [BC]
[KE] // [FC]
 $3|AD| = |BD|$
 $|KE| = 6 \text{ br}$
 $\Rightarrow |CF| = x = ?$
A) 9 B) 12 C) 18 D) 24 E) 30

12. [DE] // [BC]
[EK] // [AP]
 $|DE| = 3 \text{ br}$
 $|BC| = 7 \text{ br}$
 $|EK| = 2 \text{ br}$
 $\Rightarrow |AP| = x = ?$
A) $\frac{7}{4}$ B) $\frac{7}{2}$ C) 7 D) 14 E) 21

13. [DE] // [BC]
 $2|AD| = |BD| = 6 \text{ br}$
 $\Rightarrow |BC| = x = ?$
A) 3 B) 6 C) 9 D) 12 E) 18

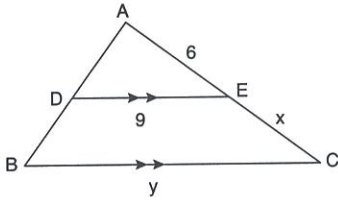
14. [DE] // [AC]
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $|EB| = 2 \text{ br}$
 $|AC| = 12 \text{ br}$
 $\Rightarrow |ED| = x = ?$
A) 2 B) 3 C) 4 D) 5 E) 6

15. [FK] // [DE] // [BC]
 $|AF| = 2|DF| = 2|BD|$
 $|DE| = 4 \text{ br}$
 $\Rightarrow |BC| = x = ?$
A) 2 B) 4 C) 8 D) 16 E) 32

16. [ED] // [BC]
 $|EB| = 3x$
 $|AE| = 2x$
 $|ED| = x$
 $|BC| = 2x + 1$
 $\Rightarrow x = ?$
A) 1 B) 2 C) 3 D) 4 E) 5



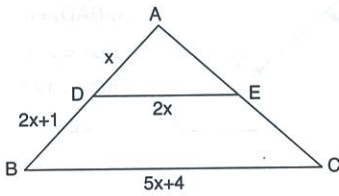
1.



$$\begin{aligned} [DE] \parallel [BC] \\ 4|AD| = 3|DB| \\ |AE| = 6 \text{ br} \\ |DE| = 9 \text{ br} \\ |EC| = x \\ |BC| = y \\ \Rightarrow y - x = ? \end{aligned}$$

- A) 21 B) 18 C) 15 D) 13 E) 18

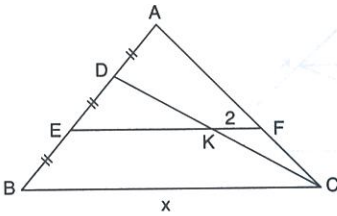
2.



$$\begin{aligned} [DE] \parallel [BC] \\ |AD| = x \\ |BD| = 2x + 1 \\ |DE| = 2x \\ |BC| = 5x + 4 \\ \Rightarrow |DE| = ? \end{aligned}$$

- A) 1 B) 2 C) 4 D) 6 E) 8

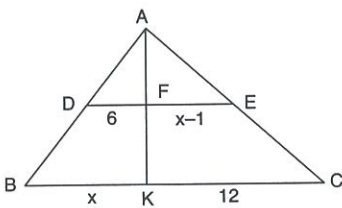
3.



$$\begin{aligned} [EF] \parallel [BC] \\ |AD| = |DE| = |EB| \\ |KF| = 2 \text{ br} \\ \Rightarrow |BC| = x = ? \end{aligned}$$

- A) 5 B) 6 C) 8 D) 12 E) 16

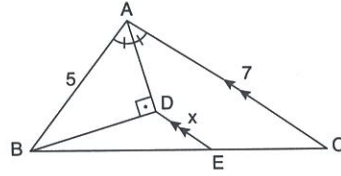
4.



$$\begin{aligned} [DE] \parallel [BC] \\ 2|DF| = |KC| = 12 \text{ br} \\ |BK| = x \\ |FE| = x - 1 \\ \Rightarrow x = ? \end{aligned}$$

- A) 1 B) 3 C) 6 D) 9 E) 12

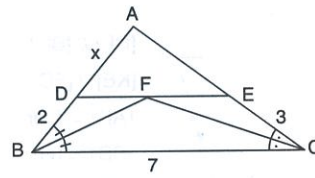
5.



$$\begin{aligned} m(\widehat{BAD}) = m(\widehat{DAC}) \\ [AD] \perp [BD] \\ [DE] \parallel [AC] \\ |AB| = 5 \text{ br} \\ |AC| = 7 \text{ br} \\ \Rightarrow |DE| = x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 5

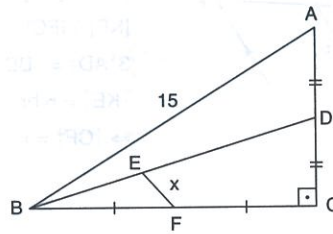
6.



$$\begin{aligned} [DE] \parallel [BC] \\ m(\widehat{ABF}) = m(\widehat{FBC}) \\ m(\widehat{BCF}) = m(\widehat{FCA}) \\ |EC| = 3 \text{ br} \\ |BD| = 2 \text{ br} \\ |BC| = 7 \text{ br} \\ \Rightarrow |AD| = x = ? \end{aligned}$$

- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 5

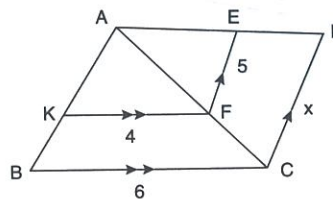
7.



$$\begin{aligned} [AC] \perp [BC] \\ |AD| = |DC| \\ |BF| = |FC| \\ 2|BE| = |ED| \\ |AB| = 15 \text{ br} \\ \Rightarrow |EF| = x = ? \end{aligned}$$

- A) $\frac{5}{2}$ B) 5 C) $\frac{15}{2}$ D) 10 E) $\frac{25}{2}$

8.

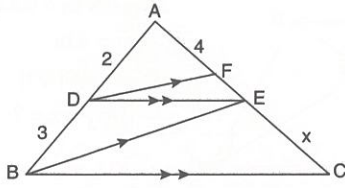


$$\begin{aligned} [EF] \parallel [DC] \\ [KF] \parallel [BC] \\ |KF| = 4 \text{ br} \\ |BC| = 6 \text{ br} \\ |EF| = 5 \text{ br} \\ \Rightarrow |DC| = x = ? \end{aligned}$$

- A) $\frac{7}{3}$ B) 3 C) $\frac{10}{3}$ D) 4 E) $\frac{15}{2}$



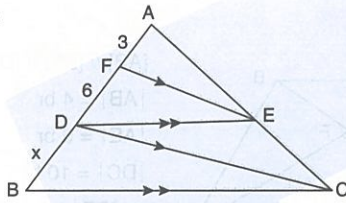
9.



$[DE] \parallel [BC]$
 $[DF] \parallel [BE]$
 $2|AD| = |AF| = 4 \text{ br}$
 $|BD| = 3 \text{ br}$
 $\Rightarrow |EC| = x = ?$

- A) 20 B) 15 C) 10 D) 5 E) 1

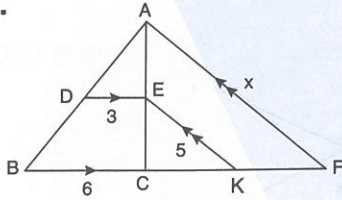
10.



$[FE] \parallel [DC]$
 $[DE] \parallel [BC]$
 $2|AF| = |DF| = 6 \text{ br}$
 $\Rightarrow |BD| = x = ?$

- A) 24 B) 18 C) 15 D) 12 E) 6

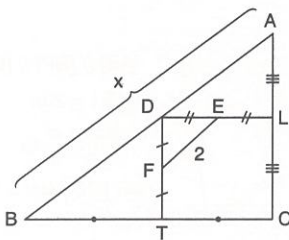
11.



$[DE] \parallel [BC]$
 $[EK] \parallel [AF]$
 $2|DE| = |BC| = 6 \text{ br}$
 $|EK| = 5 \text{ br}$
 $\Rightarrow |AF| = x = ?$

- A) 3 B) 5 C) $\frac{15}{2}$ D) 10 E) $\frac{25}{2}$

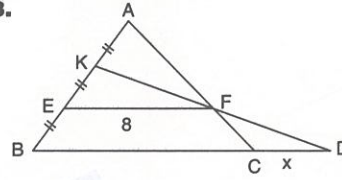
12.



$|AL| = |LC|$
 $|BT| = |TC|$
 $|DF| = |FT|$
 $|DE| = |EL|$
 $|EF| = 2 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) 2 B) 4 C) 6 D) 8 E) 16

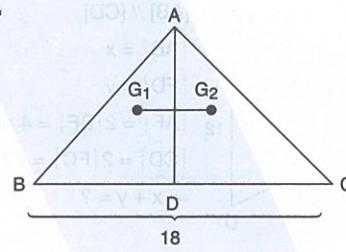
13.



$[EF] \parallel [BD]$
 $|AK| = |KE| = |EB|$
 $|EF| = 8 \text{ br}$
 $\Rightarrow |CD| = x = ?$

- A) 4 B) 6 C) 8 D) 10 E) 12

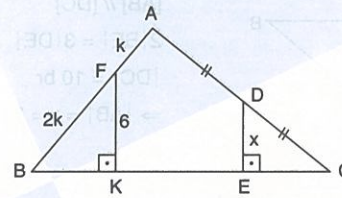
14.



G_1 , ABD üçgeninin
ağırlık merkezi
 G_1 , center of gravity
of ABD triangle's
 G_2 , ADC üçgeninin
ağırlık merkezi
 G_2 , center of gravity
of ADC triangle's
 $|BC| = 18 \text{ br}$
 $\Rightarrow |G_1G_2| = ?$

- A) 3 B) 6 C) 9 D) 12 E) 15

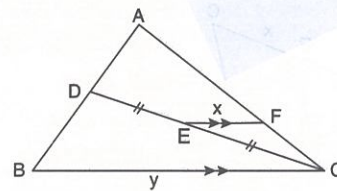
15.



$[FK] \perp [BC]$
 $[DE] \perp [BC]$
 $|AD| = |DC|$
 $2|AF| = |BF|$
 $|FK| = 6 \text{ br}$
 $\Rightarrow |DE| = x = ?$

- A) 3 B) 4 C) $\frac{9}{2}$ D) 6 E) 9

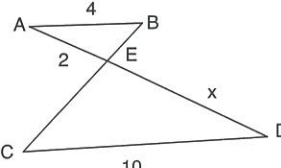
16.

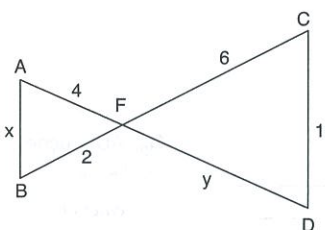


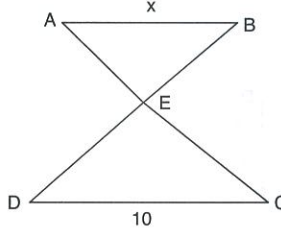
$[EF] \parallel [BC]$
 $2|AD| = 5|BD|$
 $|EF| = x$
 $|BC| = y$
 $\Rightarrow \frac{x}{y} = ?$

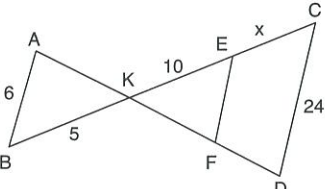
- A) $\frac{5}{14}$ B) $\frac{5}{7}$ C) $\frac{10}{7}$ D) 3 E) $\frac{13}{4}$

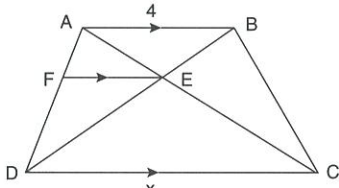


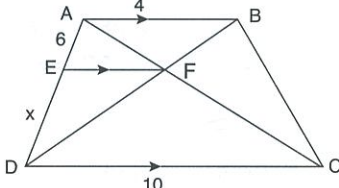
1.  $[AB] \parallel [CD]$
 $|AB| = 4 \text{ br}$
 $|AE| = 2 \text{ br}$
 $|CD| = 10 \text{ br}$
 $\Rightarrow |ED| = x = ?$
- A) 5 B) 4 C) 3 D) 2 E) 1

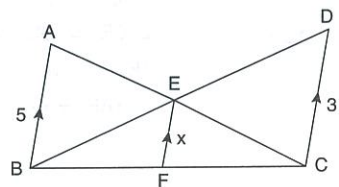
2.  $[AB] \parallel [CD]$
 $|AB| = x$
 $|FD| = y$
 $|AF| = 2|BF| = 4 \text{ br}$
 $|CD| = 2|FC| = 12 \text{ br}$
 $\Rightarrow x + y = ?$
- A) 8 B) 10 C) 12 D) 16 E) 20

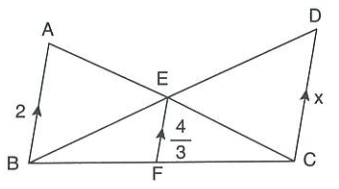
3.  $[AB] \parallel [DC]$
 $2|BE| = 3|DE|$
 $|DC| = 10 \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) 20 B) 15 C) $\frac{20}{3}$ D) 5 E) 3

4.  $[AB] \parallel [EF] \parallel [CD]$
 $4|AB| = |CD| = 24 \text{ br}$
 $|BK| = 5 \text{ br}$
 $|KE| = 10 \text{ br}$
 $\Rightarrow |EC| = x = ?$
- A) 2 B) 4 C) 5 D) 6 E) 10

5.  $[AB] \parallel [FE] \parallel [DC]$
 $|AB| = 4 \text{ br}$
 $3|AF| = 2|FD|$
 $\Rightarrow |DC| = x = ?$
- A) 9 B) 8 C) 6 D) $\frac{8}{3}$ E) $\frac{4}{3}$

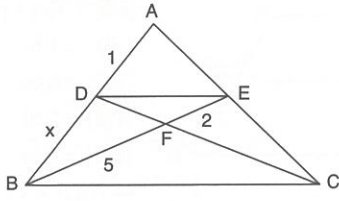
6.  $[AB] \parallel [EF] \parallel [DC]$
 $|AB| = 4 \text{ br}$
 $|AE| = 6 \text{ br}$
 $|DC| = 10 \text{ br}$
 $\Rightarrow |ED| = x = ?$
- A) $\frac{35}{2}$ B) 15 C) 12 D) $\frac{25}{2}$ E) 10

7.  $[AB] \parallel [EF] \parallel [CD]$
 $|CD| = 3 \text{ br}$
 $|AB| = 5 \text{ br}$
 $\Rightarrow |EF| = x = ?$
- A) 8 B) 5 C) 2 D) $\frac{15}{8}$ E) $\frac{8}{15}$

8.  $[AB] \parallel [EF] \parallel [DC]$
 $|AB| = 2 \text{ br}$
 $|EF| = \frac{4}{3} \text{ br}$
 $\Rightarrow |DC| = x = ?$
- A) 1 B) 2 C) 3 D) 4 E) 5



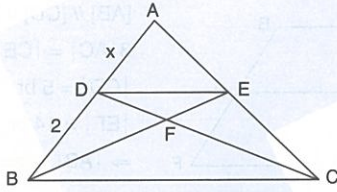
9.



$[DE] \parallel [BC]$
 $|AD| = 1$ br
 $|EF| = 2$ br
 $|BF| = 5$ br
 $\Rightarrow |BD| = x = ?$

- A) 5 B) 4 C) 3 D) $\frac{5}{2}$ E) $\frac{3}{2}$

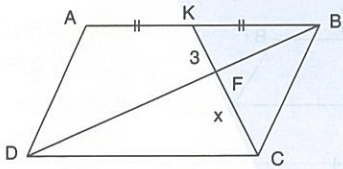
10.



$[DE] \parallel [BC]$
 $|BD| = 2$ br
 $4|DF| = 3|FC|$
 $\Rightarrow |AD| = x = ?$

- A) 10 B) 8 C) 6 D) 4 E) 2

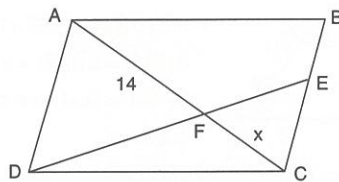
11.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|AK| = |KB|$
 $|KF| = 3$ br
 $\Rightarrow |FC| = x = ?$

- A) $\frac{1}{3}$ B) 1 C) $\frac{8}{3}$ D) 3 E) 6

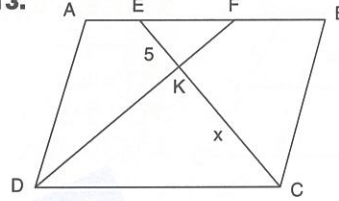
12.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $2|BE| = 5|EC|$
 $|AF| = 14$ br
 $\Rightarrow |FC| = x = ?$

- A) 1 B) 2 C) 4 D) 6 E) 8

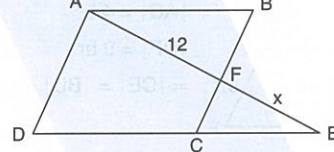
13.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $2|AE| = 2|EF| = |FB|$
 $|EK| = 5$ br
 $\Rightarrow |KC| = x = ?$

- A) $\frac{5}{4}$ B) $\frac{5}{2}$ C) 5 D) 10 E) 20

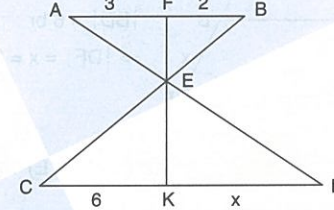
14.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|DC| = 2|CE|$
 $|AF| = 12$ br
 $\Rightarrow |FE| = x = ?$

- A) 3 B) 6 C) 9 D) 12 E) 24

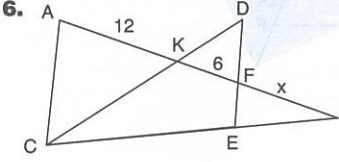
15.



$[AB] \parallel [CD]$
 $|AF| = 3$ br
 $|BF| = 2$ br
 $|CK| = 6$ br
 $\Rightarrow |KD| = x = ?$

- A) 12 B) 9 C) 6 D) 4 E) 2

16.



$[DE] \parallel [AC]$
 $|DF| = |FE|$
 $|AK| = 2|KF| = 12$ br
 $\Rightarrow |FB| = x = ?$

- A) 18 B) 12 C) 9 D) 6 E) 3



1. $[AB] \parallel [EF] \parallel [DC]$
 $|AE| = 2 \text{ br}$
 $|BF| = 4 \text{ br}$
 $|FC| = 7 \text{ br}$
 $\Rightarrow |ED| = x = ?$

- A) 21 B) 14 C) 7 D) $\frac{7}{2}$ E) $\frac{7}{4}$

2. $[AB] \parallel [CD] \parallel [EF]$
 $|AC| = 4 \text{ br}$
 $|DF| = 9 \text{ br}$
 $\Rightarrow |CE| = |BD| = x = ?$

A) 1 B) 3 C) 6 D) 9 E) 12

3. $[AB] \parallel [CD] \parallel [EF]$
 $7|AC| = 3|CE|$
 $|BD| = 6 \text{ br}$
 $\Rightarrow |DF| = x = ?$

A) $\frac{1}{7}$ B) $\frac{2}{7}$ C) $\frac{7}{2}$ D) 7 E) 14

4. $[AB] \parallel [CD] \parallel [EF] \parallel [KM]$
 $|BD| = 4 \text{ br}$
 $2|CE| = 3|DF|$
 $|EK| = 15 \text{ br}$
 $|BD| = 4 \text{ br}$
 $|AC| = x$
 $|FM| = y$
 $\Rightarrow y - x = ?$

A) 10 B) 8 C) 6 D) 4 E) 2

5. $[AB] \parallel [EF] \parallel [CD]$
 $|AB| = 1 \text{ br}$
 $|EF| = 5 \text{ br}$
 $|AE| = 2 \text{ br}$
 $|EC| = 6 \text{ br}$
 $\Rightarrow |CD| = x = ?$

- A) 21 B) 17 C) 13 D) 11 E) 7

6. $[AB] \parallel [CD] \parallel [EF]$
 $3|AC| = |CE|$
 $|CD| = 5 \text{ br}$
 $|EF| = 14 \text{ br}$
 $\Rightarrow |AB| = x = ?$

A) 4 B) 3 C) $\frac{7}{2}$ D) 2 E) 1

7. $[AB] \parallel [EF] \parallel [DC]$
 $2|BF| = 3|FC|$
 $|AB| = 4 \text{ br}$
 $|DC| = 14 \text{ br}$
 $\Rightarrow |EF| = x = ?$

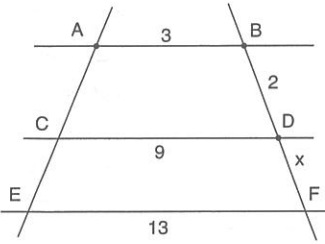
A) 5 B) 7 C) 10 D) 12 E) 13

8. $[AB] \parallel [LM] \parallel [EF] \parallel [DC]$
 $3|BM| = 6|MF| = 2|FC|$
 $3|AB| = |LM| = 6 \text{ br}$
 $|EF| = x$
 $|DC| = y$
 $\Rightarrow y - x = ?$

A) 6 B) 5 C) 4 D) 2 E) 1



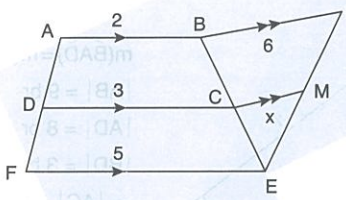
9.



[AB] // [CD] // [EF]
 $|AB| = 3 \text{ br}$
 $|CD| = 9 \text{ br}$
 $|EF| = 13 \text{ br}$
 $|BD| = 2 \text{ br}$
 $\Rightarrow |DF| = x = ?$

- A) 1 B) $\frac{4}{3}$ C) $\frac{5}{3}$ D) 3 E) 4

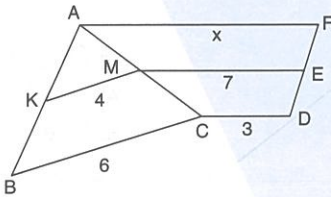
10.



[BK] // [CM]
 [AB] // [DC] // [FE]
 $|AB| = 2 \text{ br}$
 $|DC| = 3 \text{ br}$
 $|FE| = 5 \text{ br}$
 $|BK| = 6 \text{ br}$
 $\Rightarrow |CM| = x = ?$

- A) 12 B) 9 C) 6 D) 4 E) 3

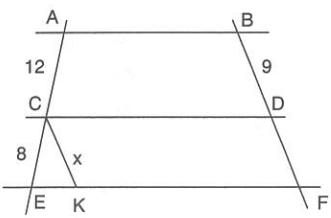
11.



[KM] // [BC]
 [AF] // [ME] // [CD]
 $|KM| = 4 \text{ br}$
 $|BC| = 6 \text{ br}$
 $|ME| = 7 \text{ br}$
 $|CD| = 3 \text{ br}$
 $\Rightarrow |AF| = x = ?$

- A) 7 B) 11 C) 13 D) 15 E) 17

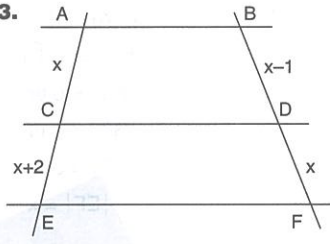
12.



[AB] // [CD] // [EF]
 [CK] // [BF]
 $|AC| = 12 \text{ br}$
 $|BD| = 9 \text{ br}$
 $|CE| = 8 \text{ br}$
 $\Rightarrow |KC| = x = ?$

- A) 2 B) 4 C) 5 D) 6 E) 8

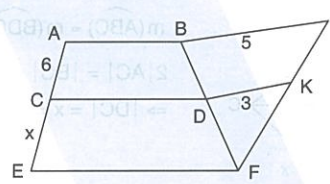
13.



[AB] // [CD] // [EF]
 $|BD| = x - 1$
 $|CE| = x + 2$
 $\Rightarrow |DF| = |AC| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

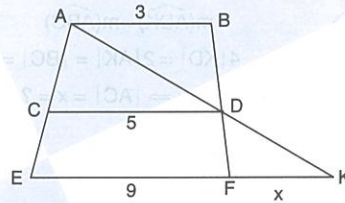
14.



[BM] // [DK]
 [AB] // [CD] // [EF]
 $|BM| = 5 \text{ br}$
 $|DK| = 3 \text{ br}$
 $|AC| = 6 \text{ br}$
 $\Rightarrow |CE| = x = ?$

- A) 10 B) 9 C) 6 D) $\frac{18}{5}$ E) $\frac{9}{5}$

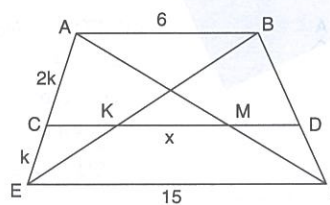
15.



[AB] // [CD] // [EK]
 $|AB| = 3 \text{ br}$
 $|CD| = 5 \text{ br}$
 $|EF| = 9 \text{ br}$
 $\Rightarrow |FK| = x = ?$

- A) 6 B) 5 C) 4 D) 3 E) 2

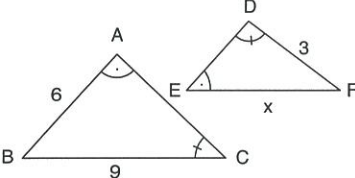
16.

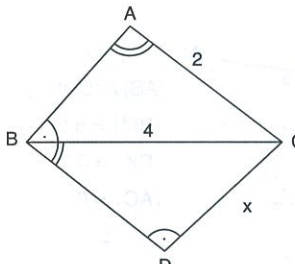


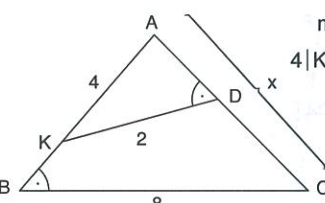
[AB] // [CD] // [EF]
 $|AC| = 2|CE|$
 $|AB| = 6 \text{ br}$
 $|EF| = 15 \text{ br}$
 $\Rightarrow |KM| = x = ?$

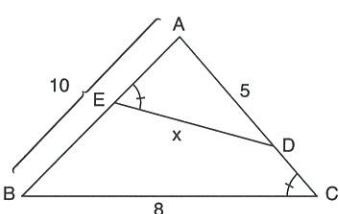
- A) 10 B) 9 C) 8 D) 6 E) 4

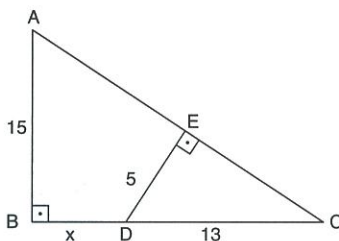


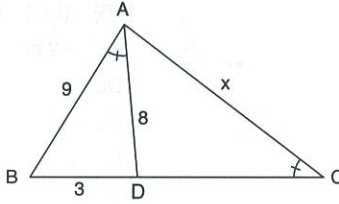
1.  $m(\widehat{A}) = m(\widehat{E})$
 $m(\widehat{C}) = m(\widehat{D})$
 $|AB| = 6 \text{ br}$
 $|BC| = 9 \text{ br}$
 $|DF| = 3 \text{ br}$
 $\Rightarrow |EF| = x = ?$
- A) 1 B) 2 C) 3 D) $\frac{9}{2}$ E) 6

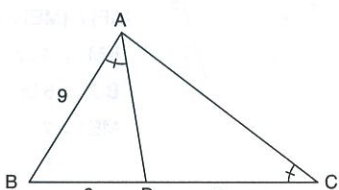
2.  $m(\widehat{BAC}) = m(\widehat{CBD})$
 $m(\widehat{ABC}) = m(\widehat{BDC})$
 $2|AC| = |BC| = 4 \text{ br}$
 $\Rightarrow |DC| = x = ?$
- A) 1 B) 2 C) 4 D) 8 E) 6

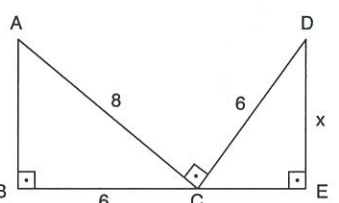
3.  $m(\widehat{ADK}) = m(\widehat{ABC})$
 $4|KD| = 2|AK| = |BC| = 8 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) 16 B) 12 C) 8 D) 4 E) 2

4.  $m(\widehat{AED}) = m(\widehat{ACB})$
 $|AB| = 10 \text{ br}$
 $|AD| = 5 \text{ br}$
 $|BC| = 8 \text{ br}$
 $\Rightarrow |ED| = x = ?$
- A) 8 B) 6 C) 5 D) 4 E) 2

5.  $[AB] \perp [BC]$
 $[DE] \perp [AC]$
 $|AB| = 15 \text{ br}$
 $|DC| = 13 \text{ br}$
 $|DE| = 5 \text{ br}$
 $\Rightarrow |BD| = x = ?$
- A) 39 B) 26 C) 23 D) 11 E) 9

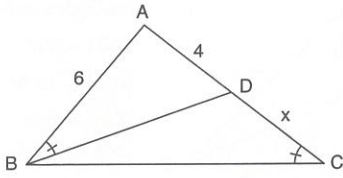
6.  $m(\widehat{BAD}) = m(\widehat{ACB})$
 $|AB| = 9 \text{ br}$
 $|AD| = 8 \text{ br}$
 $|BD| = 3 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) 36 B) 24 C) 21 D) 18 E) 15

7.  $m(\widehat{BAD}) = m(\widehat{ACB})$
 $|AB| = 9 \text{ br}$
 $|BD| = 6 \text{ br}$
 $\Rightarrow |DC| = x = ?$
- A) $\frac{5}{2}$ B) 3 C) 5 D) 6 E) $\frac{15}{2}$

8.  $[AB] \perp [BE]$
 $[AC] \perp [CD]$
 $[BE] \perp [DE]$
 $|BC| = |CD| = 6 \text{ br}$
 $|AC| = 8 \text{ br}$
 $\Rightarrow |DE| = x = ?$
- A) 8 B) 6 C) $\frac{11}{2}$ D) $\frac{9}{2}$ E) 3



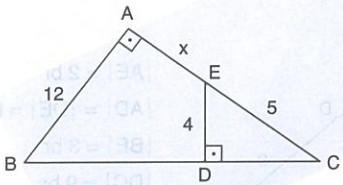
9.



$$\begin{aligned} m(\widehat{ABD}) &= m(\widehat{ACB}) \\ |AD| &= 4 \text{ br} \\ |AB| &= 6 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 5

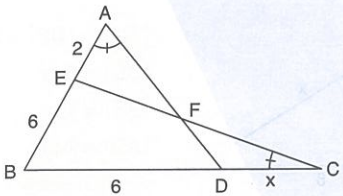
10.



$$\begin{aligned} [BA] &\perp [AC] \\ [ED] &\perp [BC] \\ |ED| &= 4 \text{ br} \\ |EC| &= 5 \text{ br} \\ |AB| &= 12 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) 11 B) 10 C) 9 D) 5 E) 4

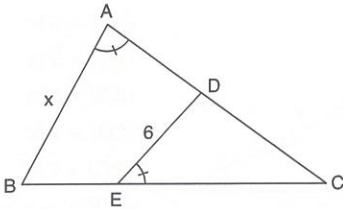
11.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{ECB}) \\ |AE| &= 2 \text{ br} \\ |EB| &= 6 \text{ br} \\ |BD| &= 6 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 5

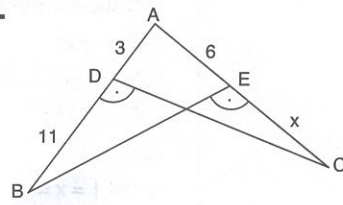
12.



$$\begin{aligned} m(\widehat{BAC}) &= m(\widehat{DEC}) \\ 3|DC| &= 2|BC| \\ |ED| &= 6 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 2 B) $\frac{7}{3}$ C) 4 D) 6 E) 9

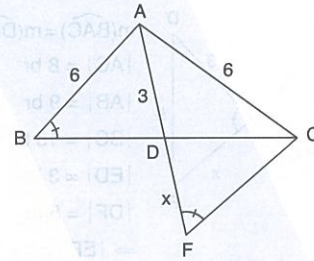
13.



$$\begin{aligned} m(\widehat{BDC}) &= m(\widehat{BEC}) \\ 2|AD| &= |AE| = 6 \text{ br} \\ |BD| &= 11 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 5

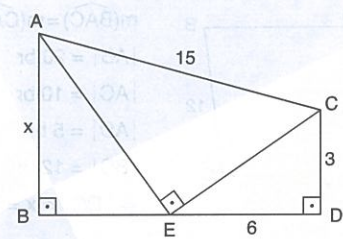
14.



$$\begin{aligned} m(\widehat{ABC}) &= m(\widehat{AFC}) \\ |AB| &= |AC| = 6 \text{ br} \\ |AD| &= 3 \text{ br} \\ \Rightarrow |DF| &= x = ? \end{aligned}$$

- A) 12 B) 9 C) 7 D) $\frac{13}{2}$ E) $\frac{9}{2}$

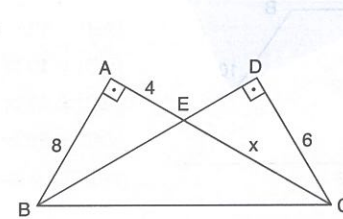
15.



$$\begin{aligned} [AB] &\perp [BD] \\ [AE] &\perp [EC] \\ [CD] &\perp [BD] \\ |ED| &= 6 \text{ br} \\ |CD| &= 3 \text{ br} \\ |AC| &= 15 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) $12\sqrt{5}$ B) $6\sqrt{5}$ C) 12 D) 6 E) $\sqrt{5}$

16.



$$\begin{aligned} [BA] &\perp [AC] \\ [BD] &\perp [DC] \\ |AB| &= 8 \text{ br} \\ |AE| &= 4 \text{ br} \\ |DC| &= 6 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

- A) 12 B) $6\sqrt{5}$ C) $4\sqrt{5}$ D) $3\sqrt{5}$ E) 3



1. $m(\widehat{BAC}) = m(\widehat{EDF})$
 $|AB| = 3 \text{ br}$
 $|AC| = |DF| = 6 \text{ br}$
 $|DE| = 12 \text{ br}$
 $|BC| = 4 \text{ br}$
 $\Rightarrow |EF| = x = ?$

- A) 16 B) 12 C) 8 D) 6 E) 4

2. $m(\widehat{BAC}) = m(\widehat{DEF})$
 $|AC| = 8 \text{ br}$
 $|AB| = 9 \text{ br}$
 $|BC| = 15 \text{ br}$
 $|ED| = 3 \text{ br}$
 $|DF| = 5 \text{ br}$
 $\Rightarrow |EF| = x = ?$

- A) 2 B) $\frac{8}{3}$ C) 4 D) 16 E) 24

3. $m(\widehat{BAC}) = m(\widehat{CAD})$
 $|AB| = 20 \text{ br}$
 $|AC| = 10 \text{ br}$
 $|AD| = 5 \text{ br}$
 $|BC| = 12 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) 4 B) 6 C) 12 D) 24 E) 36

4. $[AB] \parallel [DC]$
 $|AB| = 4 \text{ br}$
 $|BC| = 10 \text{ br}$
 $|AC| = 12 \text{ br}$
 $|DC| = 36 \text{ br}$
 $\Rightarrow |AD| = x = ?$

- A) $\frac{10}{3}$ B) 5 C) 10 D) 30 E) 90

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5. $m(\widehat{ABC}) = m(\widehat{ACD})$
 $|AB| = 6 \text{ br}$
 $|AC| = 10 \text{ br}$
 $|DC| = 5 \text{ br}$
 $|BC| = 12 \text{ br}$
 $\Rightarrow |AD| = x = ?$

- A) 24 B) 15 C) 12 D) $\frac{25}{3}$ E) $\frac{25}{6}$

6. $|AE| = 2 \text{ br}$
 $|AD| = |DE| = 6 \text{ br}$
 $|BE| = 3 \text{ br}$
 $|DC| = 9 \text{ br}$
 $\Rightarrow |BC| = x = ?$

- A) 6 B) 9 C) 10 D) 12 E) 15

7. $|EC| = |DE| = 8 \text{ br}$
 $|BD| = 6 \text{ br}$
 $|BE| = 4 \text{ br}$
 $|AD| = 2 \text{ br}$
 $\Rightarrow |AC| = x = ?$

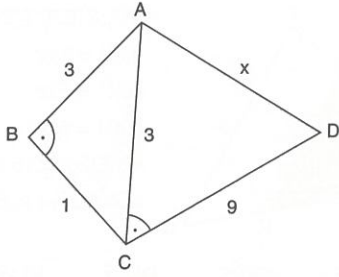
- A) 24 B) 16 C) 12 D) 8 E) 4

8. $|AD| = 3 \text{ br}$
 $|AE| = 5 \text{ br}$
 $|DE| = 6 \text{ br}$
 $|EB| = 1 \text{ br}$
 $|DC| = 7 \text{ br}$
 $\Rightarrow |BC| = x = ?$

- A) 18 B) 16 C) 12 D) 8 E) 6



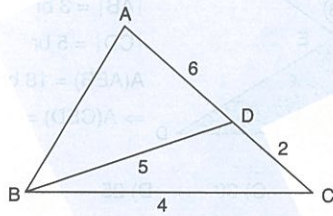
9.



$$\begin{aligned} m(\widehat{ABC}) &= m(\widehat{ACD}) \\ |AB| &= 3 \text{ br} \\ |BC| &= 1 \text{ br} \\ |AC| &= 3 \text{ br} \\ |DC| &= 9 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 27 B) 24 C) 18 D) 9 E) 3

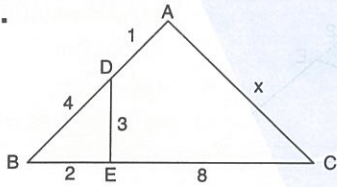
10.



$$\begin{aligned} |AD| &= 6 \text{ br} \\ |DC| &= 2 \text{ br} \\ |BD| &= 5 \text{ br} \\ |BC| &= 4 \text{ br} \\ \Rightarrow \angle(ABC) &= ? \end{aligned}$$

- A) 5 B) 10 C) 17 D) 22 E) 25

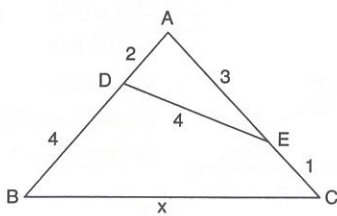
11.



$$\begin{aligned} |BD| &= 2 |BE| = 4 \text{ br} \\ |AD| &= 1 \text{ br} \\ |EC| &= 8 \text{ br} \\ |DE| &= 3 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $\frac{7}{2}$ B) 4 C) 6 D) $\frac{15}{2}$ E) 10

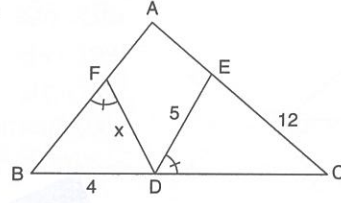
12.



$$\begin{aligned} |AD| &= 2 \text{ br} \\ |AE| &= 3 \text{ br} \\ |DE| &= |BD| = 4 \text{ br} \\ |EC| &= 1 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 16 B) 12 C) 8 D) 4 E) 2

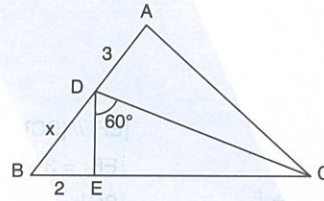
13.



$$\begin{aligned} |AB| &= |AC| \\ m(\widehat{BFD}) &= m(\widehat{EDC}) \\ |EC| &= 12 \text{ br} \\ |DE| &= 5 \text{ br} \\ |BD| &= 4 \text{ br} \\ \Rightarrow |FD| &= x = ? \end{aligned}$$

- A) $\frac{1}{2}$ B) $\frac{2}{5}$ C) 1 D) $\frac{5}{3}$ E) 5

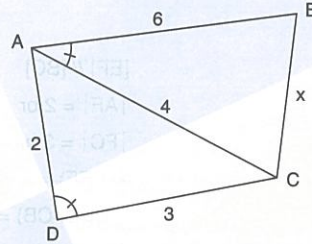
14.



$$\begin{aligned} ABC &\text{ eşkenar üçgen} \\ ABC &\text{ equilateral triangle} \\ m(\widehat{EDC}) &= 60^\circ \\ |AD| &= 3 \text{ br} \\ |BE| &= 2 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) 2 B) $\frac{5}{2}$ C) $\frac{7}{2}$ D) 4 E) 6

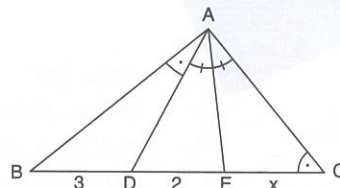
15.



$$\begin{aligned} m(\widehat{BAC}) &= m(\widehat{ADC}) \\ |AB| &= 6 \text{ br} \\ |AC| &= 4 \text{ br} \\ |AD| &= 2 \text{ br} \\ |DC| &= 3 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 8 B) 6 C) 5 D) 4 E) 2

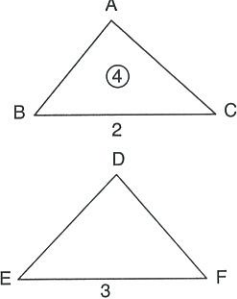
16.

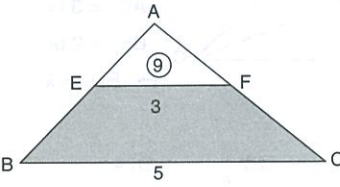


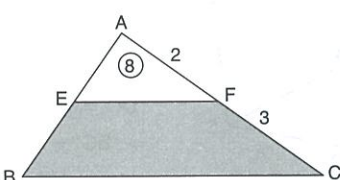
$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{ACB}) \\ m(\widehat{DAE}) &= m(\widehat{EAC}) \\ |BD| &= 3 \text{ br} \\ |DE| &= 2 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

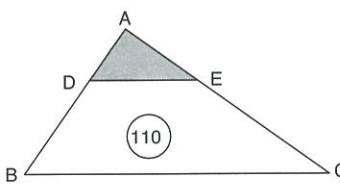
- A) 1 B) 2 C) $\frac{10}{3}$ D) 4 E) $\frac{13}{3}$



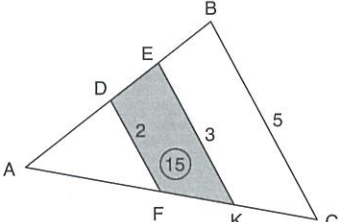
1.  $\widehat{ABC} \approx \widehat{DEF}$
 $|BC| = 2 \text{ br}$
 $|EF| = 3 \text{ br}$
 $A(ABC) = 4 \text{ br}^2$
 $\Rightarrow A(DEF) = ?$
- A) 3 B) 4 C) 6 D) 9 E) 18

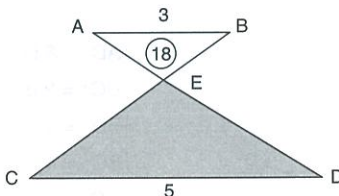
2.  $[EF] \parallel [BC]$
 $|EF| = 3 \text{ br}$
 $|BC| = 5 \text{ br}$
 $A(AEF) = 9 \text{ br}^2$
 $\Rightarrow A(EFCB) = ?$
- A) 50 B) 25 C) 16 D) 15 E) 6

3.  $[EF] \parallel [BC]$
 $|AF| = 2 \text{ br}$
 $|FC| = 3 \text{ br}$
 $A(AEF) = 8 \text{ br}^2$
 $\Rightarrow A(EFCB) = ?$
- A) 50 B) 42 C) 25 D) 27 E) 17

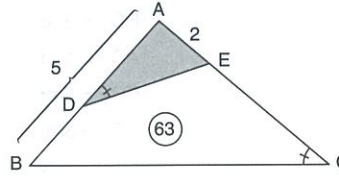
4.  $[DE] \parallel [BC]$
 $5|AE| = 3|EC|$
 $A(DECB) = 110 \text{ br}^2$
 $\Rightarrow A(ADE) = ?$
- A) 27 B) 18 C) 12 D) 9 E) 3

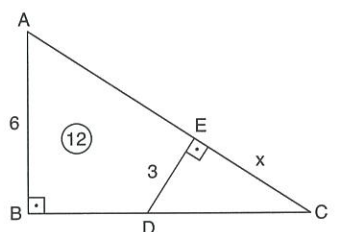
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5.  $[DF] \parallel [EK] \parallel [BC]$
 $|DF| = 2 \text{ br}$
 $|EK| = 3 \text{ br}$
 $|BC| = 5 \text{ br}$
 $A(DFKE) = 15 \text{ br}^2$
 $\Rightarrow A(ADF) + A(EBCK) = ?$
- A) 60 B) 45 C) 35 D) 30 E) 20

6.  $[AB] \parallel [CD]$
 $|AB| = 3 \text{ br}$
 $|CD| = 5 \text{ br}$
 $A(AEB) = 18 \text{ br}^2$
 $\Rightarrow A(CED) = ?$
- A) 100 B) 50 C) 30 D) 25 E) 18

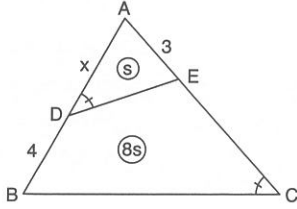
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7.  $m(\widehat{ADE}) = m(\widehat{ACB})$
 $|AE| = 2 \text{ br}$
 $|AB| = 5 \text{ br}$
 $A(DECB) = 63 \text{ br}^2$
 $\Rightarrow A(DAE) = ?$
- A) 4 B) 8 C) 12 D) 14 E) 16

8.  $[AB] \perp [BC]$
 $[DE] \perp [AC]$
 $|AB| = 6 \text{ br}$
 $|ED| = 3 \text{ br}$
 $A(ABDE) = 12 \text{ br}^2$
 $\Rightarrow |EC| = x = ?$
- A) $\frac{6}{2}$ B) 2 C) $\frac{8}{3}$ D) 3 E) 6



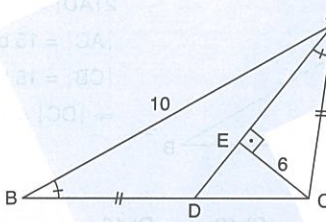
9.



$$\begin{aligned} m(\widehat{ADE}) &= m(\widehat{ACB}) \\ 8A(\triangle ADE) &= A(\triangle ECB) \\ |AE| &= 3 \text{ br} \\ |DB| &= 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 9 B) 6 C) 5 D) 4 E) 3

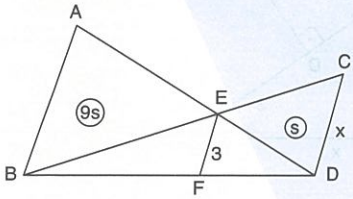
10.



$$\begin{aligned} m(\widehat{DAC}) &= m(\widehat{ABC}) \\ |AC| &= |BD| \\ [CE] &\perp [AD] \\ |AB| &= 10 \text{ br} \\ |EC| &= 6 \text{ br} \\ \Rightarrow A(\triangle ABD) &= ? \end{aligned}$$

- A) 10 B) 12 C) 15 D) 30 E) 60

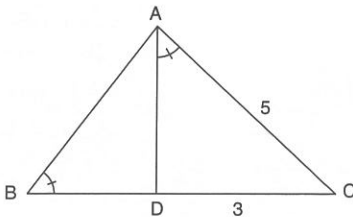
11.



$$\begin{aligned} [AB] &\parallel [EF] \parallel [CD] \\ A(\triangle ABE) &= 9A(\triangle ECD) \\ |EF| &= 3 \text{ br} \\ \Rightarrow |CD| &= x \end{aligned}$$

- A) 1 B) 3 C) 4 D) $\frac{14}{3}$ E) 12

12.

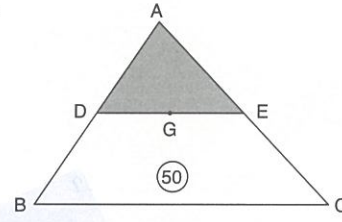


$$\begin{aligned} m(\widehat{DAC}) &= m(\widehat{ABC}) \\ |AC| &= 5 \text{ br} \\ |DC| &= 3 \text{ br} \\ \Rightarrow \frac{A(\triangle ABD)}{A(\triangle ADC)} &= ? \end{aligned}$$

- A) $\frac{2}{3}$ B) $\frac{5}{3}$ C) $\frac{16}{9}$ D) $\frac{25}{9}$ E) $\frac{25}{3}$

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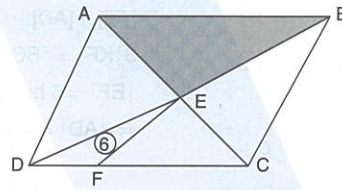
13.



G, ABC üçgeninin
ağırlık merkezi
G, center of gravity of
ABC triangle's
[DE] // [BC]
 $A(\triangle DEC) = 50 \text{ br}^2$
 $\Rightarrow A(\triangle ADE) = ?$

- A) 5 B) 10 C) 20 D) $\frac{200}{9}$ E) 40

14.

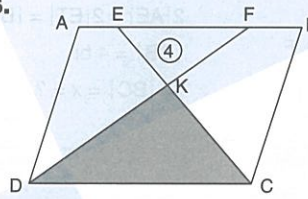


ABCD paralelkenar
ABCD parallelogram
 $3|DF| = 2|FC|$
 $A(\triangle DEF) = 6 \text{ br}^2$
 $\Rightarrow A(\triangle ABE) = ?$

- A) 10 B) 15 C) 25 E) $\frac{75}{2}$ E) 50

PUZA YAYINLARI

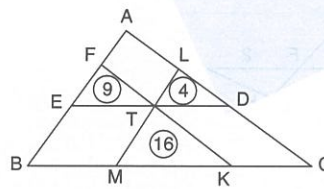
15.



ABCD paralelkenar
ABCD parallelogram
 $3|AE| = 6|EF| = 2|FB|$
 $A(\triangle EFK) = 4 \text{ br}^2$
 $\Rightarrow A(\triangle DKC) = ?$

- A) 144 B) 72 C) 36 D) 24 E) 18

16.

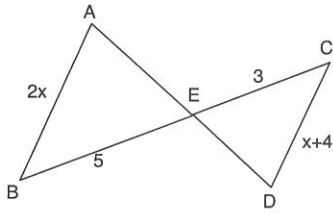


[ED] // [BC]
[ML] // [AB]
[FK] // [AC]
 $A(\triangle EFT) = 9 \text{ br}^2$
 $A(\triangle TLD) = 4 \text{ br}^2$
 $A(\triangle TMK) = 16 \text{ br}^2$
 $\Rightarrow A(\triangle ABC) = ?$

- A) 27 B) 29 C) 48 D) 64 E) 81



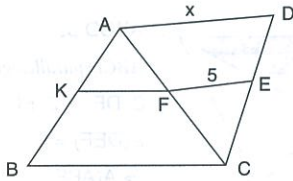
1.



$$\begin{aligned} [AB] &\parallel [CD] \\ |BE| &= 5 \text{ br} \\ |EC| &= 3 \text{ br} \\ |AB| &= 2x \\ |CD| &= x + 4 \\ \Rightarrow x &= ? \end{aligned}$$

- A) 20 B) 12 C) 10 D) 4 E) $\frac{20}{11}$

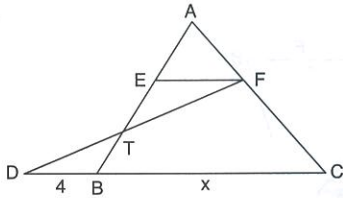
2.



$$\begin{aligned} [KF] &\parallel [BC] \\ [FE] &\parallel [AD] \\ 3|KF| &= |BC| \\ |EF| &= 5 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 1 B) $\frac{6}{5}$ C) $\frac{10}{3}$ D) $\frac{15}{2}$ E) 15

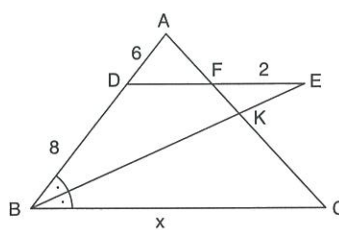
3.



$$\begin{aligned} [EF] &\parallel [DC] \\ 2|AE| &= 2|ET| = |BT| \\ |DB| &= 4 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 2 B) 3 C) 4 D) 6 E) 8

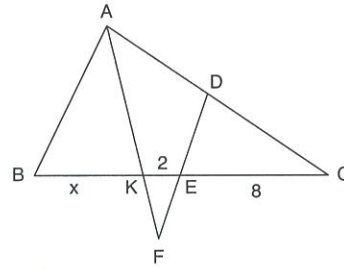
4.



$$\begin{aligned} [DE] &\parallel [BC] \\ |EF| &= 2 \text{ br} \\ |AD| &= 6 \text{ br} \\ |BD| &= 8 \text{ br} \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) $\frac{56}{3}$ B) 14 C) 8 D) 6 E) 4

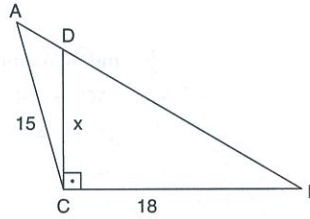
5.



$$\begin{aligned} [DE] &\parallel [AB] \\ |DE| &= 2|EF| \\ |EC| &= 8 \text{ br} \\ |KE| &= 2 \text{ br} \\ \Rightarrow |BK| &= x = ? \end{aligned}$$

- A) 10 B) 8 C) 6 D) 4 E) 2

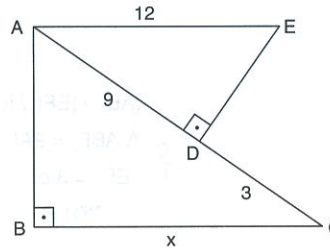
6.



$$\begin{aligned} [DC] &\perp [CB] \\ 2|AD| &= |DB| \\ |AC| &= 15 \text{ br} \\ |CB| &= 18 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 6 B) 8 C) 12 D) 16 E) 20

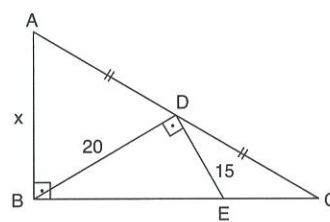
7.



$$\begin{aligned} [AE] &\parallel [BC] \\ [ED] &\perp [AC] \\ [AB] &\perp [BC] \\ |AE| &= 12 \text{ br} \\ |AD| &= 9 \text{ br} \\ |DC| &= 3 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 10 B) 9 C) $\frac{45}{4}$ D) $\frac{15}{2}$ E) 5

8.

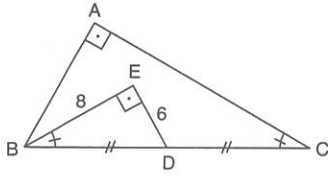


$$\begin{aligned} [AB] &\perp [BC] \\ [BD] &\perp [DE] \\ |AD| &= |DC| \\ |BD| &= 20 \text{ br} \\ |DE| &= 15 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 36 B) 24 C) 12 D) 8 E) 6



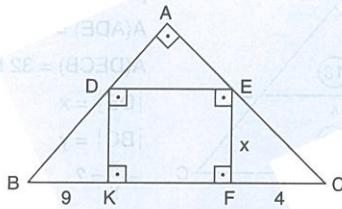
9.



$|BD| = |DC|$
 $[BA] \perp [AC]$
 $[BE] \perp [ED]$
 $|EB| = 8$ br
 $|ED| = 6$ br
 $m(\widehat{EBC}) = m(\widehat{ACB})$
 $\Rightarrow A(ABC) = ?$

- A) 48 B) 64 C) 96 D) 100 E) 114

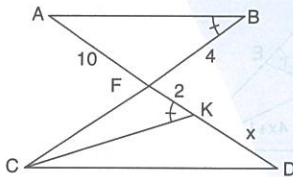
10.



$[BA] \perp [AC]$
 DEFK dikdörtgen
 DEFK rectangle
 $|BK| = 9$ br
 $|FC| = 4$ br
 $\Rightarrow |EF| = x = ?$

- A) $\frac{2}{3}$ B) 4 C) $\frac{9}{2}$ D) 6 E) 36

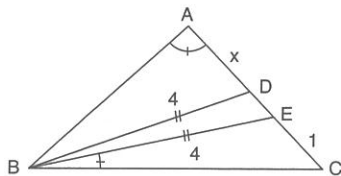
11.



$[AB] \parallel [CD]$
 $m(\widehat{ABC}) = m(\widehat{AKC})$
 $|AF| = 10$ br
 $|BF| = 4$ br
 $|FK| = 2$ br
 $\Rightarrow |KD| = x = ?$

- A) 21 B) $\frac{21}{2}$ C) 12 D) 6 E) $\frac{11}{2}$

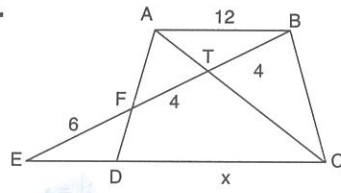
12.



$m(\widehat{BAC}) = m(\widehat{EBC})$
 $|BD| = |BE| = 4$ br
 $|EC| = 1$ br
 $\Rightarrow |AD| = x = ?$

- A) 16 B) 8 C) 4 D) 2 E) 1

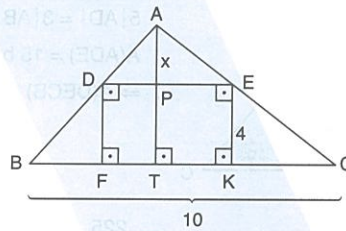
13.



$[AB] \parallel [EC]$
 $|AB| = 12$ br
 $|EF| = 6$ br
 $|FT| = |TB| = 4$ br
 $\Rightarrow |DC| = x = ?$

- A) 9 B) 12 C) 16 D) 21 E) 30

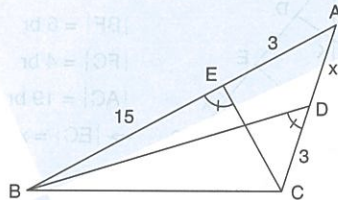
14.



DEKF kare
 DEKF square
 $|EK| = 4$ br
 $|BC| = 10$ br
 $\Rightarrow |AP| = x = ?$

- A) 1 B) $\frac{4}{3}$ C) $\frac{8}{3}$ D) 4 E) 32

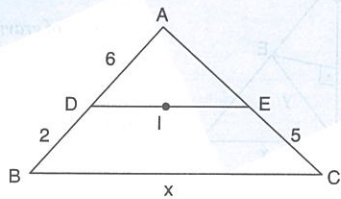
15.



$m(\widehat{BEC}) = m(\widehat{BDC})$
 $|DC| = 3$ br
 $|BE| = 15$ br
 $|AE| = 3$ br
 $\Rightarrow |AD| = x = ?$

- A) 3 B) 4 C) 6 D) 9 E) 12

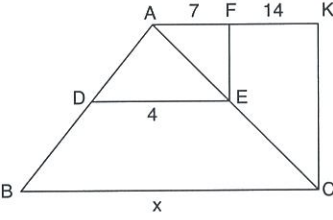
16.

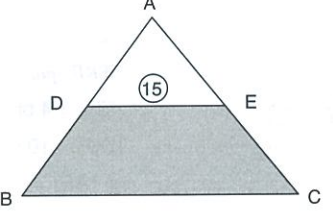


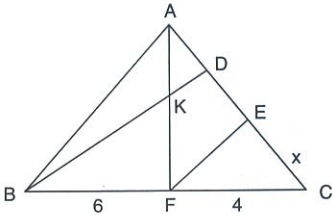
$[DE] \parallel [BC]$
 I iç teğet çemberin
 merkezi
 I center point of the
 incircle
 $|AD| = 6$ br
 $|BD| = 2$ br
 $|EC| = 5$ br
 $\Rightarrow |BC| = x = ?$

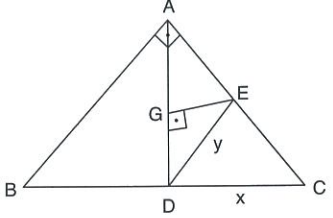
- A) $\frac{28}{3}$ B) 8 C) 6 D) $\frac{21}{4}$ E) 5



1.  [DE] // [BC]
[FE] // [KC]
|AF| = 7 br
|FK| = 14 br
|DE| = 4 br
 $\Rightarrow |BC| = x = ?$
- A) 2 B) 6 C) 8 D) 10 E) 12

2.  [DE] // [BC]
 $5|AD| = 3|AB|$
 $A(ADE) = 15 \text{ br}^2$
 $\Rightarrow A(DEC) = ?$
- A) $\frac{5}{3}$ B) $\frac{80}{3}$ C) 30 D) $\frac{225}{3}$ E) 80

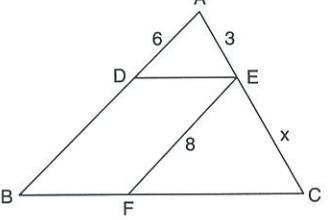
3.  [BD] // [FE]
 $2|AK| = 3|KF|$
|BF| = 6 br
|FC| = 4 br
|AC| = 19 br
 $\Rightarrow |EC| = x = ?$
- A) 2 B) 3 C) 4 D) 6 E) 8

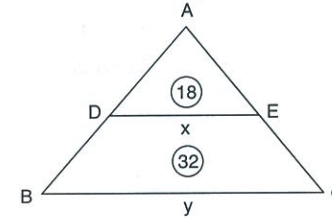
4.  G, ABC üçgeninin
ağırlık merkezi
G, center of gravity of
ABC triangle's
[AB] // [ED]
[BA] $\perp$ [AC]
[EG] $\perp$ [AD]
|ED| = y
|DC| = x
 $\Rightarrow \frac{x}{y} = ?$
- A) $\frac{1}{\sqrt{3}}$ B) 1 C) $\sqrt{3}$ D) 3 E) $3\sqrt{3}$

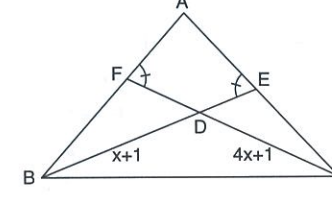
PUZA YAYINLARI

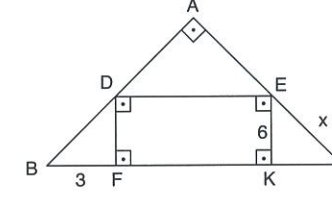
PUZA YAYINLARI

PUZA YAYINLARI

5.  DEFB paralelkenar
DEFB paralelogram
|AD| = 2|AE| = 6 br
|EF| = 8 br
 $\Rightarrow |EC| = x = ?$
- A) 1 B) 2 C) 3 D) 4 E) 5

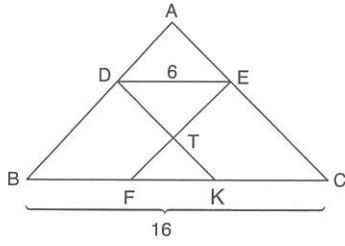
6.  [DE] // [BC]
 $A(ADE) = 18 \text{ br}^2$
 $A(DEC) = 32 \text{ br}^2$
|DE| = x
|BC| = y
 $\Rightarrow \frac{x}{y} = ?$
- A) $\frac{3}{4}$ B) $\frac{3}{5}$ C) $\frac{3}{7}$ D) $\frac{9}{25}$ E) $\frac{9}{49}$

7.  $m(\widehat{AFC}) = m(\widehat{AEB})$
|FD| = x
|DE| = 2x + 2
|DC| = 4x + 1
|BD| = x + 1
 $\Rightarrow \frac{A(BFD)}{A(DEC)} = ?$
- A) $\frac{1}{9}$ B) $\frac{1}{3}$ C) 1 D) 3 E) 9

8.  DEKF dikdörtgen
DEKF rectangle
[BA] $\perp$ [AC]
|BF| = 3 br
|EK| = 6 br
 $\Rightarrow |EC| = x = ?$
- A) $\sqrt{5}$ B) 5 C) $3\sqrt{5}$ D) $6\sqrt{5}$ E) $12\sqrt{5}$



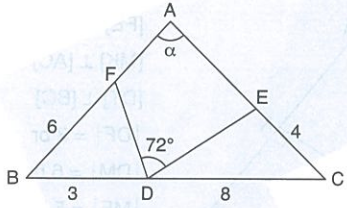
9.



DEFB ve DECK
paralelkenar
DEFB and DECK
parallelogram
 $|DE| = 6$ br
 $|BC| = 16$ br
 $\Rightarrow \frac{A(DET)}{A(FTK)} = ?$

- A) 1 B) $\frac{3}{2}$ C) $\frac{9}{4}$ D) 3 E) 9

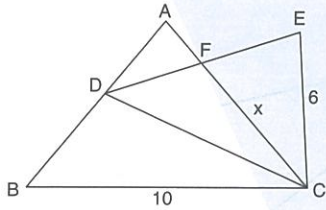
10.



$|AB| = |AC|$
 $m(\widehat{FDE}) = 72^\circ$
 $|BF| = 6$ br
 $|EC| = 4$ br
 $|BD| = 3$ br
 $|DC| = 8$ br
 $\Rightarrow m(\widehat{BAC}) = \alpha = ?$

- A) 144 B) 72 C) 36 D) 18 E) 9

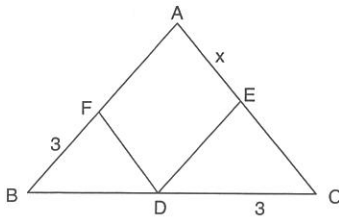
11.



ABC, DEC eşkenar
üçgen
ABC, DEC equilateral
triangle
 $|EC| = 6$ br
 $|BC| = 10$ br
 $\Rightarrow |FC| = x = ?$

- A) 2 B) 3,6 C) 4 D) 4,8 E) 8

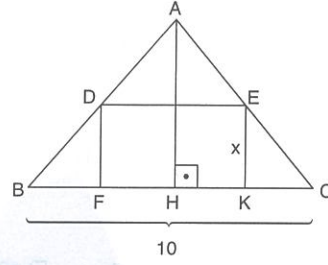
12.



ABC eşkenar üçgen
ABC equilateral
triangle
 $m(\widehat{AED}) = m(\widehat{FDC})$
 $|BF| = 3$ br
 $|DC| = 3$ br
 $\Rightarrow |AE| = x = ?$

- A) 1 B) $\frac{3}{2}$ C) 2 D) 3 E) 4

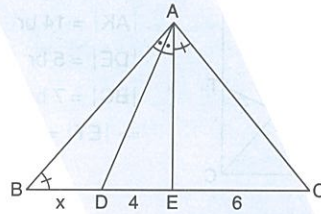
13.



DEKF kare
DEKF square
 $|AH| = 12$ br
 $|BC| = 10$ br
 $\Rightarrow |EK| = x = ?$

- A) 60 B) 30 C) 15 D) $\frac{32}{5}$ E) $\frac{60}{11}$

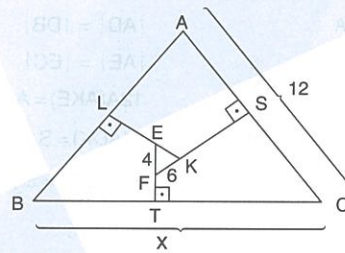
14.



$m(\widehat{EAC}) = m(\widehat{ABC})$
 $m(\widehat{BAD}) = m(\widehat{DAE})$
 $|DE| = 4$ br
 $|EC| = 6$ br
 $\Rightarrow |BD| = x = ?$

- A) 2 B) 4 C) $\frac{22}{5}$ D) $\frac{20}{3}$ E) $\frac{35}{2}$

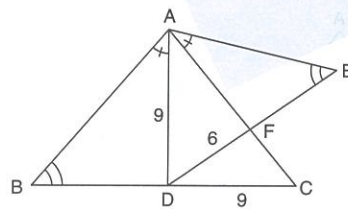
15.



$[ET] \perp [BC]$
 $[KL] \perp [AB]$
 $[FS] \perp [AC]$
 $|EF| = 4$ br
 $|FK| = 6$ br
 $|AC| = 12$ br
 $\Rightarrow |BC| = x = ?$

- A) 2 B) 4 C) 6 D) 8 E) 12

16.

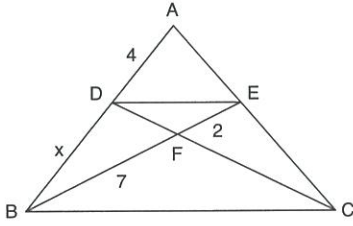


$m(\widehat{CAE}) = m(\widehat{BAD})$
 $m(\widehat{AED}) = m(\widehat{ABC})$
 $|AD| = 9$ br
 $|DC| = 9$ br
 $|DF| = 6$ br
 $\Rightarrow |AF| = ?$

- A) 3 B) 6 C) 8 D) 9 E) 12



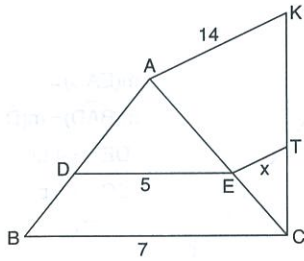
1.



$[DE] \parallel [BC]$
 $|EF| = 2 \text{ br}$
 $|BF| = 7 \text{ br}$
 $|AD| = 4 \text{ br}$
 $\Rightarrow |BD| = x = ?$

- A) $\frac{1}{2}$ B) 3 C) 10 D) 14 E) 18

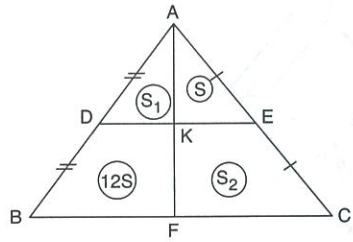
2.



$[DE] \parallel [BC]$
 $[AK] \parallel [ET]$
 $|AK| = 14 \text{ br}$
 $|DE| = 5 \text{ br}$
 $|BC| = 7 \text{ br}$
 $\Rightarrow |ET| = x = ?$

- A) 2 B) 3 C) 4 D) $\frac{49}{6}$ E) $\frac{98}{5}$

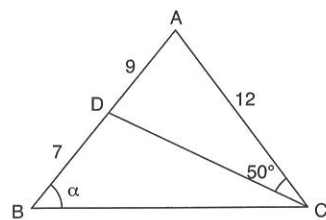
3.



$|AD| = |DB|$
 $|AE| = |EC|$
 $12A(AKE) = A(DKFB)$
 $A(ADK) = S_1$
 $A(KECF) = S_2$
 $\Rightarrow \frac{S_1}{S_2} = ?$

- A) $\frac{1}{12}$ B) $\frac{3}{4}$ C) 1 D) $\frac{4}{3}$ E) 12

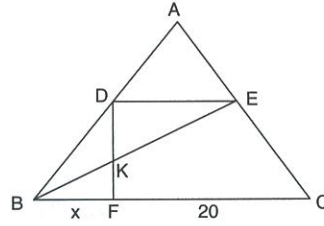
4.



$|AD| = 9 \text{ br}$
 $|BD| = 7 \text{ br}$
 $|AC| = 12 \text{ br}$
 $m(\widehat{ACD}) = 50^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 25 B) 40 C) 50 D) 80 E) 100

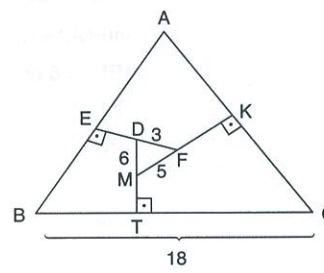
5.



$[DE] \parallel [BC]$
 $|AD| = 2|BD|$
 $|EK| = 3|BK|$
 $|FC| = 20 \text{ br}$
 $\Rightarrow |BF| = x = ?$

- A) $\frac{20}{7}$ B) $\frac{10}{3}$ C) $\frac{40}{7}$ D) 20 E) 40

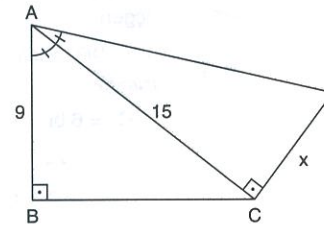
6.



$[FE] \perp [AB]$
 $[MK] \perp [AC]$
 $[DT] \perp [BC]$
 $|DF| = 3 \text{ br}$
 $|DM| = 6 \text{ br}$
 $|MF| = 5 \text{ br}$
 $|BC| = 18 \text{ br}$
 $\Rightarrow \angle(ABC) = ?$

- A) 28 B) 42 C) 56 D) 70 E) 84

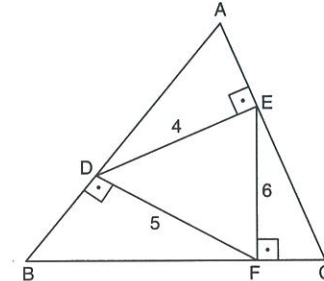
7.



$[AB] \perp [BC]$
 $[AC] \perp [CD]$
 $|AB| = 9 \text{ br}$
 $|AC| = 15 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) 9 B) 12 C) 15 D) 20 E) 25

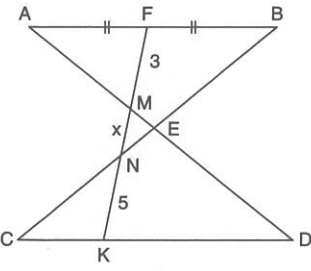
8.

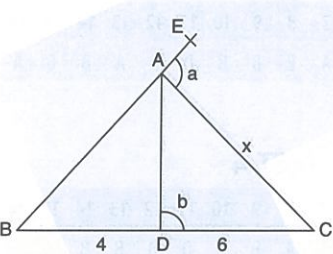


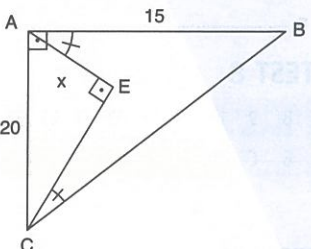
$[DE] \perp [AC]$
 $[FD] \perp [AB]$
 $[EF] \perp [BC]$
 $|DF| = 5 \text{ br}$
 $|DE| = 4 \text{ br}$
 $|EF| = 6 \text{ br}$
 $|BC| = 12 \text{ br}$
 $\Rightarrow \angle(ABC) = ?$

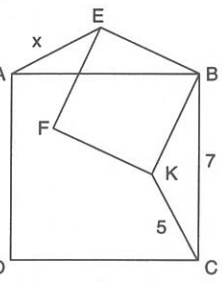
- A) 15 B) 30 C) 45 D) 60 E) 75

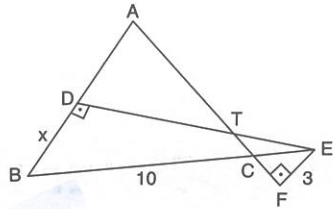


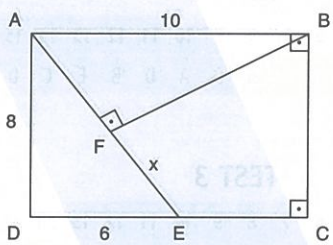
9.  $|AF| = |FB|$
 $7|CK| = 3|KD|$
 $[AB] \parallel [CD]$
 $|FM| = 3 \text{ br}$
 $|NK| = 5 \text{ br}$
 $\Rightarrow |MN| = x = ?$
- A) 5 B) 4 C) 3 D) 2 E) 1

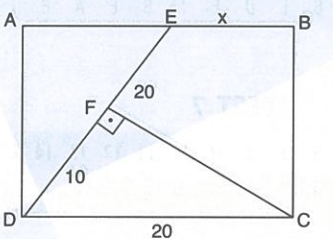
10.  $m(\widehat{EAC}) = a$
 $m(\widehat{ADC}) = b$
 $a + b = 180^\circ$
 $|BD| = 4 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow |AC| = x = ?$
- A) $\sqrt{5}$ B) $\sqrt{10}$ C) $\sqrt{15}$ D) $\sqrt{30}$ E) $2\sqrt{15}$

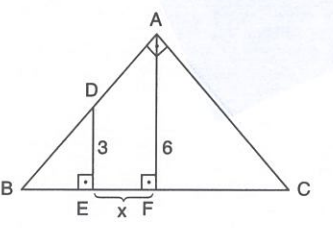
11.  $[CA] \perp [AB]$
 $[AE] \perp [EC]$
 $m(\widehat{BAE}) = m(\widehat{ECB})$
 $|AC| = 20 \text{ br}$
 $|AB| = 15 \text{ br}$
 $\Rightarrow |AE| = x = ?$
- A) $\sqrt{5}$ B) $\sqrt{10}$ C) $2\sqrt{10}$ D) $4\sqrt{10}$ E) $8\sqrt{10}$

12.  ABCD ve EBFK kare
 ABCD and EBFK square
 $|BC| = 7 \text{ br}$
 $|KC| = 5 \text{ br}$
 $\Rightarrow |AE| = x = ?$
- A) 2 B) 3 C) 4 D) 5 E) 7

13.  $|AC| = |AB|$
 $[ED] \perp [AB]$
 $[EF] \perp [AF]$
 $|BC| = 10 \text{ br}$
 $|CE| = 5 \text{ br}$
 $|EF| = 3 \text{ br}$
 $\Rightarrow |BD| = x = ?$
- A) 6 B) 8 C) 9 D) 12 E) 15

14.  ABCD dikdörtgen
 ABCD rectangle
 $[BF] \perp [AE]$
 $|AB| = 10 \text{ br}$
 $|AD| = 8 \text{ br}$
 $|DE| = 6 \text{ br}$
 $\Rightarrow |FE| = x = ?$
- A) 10 B) 8 C) 6 D) 4 E) 2

15.  ABCD dikdörtgen
 ABCD rectangle
 $[DE] \perp [FC]$
 $|EF| = 20 \text{ br}$
 $|DF| = 10 \text{ br}$
 $|DC| = 20 \text{ br}$
 $\Rightarrow |EB| = x = ?$
- A) 1 B) 2 C) 3 D) 4 E) 5

16.  $[BA] \perp [AC]$
 $[DE] \perp [BC]$
 $[AF] \perp [BC]$
 $|AF| = 6 \text{ br}$
 $|DE| = 3 \text{ br}$
 $A(AFC) = 4A(BDE)$
 $\Rightarrow |EF| = x = ?$
- A) 6 B) 5 C) 4 D) 3 E) 2



ÜÇGENDE BENZERLİK

Yanıt Anahtarı

TRIANGLE SIMILARITIES

Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	E	E	D	C	C	A	D	A	D	B	E	C	D	B

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	D	D	A	E	A	E	B	B	D	D	A	B	C	A

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	B	E	C	B	D	D	E	C	E	C	E	B	B	A

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	E	D	B	D	C	A	B	D	D	D	B	B	A	C

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	A	D	C	B	E	D	E	E	B	E	A	B	C	D

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	B	D	D	E	B	C	D	D	D	C	D	E	A	C

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	B	B	A	B	C	C	C	D	C	C	E	B	A	E

TEST 8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	E	B	A	B	B	B	C	D	B	A	D	C	C	A

TEST 9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	B	C	C	D	B	A	D	C	C	B	D	E	D	D	B

TEST 10

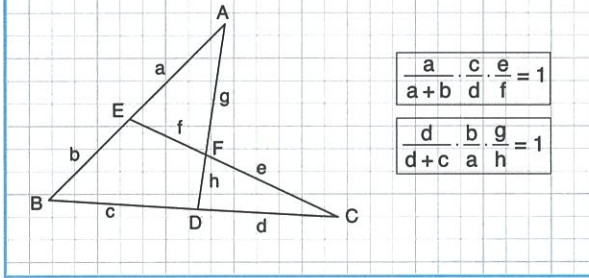
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	D	C	C	B	D	B	D	E	C	D	D	D	E	D



MENELAUS-SEVA
CARNOT-STEWART
MENELAUS-CEVA
CARNOT-STEWART



ÖZELLİK|Property 1



1. $\Rightarrow x = ?$

$\frac{4}{3}$

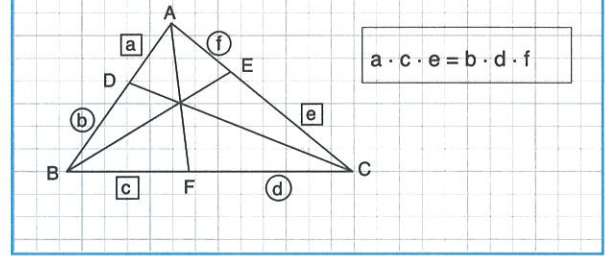
2. $\Rightarrow x = ?$

2

3. $\Rightarrow x = ?$

4

ÖZELLİK|Property 2



1. $\Rightarrow x = ?$

6

2. $|AB| = 3|AF|$
 $\Rightarrow x = ?$

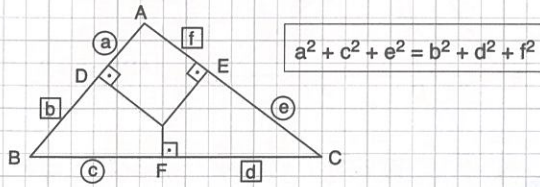
3

3. $\Rightarrow x = ?$

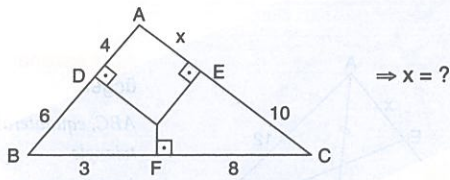
$\frac{30}{13}$



ÖZELLİK|Property 3

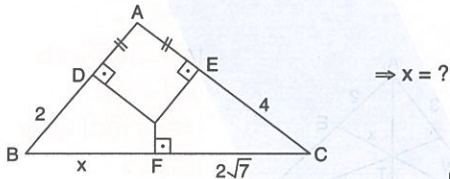


1.



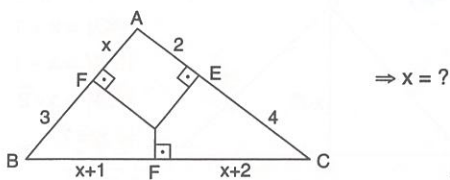
5

2.



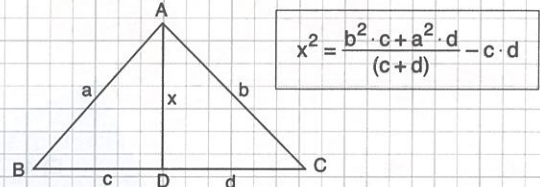
4

3.

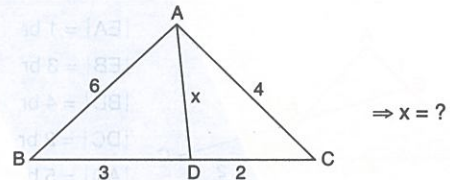


2

ÖZELLİK|Property 4

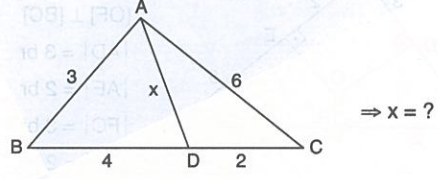


1.



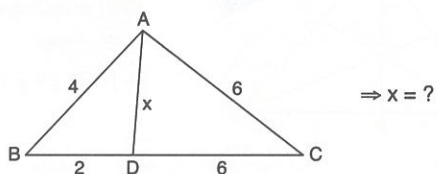
$3\sqrt{2}$

2.



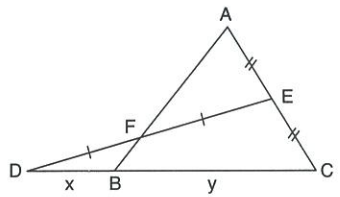
$\sqrt{19}$

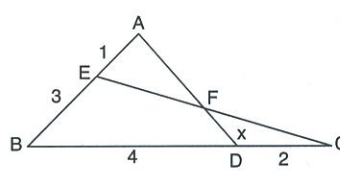
3.

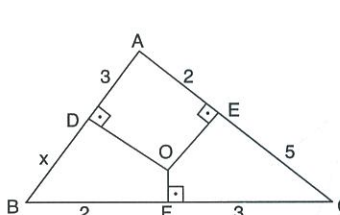


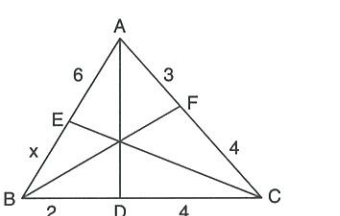
3



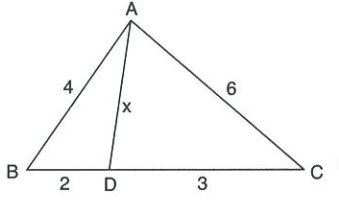
1.  $|AE| = |EC|$
 $|DF| = |FE|$
 $|DB| = x$
 $|BC| = y$
 $\Rightarrow \frac{x}{y} = ?$
- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) 1 D) 2 E) 4

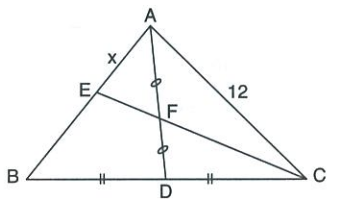
2.  $|EA| = 1 \text{ br}$
 $|EB| = 3 \text{ br}$
 $|BD| = 4 \text{ br}$
 $|DC| = 2 \text{ br}$
 $|AD| = 5 \text{ br}$
 $\Rightarrow |FD| = x = ?$
- A) $\frac{2}{5}$ B) $\frac{5}{4}$ C) $\frac{5}{2}$ D) $\frac{8}{5}$ E) $\frac{8}{7}$

3.  $[OD] \perp [AB]$
 $[OE] \perp [AC]$
 $[OF] \perp [BC]$
 $|AD| = 3 \text{ br}$
 $|AE| = 2 \text{ br}$
 $|FC| = 3 \text{ br}$
 $|BF| = 2 \text{ br}$
 $|EC| = 5 \text{ br}$
 $\Rightarrow |DB| = x = ?$
- A) 4 B) 5 C) $4\sqrt{2}$ D) $4\sqrt{3}$ E) 8

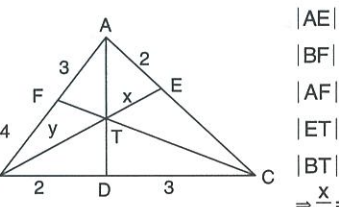
4.  $|BD| = 2 \text{ br}$
 $|AF| = 3 \text{ br}$
 $|DC| = |FC| = 4 \text{ br}$
 $|AE| = 6 \text{ br}$
 $\Rightarrow |BE| = x = ?$
- A) 2 B) 3 C) 4 D) 6 E) 12

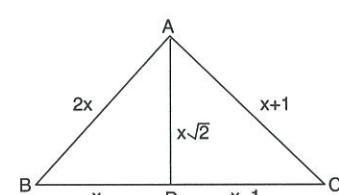
PUZA YAYINLARI

5.  $|BD| = 2 \text{ br}$
 $|DC| = 3 \text{ br}$
 $|AB| = 4 \text{ br}$
 $|AC| = 6 \text{ br}$
 $\Rightarrow |AD| = x = ?$
- A) $\sqrt{6}$ B) $2\sqrt{3}$ C) $\sqrt{14}$ D) $3\sqrt{2}$ E) 5

6.  ABC eşkenar
 üçgen
 ABC, equilateral
 triangle
 $|AC| = 12 \text{ br}$
 $|AF| = |FD|$
 $|BD| = |DC|$
 $\Rightarrow |AE| = x = ?$
- A) 4 B) 6 C) 8 D) 9 E) 10

PUZA YAYINLARI

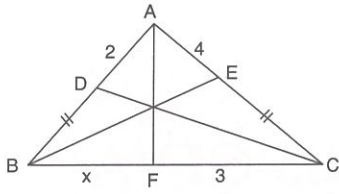
7.  $|AE| = |BD| = 2 \text{ br}$
 $|BF| = 4 \text{ br}$
 $|AF| = |DC| = 3 \text{ br}$
 $|ET| = x$
 $|BT| = y$
 $\Rightarrow \frac{x}{y} = ?$
- A) $\frac{1}{3}$ B) $\frac{1}{2}$ C) 1 D) 2 E) 3

8.  $|AB| = 2|BD| = 2x$
 $|AC| = x + 1$
 $|DC| = x - 1$
 $|AD| = x\sqrt{2}$
 $\Rightarrow x = ?$
- A) 2 B) 3 C) 4 D) 5 E) 6

PUZA YAYINLARI



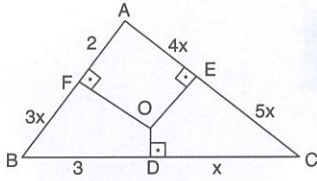
9.



$$\begin{aligned} |EC| &= |BD| = 2 \text{ br} \\ |AE| &= 4 \text{ br} \\ |FC| &= 3 \text{ br} \\ \Rightarrow |BF| &= x = ? \end{aligned}$$

- A) 2 B) 3 C) 4 D) 6 E) 12

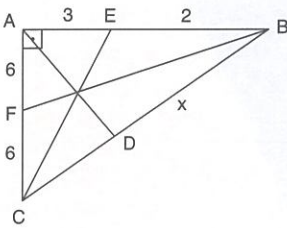
10.



$$\begin{aligned} [OE] &\perp [AC] \\ [OF] &\perp [AB] \\ [OD] &\perp [BC] \\ |BF| &= 3x \\ |AE| &= 4x \\ |EC| &= 5x \\ |AF| &= 2 \text{ br} \\ |BD| &= 3 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 2 B) 3 C) $\sqrt{6}$ D) $\sqrt{11}$ E) $\sqrt{13}$

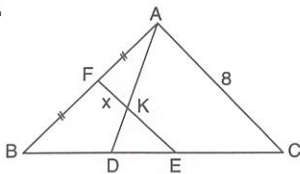
11.



$$\begin{aligned} [BA] &\perp [AC] \\ |AF| &= |FC| = 6 \text{ br} \\ |AE| &= 3 \text{ br} \\ |EB| &= 2 \text{ br} \\ \Rightarrow |DB| &= x = ? \end{aligned}$$

- A) 1 B) $\frac{13}{5}$ C) 3 D) $\frac{26}{5}$ E) $\frac{35}{3}$

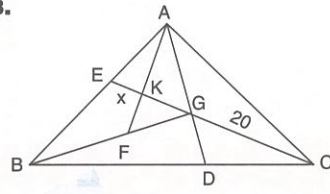
12.



$$\begin{aligned} |BF| &= |FA| \\ |AC| &= 8 \text{ br} \\ 3|BD| &= 6|DE| = 2|EC| \\ \Rightarrow |FK| &= x = ? \end{aligned}$$

- A) $\frac{1}{3}$ B) $\frac{3}{4}$ C) 1 D) 2 E) 3

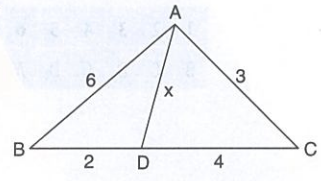
13.



$$\begin{aligned} G, ABC \text{ üçgeninin} \\ \text{ağırlık merkezi} \\ G, \text{center of gravity } ABC \\ \text{triangle's} \\ 2|BF| &= |FG| \\ |GC| &= 20 \text{ br} \\ \Rightarrow |EK| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 4 D) 8 E) 6

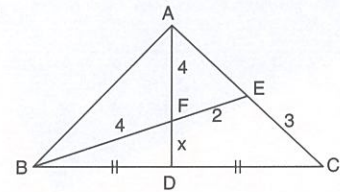
14.



$$\begin{aligned} |AC| &= 3 \text{ br} \\ |AB| &= 6 \text{ br} \\ |BD| &= 2 \text{ br} \\ |DC| &= 4 \text{ br} \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) $\sqrt{19}$ B) 4 C) $2\sqrt{3}$ D) $2\sqrt{2}$ E) 12

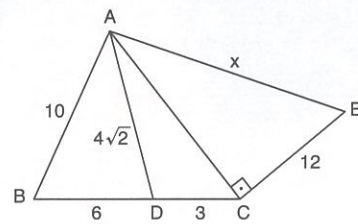
15.



$$\begin{aligned} |BD| &= |DC| \\ |AF| &= |BF| = 4 \text{ br} \\ |EF| &= 2 \text{ br} \\ |EC| &= 3 \text{ br} \\ \Rightarrow |FD| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 6

16.



$$\begin{aligned} [AC] &\perp [CE] \\ |AD| &= 4\sqrt{2} \text{ br} \\ |AB| &= 10 \text{ br} \\ |DC| &= 3 \text{ br} \\ |EC| &= 12 \text{ br} \\ |BD| &= 6 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

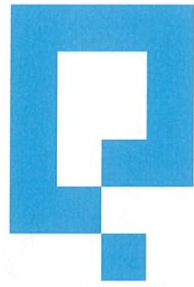
- A) $\sqrt{29}$ B) $\sqrt{30}$ C) 6 D) 10 E) 13



**MENELAUS-SEVA- MENELAUS-CEVA-
CARNOT-STEWART CARNOT-STEWART**
Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	B	C	D	A	B	B	D	E	D	D	B	A	B	E

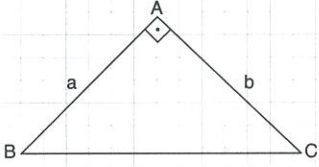


ÜÇGENDE ALAN

AREAS OF TRIANGLES

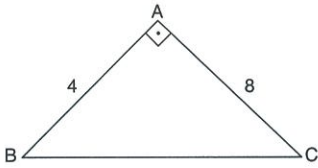


ÖZELLİK|Property 1



$$A(ABC) = \frac{a \cdot b}{2}$$

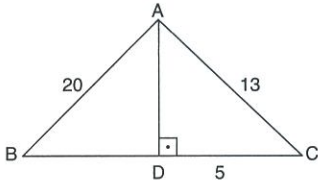
1.



$$\Rightarrow A(ABC) = ?$$

16

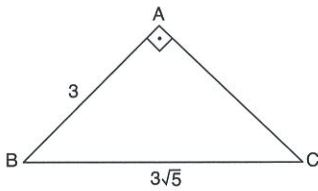
2.



$$\Rightarrow A(ABC) = ?$$

126

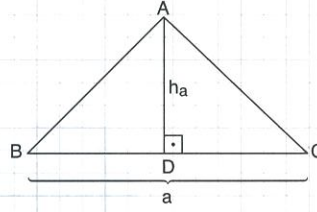
3.



$$\Rightarrow A(ABC) = ?$$

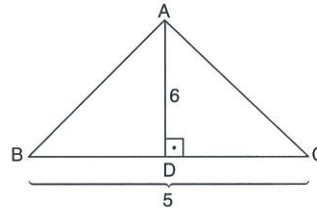
9

ÖZELLİK|Property 2



$$A(ABC) = \frac{a \cdot h_a}{2}$$

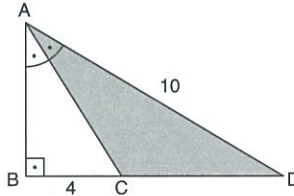
1.



$$\Rightarrow A(ABC) = ?$$

15

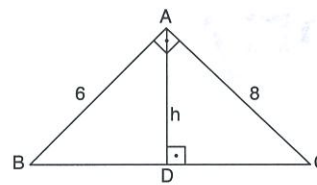
2.



$$\Rightarrow A(ACD) = ?$$

20

3.

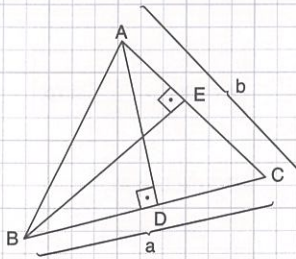


$$\Rightarrow h = ?$$

4,8

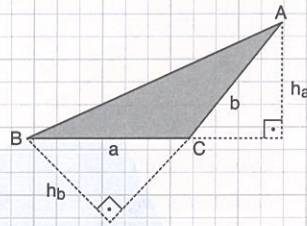


ÖZELLİK|Property 3



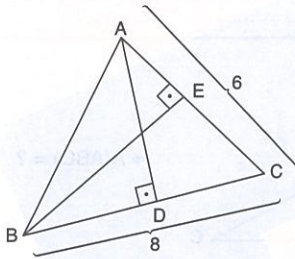
$$\begin{aligned} |AD| &= h_a \\ |BE| &= h_b \\ A(ABC) &= \frac{a \cdot h_a}{2} = \frac{b \cdot h_b}{2} \end{aligned}$$

ÖZELLİK|Property 4



$$A(ABC) = \frac{a \cdot h_a}{2} = \frac{b \cdot h_b}{2}$$

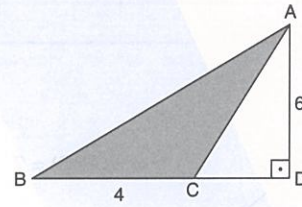
1.



$$\begin{aligned} |AD| &= 3 \text{ br} \\ \Rightarrow |BE| &= ? \end{aligned}$$

4

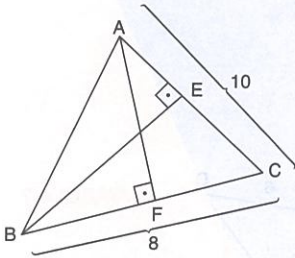
1.



$$\Rightarrow A(ABC) = ?$$

12

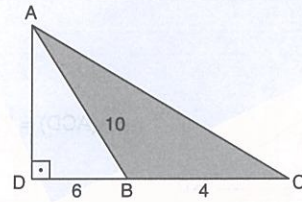
2.



$$\begin{aligned} |BE| &= 6 \text{ br} \\ \Rightarrow |AF| &= ? \end{aligned}$$

$\frac{15}{2}$

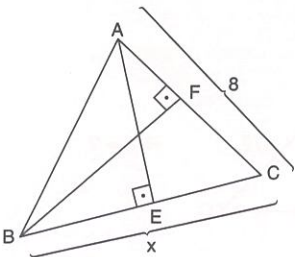
2.



$$\Rightarrow A(ABC) = ?$$

16

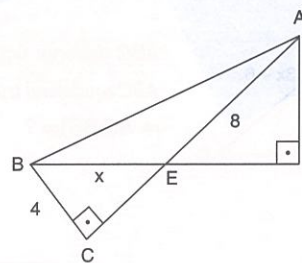
3.



$$\begin{aligned} |AE| &= 4 \text{ br} \\ |BF| &= 6 \text{ br} \\ \Rightarrow x &= ? \end{aligned}$$

12

3.

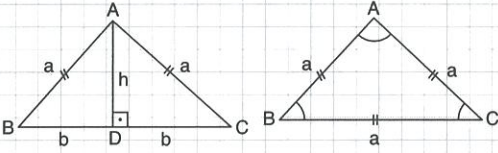


$$\Rightarrow x = ?$$

$\frac{16}{3}$



ÖZELLİK|Property 5



İkizkenar üçgen

Isosceles triangle

$$b^2 + h^2 = a^2$$

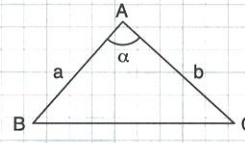
$$A(ABC) = \frac{2b \cdot h}{2} = b \cdot h$$

Eşkenar üçgen

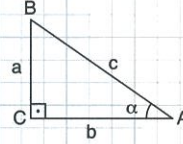
Equilateral triangle

$$A(ABC) = \frac{a^2 \sqrt{3}}{4}$$

ÖZELLİK|Property 6



$$A(ABC) = \frac{a \cdot b}{2} \cdot \sin \alpha$$

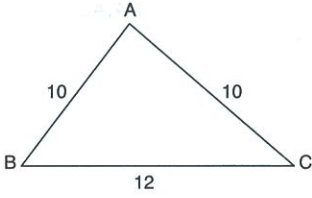


ABC dik üçgen

ABC right triangle

$$\sin \alpha = \frac{a}{c}$$

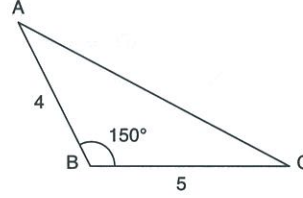
1.



$$\Rightarrow A(ABC) = ?$$

48

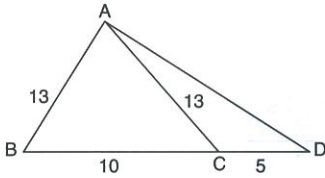
1.



$$\Rightarrow A(ABC) = ?$$

5

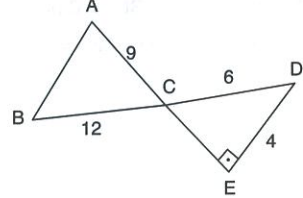
2.



$$\Rightarrow A(ACD) = ?$$

30

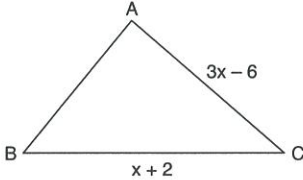
2.



$$\Rightarrow A(ABC) = ?$$

36

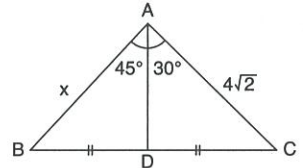
3.



ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow A(ABC) = ?$

$9\sqrt{3}$

3.

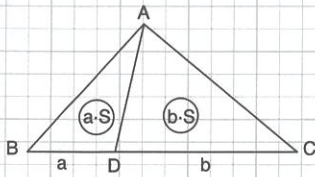


$$\Rightarrow x = ?$$

4

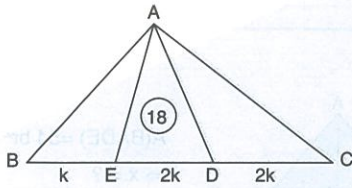


ÖZELLİK|Property 7



$$\frac{A(ABD)}{A(ADC)} = \frac{a}{b}$$

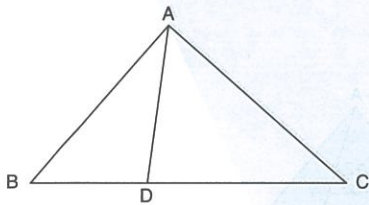
1.



$$\Rightarrow A(ABC) = ?$$

45

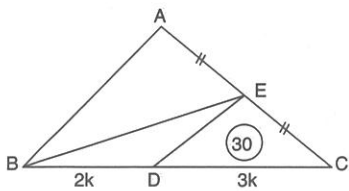
2.



$$\begin{aligned} A(ABC) &= 70 \\ 3|BD| &= 4|DC| \\ \Rightarrow A(ADC) &= ? \end{aligned}$$

30

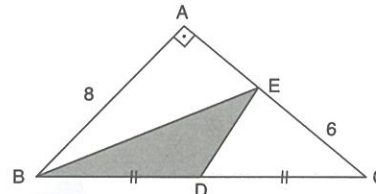
3.



$$\Rightarrow A(ABC) = ?$$

100

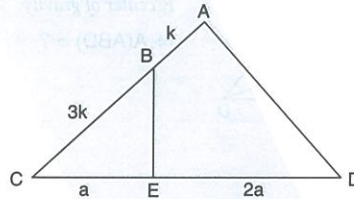
4.



$$\Rightarrow A(EBD) = ?$$

12

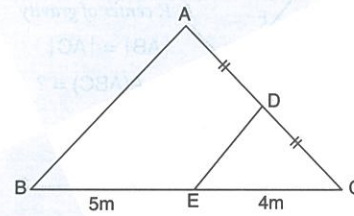
5.



$$\Rightarrow \frac{A(BCE)}{A(ADC)} = ?$$

$\frac{1}{4}$

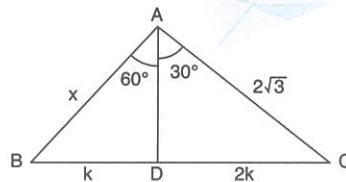
6.



$$\begin{aligned} A(EDC) &= 40 \text{ br}^2 \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

180

7.

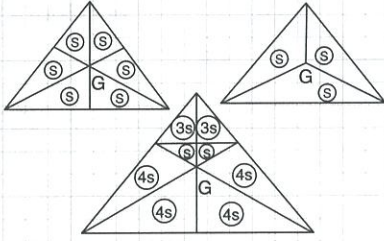


$$\Rightarrow x = ?$$

1

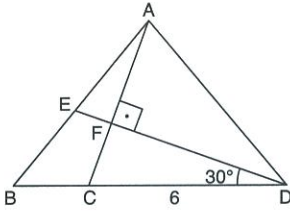


ÖZELLİK|Property 8



G ağırlık merkezi
G, center of gravity

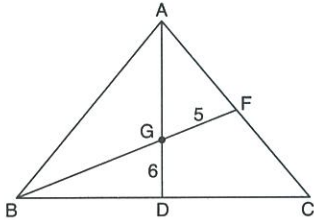
1.



F Ağırlık merkezi
F, center of gravity
 $\Rightarrow A(ABD) = ?$

$27\sqrt{3}$

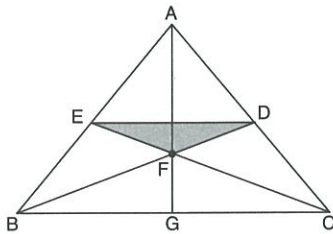
2.



F Ağırlık merkezi
F, center of gravity
 $|AB| = |AC|$
 $\Rightarrow A(ABC) = ?$

144

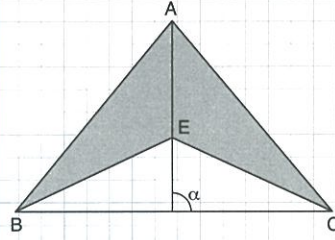
3.



F Ağırlık merkezi
F, center of gravity
 $A(ABC) = 72 \text{ br}^2$
 $\Rightarrow A(EDF) = ?$

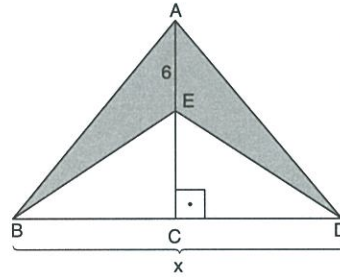
6

ÖZELLİK|Property 9



$$A(BACE) = \frac{1}{2} \cdot |BC| \cdot |AE| \cdot \sin \alpha$$

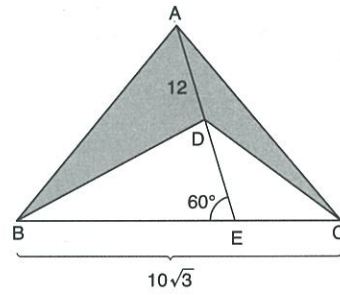
1.



$A(BADE) = 54 \text{ br}^2$
 $\Rightarrow x = ?$

18

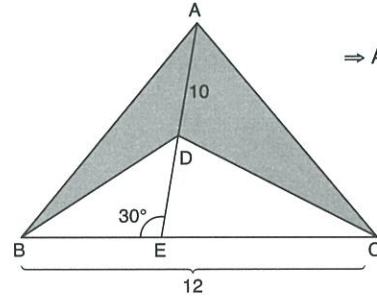
2.



$\Rightarrow A(ABDC) = ?$

90

3.

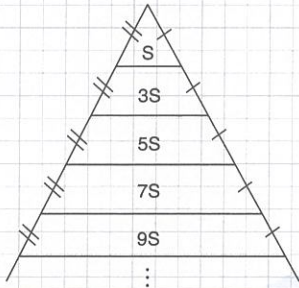


$\Rightarrow A(ABDC) = ?$

30



ÖZELLİK|Property 10



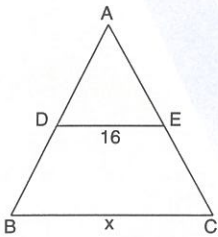
1.



$$\Rightarrow A(ABC) = ?$$

144

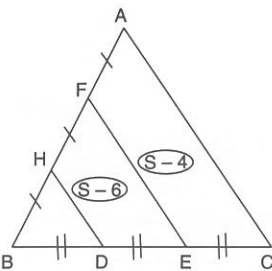
2.



$$A(ADE) = A(BCED) \\ \Rightarrow x = ?$$

$16\sqrt{2}$

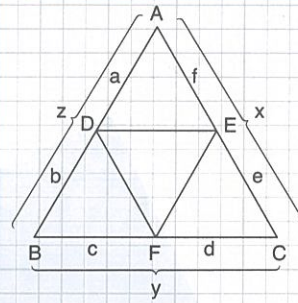
3.



$$\Rightarrow A(ABC) = ?$$

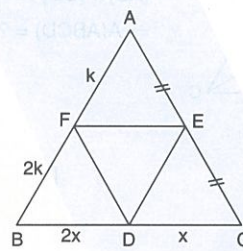
9

ÖZELLİK|Property 11



$$\frac{A(DEF)}{A(ABC)} = \frac{c \cdot e \cdot a + d \cdot f \cdot b}{x \cdot y \cdot z}$$

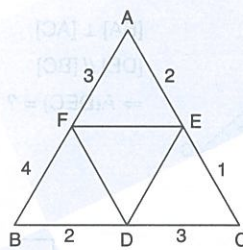
1.



$$A(DEF) = 4 \text{ br}^2 \\ \Rightarrow A(ABC) = ?$$

18

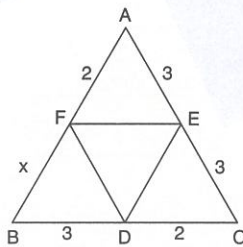
2.



$$\Rightarrow \frac{A(DEF)}{A(ABC)} = ?$$

$\frac{2}{7}$

3.

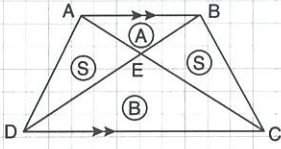


$$\frac{A(DEF)}{A(ABC)} = \frac{7}{30} \\ \Rightarrow x = ?$$

4



ÖZELLİK|Property 12

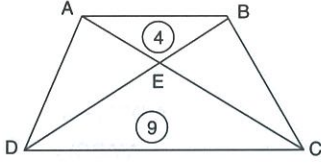


$$[AB] \parallel [DC]$$

$$A(AED) = A(EBC)$$

$$S \cdot S = A \cdot B$$

1.

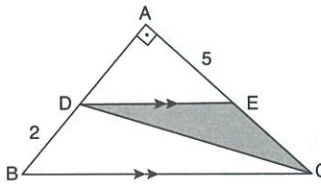


$$[AB] \parallel [CD]$$

$$\Rightarrow A(ABCD) = ?$$

25

2.



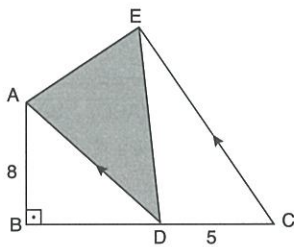
$$[BA] \perp [AC]$$

$$[DE] \parallel [BC]$$

$$\Rightarrow A(DEC) = ?$$

5

3.



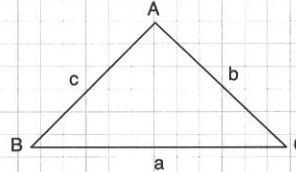
$$[AB] \perp [BC]$$

$$[AD] \parallel [EC]$$

$$\Rightarrow A(ADE) = ?$$

20

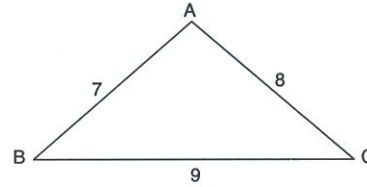
ÖZELLİK|Property 13



$$u = \frac{a+b+c}{2}$$

$$A(ABC) = \sqrt{u(u-a)(u-b)(u-c)}$$

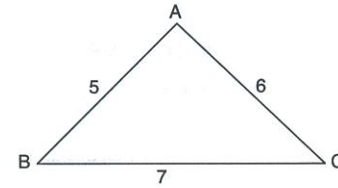
1.



$$\Rightarrow A(ABC) = ?$$

$12\sqrt{5}$

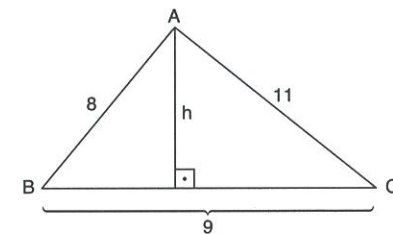
2.



$$\Rightarrow A(ABC) = ?$$

$6\sqrt{6}$

3.

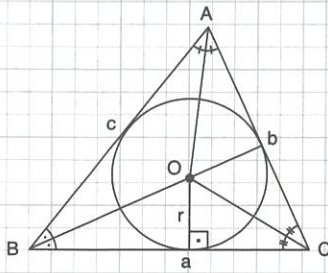


$$\Rightarrow h = ?$$

$\frac{4\sqrt{35}}{3}$



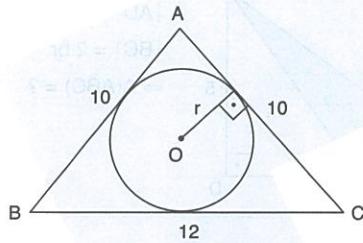
ÖZELLİK|Property 14



$$u = \frac{a+b+c}{2}$$

$$A(ABC) = u \cdot r$$

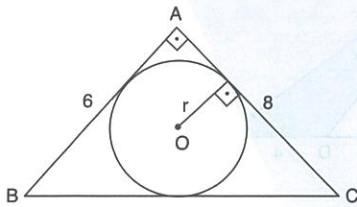
1.



$$\Rightarrow r = ?$$

3

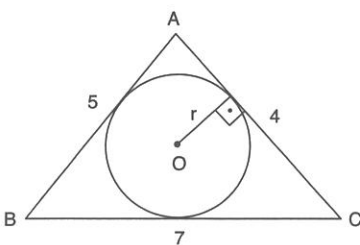
2.



$$\Rightarrow r = ?$$

2

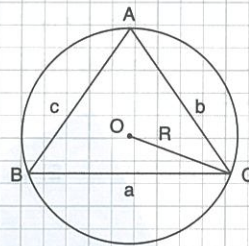
3.



$$\Rightarrow r = ?$$

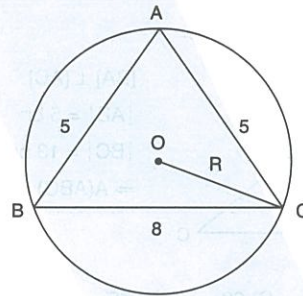
$$\frac{\sqrt{6}}{2}$$

ÖZELLİK|Property 15



$$A(ABC) = \frac{a \cdot b \cdot c}{4 \cdot R}$$

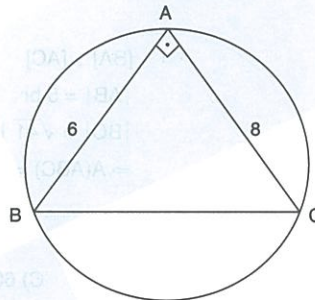
1.



$$\Rightarrow R = ?$$

$$\frac{25}{6}$$

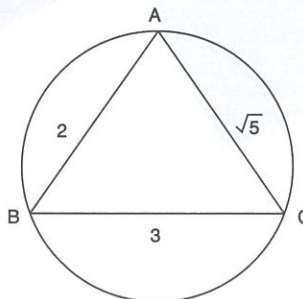
2.



$$\Rightarrow R = ?$$

5

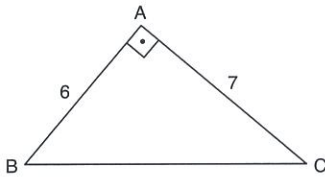
3.

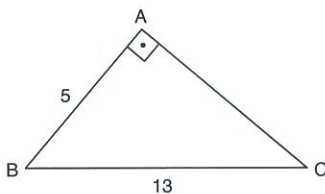


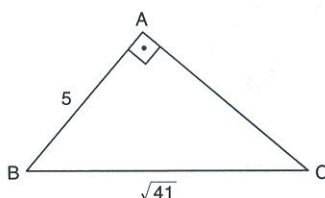
$$\Rightarrow R = ?$$

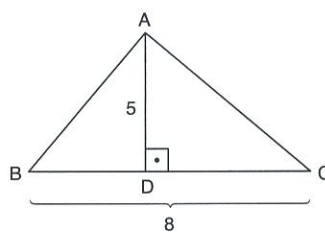
$$\frac{3}{2}$$

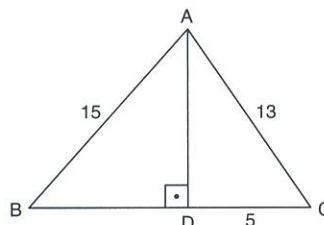


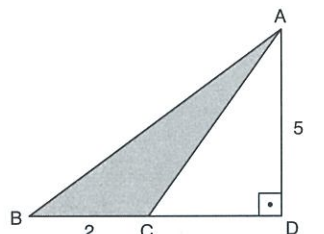
1.  $[BA] \perp [AC]$
 $|AB| = 6$ br
 $|AC| = 7$ br
 $\Rightarrow A(ABC) = ?$
- A) 6 B) 7 C) 14 D) 21 E) 42

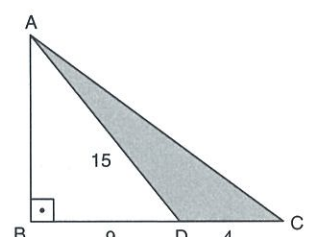
2.  $[BA] \perp [AC]$
 $|AB| = 5$ br
 $|BC| = 13$ br
 $\Rightarrow A(ABC) = ?$
- A) 15 B) 30 C) 60 D) 65 E) 75

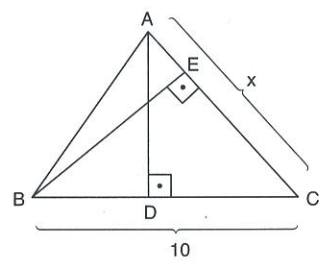
3.  $[BA] \perp [AC]$
 $|AB| = 5$ br
 $|BC| = \sqrt{41}$ br
 $\Rightarrow A(ABC) = ?$
- A) 10 B) 20 C) 60
 D) $5\sqrt{41}$ E) $10\sqrt{41}$

4.  $[AD] \perp [BC]$
 $|AD| = 5$ br
 $|BC| = 8$ br
 $\Rightarrow A(ABC) = ?$
- A) 5 B) 8 C) 10 D) 20 E) 40

5.  $[AD] \perp [BC]$
 $|AB| = 15$ br
 $|AC| = 13$ br
 $|DC| = 5$ br
 $\Rightarrow A(ABC) = ?$
- A) 30 B) 54 C) 60 D) 64 E) 84

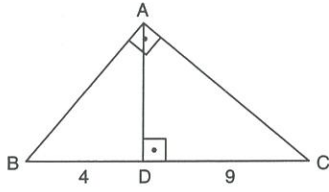
6.  $[AD] \perp [BD]$
 $|AD| = 5$ br
 $|BC| = 2$ br
 $\Rightarrow A(ABC) = ?$
- A) 2 B) $\frac{5}{2}$ C) 5 D) 10 E) 20

7.  $[AB] \perp [BC]$
 $|AD| = 15$ br
 $|BD| = 9$ br
 $|DC| = 4$ br
 $\Rightarrow A(ADC) = ?$
- A) 9 B) 18 C) 24 D) 48 E) 96

8.  $[AD] \perp [BC]$
 $[BE] \perp [AC]$
 $|AD| = 6$ br
 $|BE| = 5$ br
 $|BC| = 10$ br
 $\Rightarrow |AC| = x = ?$
- A) 12 B) 13 C) 15 D) 16 E) 18



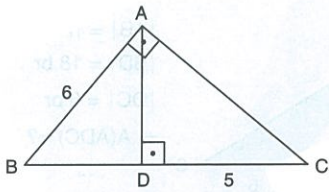
9.



$[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $|DC| = 9 \text{ br}$
 $|BD| = 4 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 78 B) 39 C) 36 D) 18 E) 12

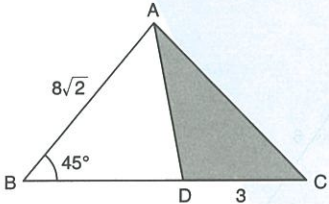
10.



$[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $|AB| = 6 \text{ br}$
 $|DC| = 5 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 15 B) 30 C) $9\sqrt{5}$ D) $18\sqrt{5}$ E) $36\sqrt{5}$

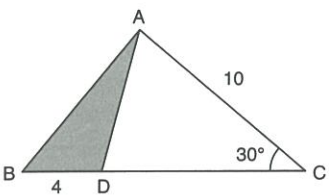
11.



$m(\widehat{ABC}) = 45^\circ$
 $|AB| = 8\sqrt{2} \text{ br}$
 $|DC| = 3 \text{ br}$
 $\Rightarrow A(ADC) = ?$

- A) 6 B) 12 C) $12\sqrt{2}$ D) 24 E) $24\sqrt{2}$

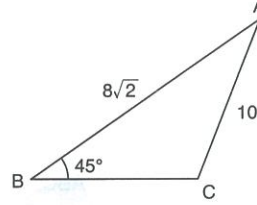
12.



$m(\widehat{ACB}) = 30^\circ$
 $|AC| = 10 \text{ br}$
 $|BD| = 4 \text{ br}$
 $\Rightarrow A(ABD) = ?$

- A) 40 B) $20\sqrt{3}$ C) 20 D) $10\sqrt{3}$ E) 10

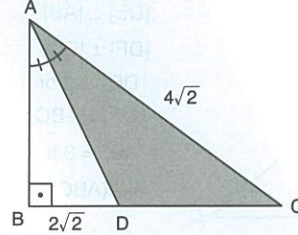
13.



$m(\widehat{ABC}) = 45^\circ$
 $|AB| = 8\sqrt{2} \text{ br}$
 $|AC| = 10 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $4\sqrt{2}$ B) 6 C) 8 D) 12 E) 16

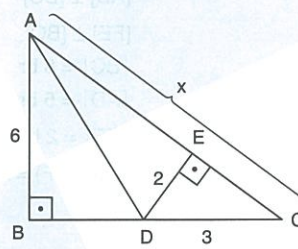
14.



$[AB] \perp [BC]$
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $|BD| = 2\sqrt{2} \text{ br}$
 $|AC| = 4\sqrt{2} \text{ br}$
 $\Rightarrow A(ADC) = ?$

- A) 4 B) $4\sqrt{2}$ C) 8 D) $8\sqrt{2}$ E) 16

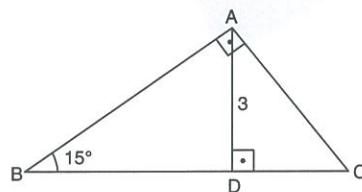
15.



$[AB] \perp [BC]$
 $[DE] \perp [AC]$
 $|AB| = 6 \text{ br}$
 $|DC| = 3 \text{ br}$
 $|DE| = 2 \text{ br}$
 $\Rightarrow |AC| = x = ?$

- A) 9 B) 10 C) 12 D) 15 E) 18

16.

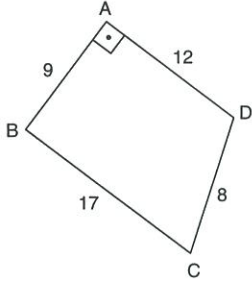


$[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $m(\widehat{ABC}) = 15^\circ$
 $|AD| = 3 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 6 B) 12 C) $\frac{27}{2}$ D) 18 E) 36



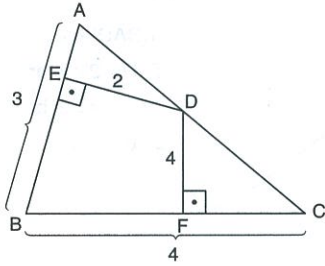
1.



$[BA] \perp [AD]$
 $|AB| = 9 \text{ br}$
 $|AD| = 12 \text{ br}$
 $|BC| = 17 \text{ br}$
 $|CD| = 8 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 114 B) 122 C) 132 D) 144 E) 160

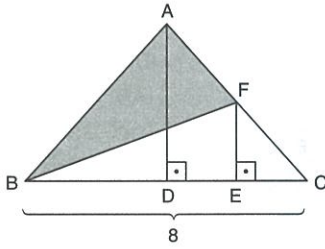
2.



$[DE] \perp [AB]$
 $[DF] \perp [BC]$
 $|DE| = 2 \text{ br}$
 $|DF| = |BC| = 4 \text{ br}$
 $|AB| = 3 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 7 B) 8 C) 10 D) 11 E) 22

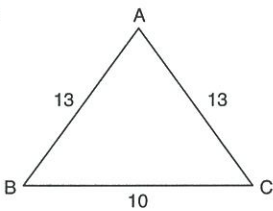
3.



$[AD] \perp [BC]$
 $[FE] \perp [BC]$
 $|BC| = 8 \text{ br}$
 $|AD| = 5 \text{ br}$
 $|FE| = 2 \text{ br}$
 $\Rightarrow A(ABF) = ?$

- A) 24 B) 20 C) 16 D) 12 E) 8

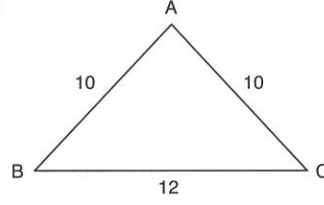
3.



$|AB| = |AC| = 13 \text{ br}$
 $|BC| = 10 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 20 B) 30 C) 45 D) 60 E) 130

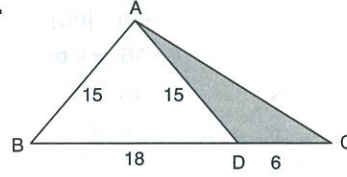
5.



$|AB| = |AC| = 10 \text{ br}$
 $|BC| = 12 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 120 B) 96 C) 60 D) 48 E) 24

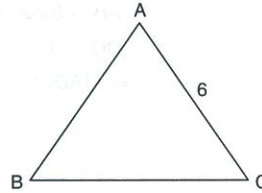
6.



$|AB| = |AD| = 15 \text{ br}$
 $|BD| = 18 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow A(ADC) = ?$

- A) 45 B) 40 C) 36 D) 15 E) 12

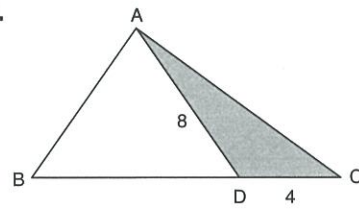
7.



ABC eşkenar üçgen
ABC equilateral triangle
 $|AC| = 6 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $36\sqrt{3}$ B) 36 C) $12\sqrt{3}$ D) $9\sqrt{3}$ E) 12

8.

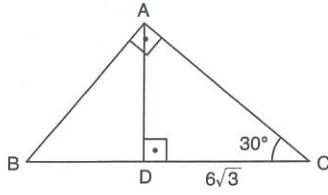


ABD eşkenar üçgen
ABD equilateral triangle
 $|DC| = 4 \text{ br}$
 $|AD| = 8 \text{ br}$
 $\Rightarrow A(ADC) = ?$

- A) 64 B) 32 C) $16\sqrt{3}$ D) $12\sqrt{3}$ E) $8\sqrt{3}$



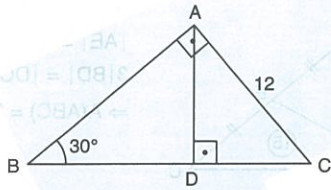
9.



$[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $m(\widehat{ACB}) = 30^\circ$
 $|DC| = 6\sqrt{3} \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $84\sqrt{3}$ B) $42\sqrt{3}$ C) $24\sqrt{3}$ D) $16\sqrt{3}$ E) $12\sqrt{3}$

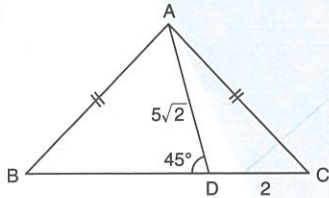
10.



$[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $m(\widehat{ABC}) = 30^\circ$
 $|AC| = 12 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $72\sqrt{3}$ B) 72 C) 36 D) 24 E) $18\sqrt{3}$

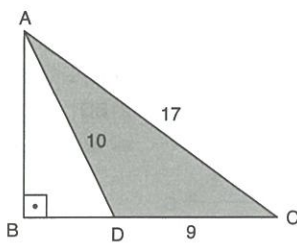
11.



$|AB| = |AC|$
 $m(\widehat{ADB}) = 45^\circ$
 $|AD| = 5\sqrt{2} \text{ br}$
 $|DC| = 2 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 170 B) 85 C) 70 D) 35 E) 25

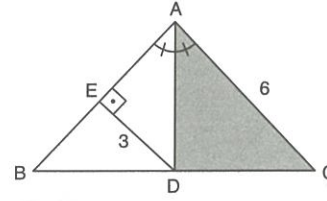
12.



$[AB] \perp [BC]$
 $|AC| = 17 \text{ br}$
 $|AD| = 10 \text{ br}$
 $|DC| = 9 \text{ br}$
 $\Rightarrow A(ADC) = ?$

- A) 54 B) 45 C) 36 D) 27 E) 18

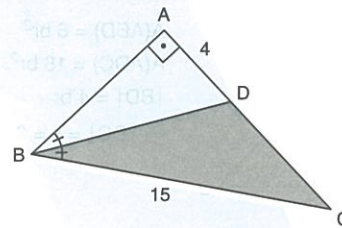
13.



$[DE] \perp [AB]$
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $|ED| = 3 \text{ br}$
 $|AC| = 6 \text{ br}$
 $\Rightarrow A(DAC) = ?$

- A) 9 B) 12 C) $9\sqrt{3}$ D) 18 E) $18\sqrt{3}$

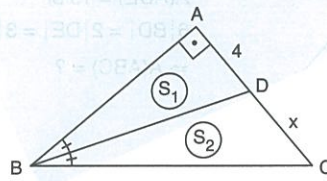
14.



$[BA] \perp [AC]$
 $m(\widehat{ABD}) = m(\widehat{DBC})$
 $|AD| = 4 \text{ br}$
 $|BC| = 15 \text{ br}$
 $\Rightarrow A(DBC) = ?$

- A) $\frac{15}{2}$ B) 15 C) 30 D) $30\sqrt{3}$ E) 60

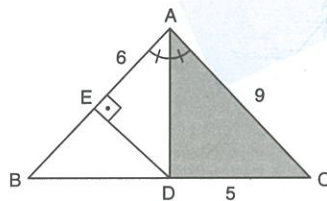
15.



$[BA] \perp [AC]$
 $m(\widehat{ADB}) = m(\widehat{DBC})$
 $A(ABD) = S_1$
 $A(DBC) = S_2$
 $S_2 - S_1 = 6 \text{ br}^2$
 $|AD| = 4 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9

16.

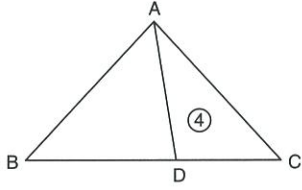


$[DE] \perp [AB]$
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $|AC| = 9 \text{ br}$
 $|DC| = 5 \text{ br}$
 $|AE| = 6 \text{ br}$
 $\Rightarrow A(ADC) = ?$

- A) 6 B) 9 C) 18 D) $\frac{45}{2}$ E) 45



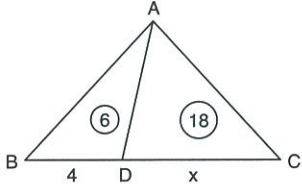
1.



- A) $\frac{8}{3}$ B) 6 C) $\frac{32}{3}$ D) 10 E) 12

$$\begin{aligned} A(ADC) &= 4 \text{ br}^2 \\ 3|DC| &= 2|BD| \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

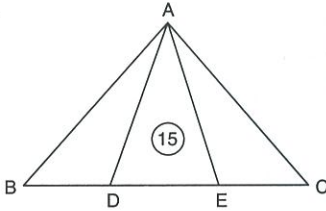
2.



- A) $\frac{4}{3}$ B) 4 C) 8 D) 12 E) 15

$$\begin{aligned} A(ABD) &= 6 \text{ br}^2 \\ A(ADC) &= 18 \text{ br}^2 \\ |BD| &= 4 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

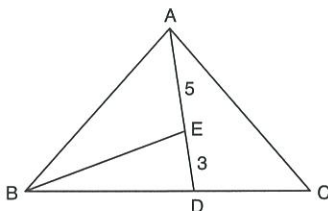
3.



- A) 15 B) 20 C) 30 D) 45 E) 60

$$\begin{aligned} A(ADE) &= 15 \text{ br}^2 \\ 6|BD| &= 2|DE| = 3|EC| \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

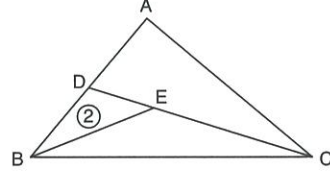
4.



- A) 4 B) 5 C) 6 D) 8 E) 10

$$\begin{aligned} 3|BD| &= 2|DC| \\ |AE| &= 5 \text{ br} \\ |ED| &= 3 \text{ br} \\ \Rightarrow \frac{A(ADC)}{A(EBD)} &= ? \end{aligned}$$

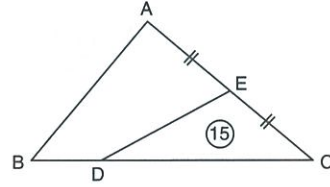
5.



- A) $\frac{11}{3}$ B) 4 C) 5 D) 7 E) 10

$$\begin{aligned} A(BDE) &= 2 \text{ br}^2 \\ 3|AD| &= 2|BD| \\ 2|DE| &= |EC| \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

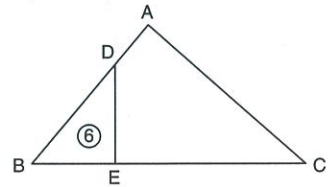
6.



- A) 50 B) 40 C) 30 D) 20 E) 15

$$\begin{aligned} A(EDC) &= 15 \text{ br}^2 \\ |AE| &= |EC| \\ 3|BD| &= |DC| \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

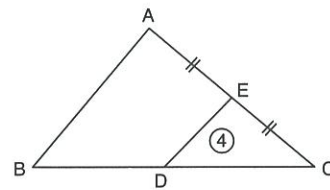
7.



- A) 27 B) 30 C) 33 D) 36 E) 39

$$\begin{aligned} A(DBE) &= 6 \text{ br}^2 \\ 2|AD| &= |BD| \\ 3|BE| &= |EC| \\ \Rightarrow A(ADEC) &= ? \end{aligned}$$

8.

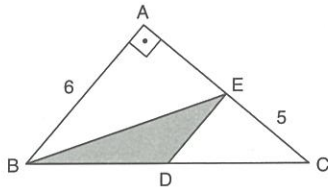


- A) 8 B) 10 C) 12 D) 16 E) 20

$$\begin{aligned} A(EDC) &= 4 \text{ br}^2 \\ |AE| &= |EC| \\ 2|BD| &= 3|DC| \\ \Rightarrow A(ABC) &= ? \end{aligned}$$



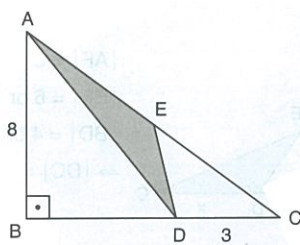
9.



$[BA] \perp [AC]$
 $|AB| = 6 \text{ br}$
 $|EC| = 5 \text{ br}$
 $3|BD| = 2|DC|$
 $\Rightarrow A(EBD) = ?$

- A) 30 B) 15 C) 12 D) 9 E) 6

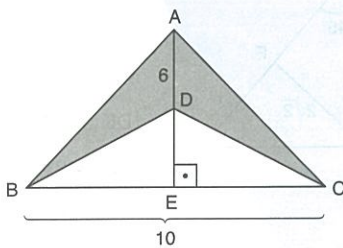
10.



$[AB] \perp [BC]$
 $2|AE| = |EC|$
 $|AB| = 8 \text{ br}$
 $|DC| = 3 \text{ br}$
 $\Rightarrow A(AED) = ?$

- A) 4 B) 6 C) 8 D) 12 E) 15

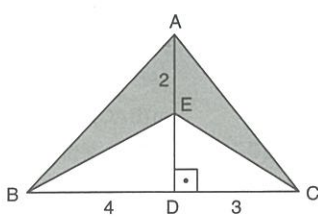
11.



$[AE] \perp [BC]$
 $|AD| = 6 \text{ br}$
 $|BC| = 10 \text{ br}$
 $\Rightarrow A(ABDC) = ?$

- A) 120 B) 60 C) 45 D) 30 E) 15

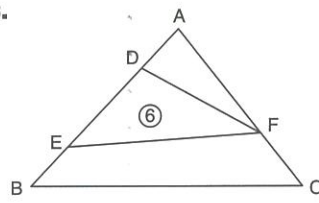
12.



$[AD] \perp [BC]$
 $|AE| = 2 \text{ br}$
 $|BD| = 4 \text{ br}$
 $|DC| = 3 \text{ br}$
 $\Rightarrow A(ABEC) = ?$

- A) 3 B) 4 C) 6 D) 7 E) 14

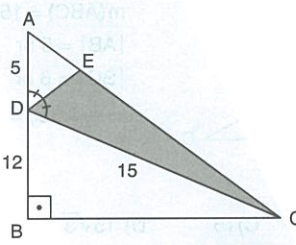
13.



$A(DFE) = 6 \text{ br}^2$
 $2|AD| = |DE| = 2|EB|$
 $3|AF| = 2|FC|$
 $\Rightarrow A(ABC) = ?$

- A) 8 B) 12 C) 15 D) 20 E) 30

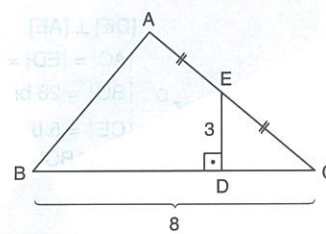
14.



$[AB] \perp [BC]$
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $|AD| = 5 \text{ br}$
 $|DC| = 15 \text{ br}$
 $|BD| = 12 \text{ br}$
 $\Rightarrow A(EDC) = ?$

- A) 5 B) $\frac{45}{8}$ C) $\frac{135}{8}$ D) $\frac{45}{2}$ E) 45

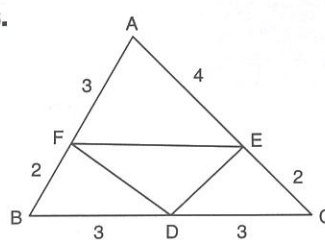
15.



$[ED] \perp [BC]$
 $|AE| = |EC|$
 $|ED| = 3 \text{ br}$
 $|BC| = 8 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 60 B) 48 C) 36 D) 24 E) 12

16.

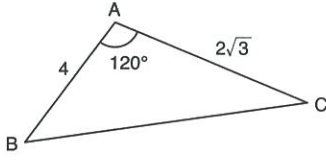


$|AF| = |BD| = |DC| = 3 \text{ br}$
 $|FB| = |EC| = 2 \text{ br}$
 $|AE| = 4 \text{ br}$
 $\Rightarrow \frac{A(FED)}{A(ABC)} = ?$

- A) $\frac{1}{5}$ B) $\frac{2}{7}$ C) $\frac{7}{30}$ D) $\frac{7}{15}$ E) $\frac{1}{2}$



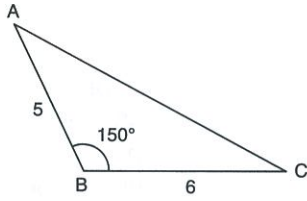
1.



$$\begin{aligned} m(\widehat{BAC}) &= 120^\circ \\ |AB| &= 4 \text{ br} \\ |AC| &= 2\sqrt{3} \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 15 B) $8\sqrt{3}$ C) 12 D) $4\sqrt{3}$ E) 6

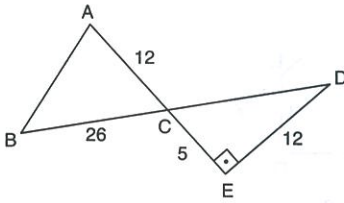
2.



$$\begin{aligned} m(\widehat{ABC}) &= 150^\circ \\ |AB| &= 5 \text{ br} \\ |BC| &= 6 \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) $\frac{15}{2}$ B) $\frac{15\sqrt{3}}{2}$ C) 15 D) $15\sqrt{3}$ E) 30

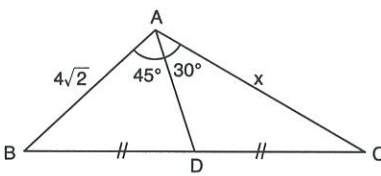
3.



$$\begin{aligned} [DE] &\perp [AE] \\ |AC| &= |ED| = 12 \text{ br} \\ |BC| &= 26 \text{ br} \\ |CE| &= 5 \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 144 B) 81 C) 72 D) 69 E) 60

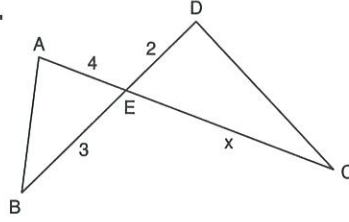
4.



$$\begin{aligned} |BD| &= |DC| \\ m(\widehat{BAD}) &= 45^\circ \\ m(\widehat{DAC}) &= 30^\circ \\ |AB| &= 4\sqrt{2} \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) 6 D) 8 E) 12

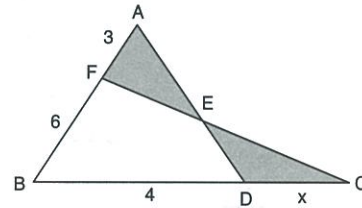
5.



$$\begin{aligned} A(ABE) &= A(ECD) \\ |ED| &= 2 \text{ br} \\ |AE| &= 4 \text{ br} \\ |BE| &= 3 \text{ br} \\ \Rightarrow |EC| &= x = ? \end{aligned}$$

- A) 12 B) 8 C) 6 D) 3 E) $\frac{3}{2}$

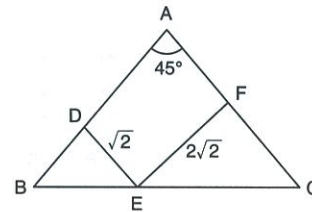
6.



$$\begin{aligned} A(AFE) &= A(EDC) \\ |AF| &= 3 \text{ br} \\ |BF| &= 6 \text{ br} \\ |BD| &= 4 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 6

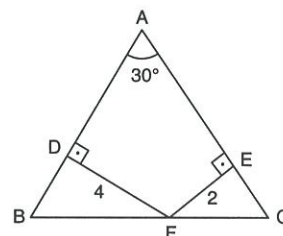
7.



$$\begin{aligned} AFED &\text{ paralelkenar} \\ AFED &\text{ paralelogram} \\ |AB| &= |AC| \\ m(\widehat{BAC}) &= 45^\circ \\ |DE| &= \sqrt{2} \text{ br} \\ |FE| &= 2\sqrt{2} \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 4 B) $4\sqrt{2}$ C) $\frac{9\sqrt{2}}{2}$ D) $6\sqrt{2}$ E) $9\sqrt{2}$

8.

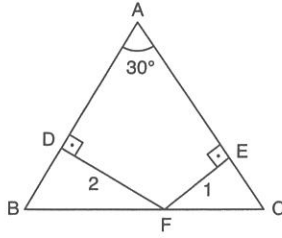


$$\begin{aligned} [FD] &\perp [AB] \\ [FE] &\perp [AC] \\ |AB| &= |AC| \\ m(\widehat{BAC}) &= 30^\circ \\ |FD| &= 2 \text{ br} \\ |FE| &= 4 \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 9 B) 12 C) $9\sqrt{2}$ D) 18 E) 36



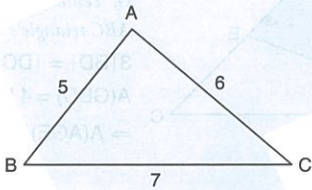
9.



$m(\widehat{BAC}) = 30^\circ$
 $|AB| = |AC|$
 $[FE] \perp [AC]$
 $[FD] \perp [AB]$
 $|DF| = 2 \text{ br}$
 $|EF| = 1 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $36\sqrt{3}$ B) 36 C) 27 D) $18\sqrt{3}$ E) 9

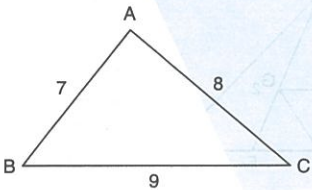
10.



$|AB| = 5 \text{ br}$
 $|AC| = 6 \text{ br}$
 $|BC| = 7 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $2\sqrt{6}$ B) $3\sqrt{6}$ C) $6\sqrt{6}$ D) $12\sqrt{3}$ E) $24\sqrt{3}$

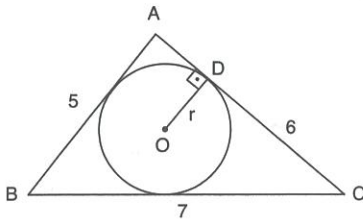
11.



$|AB| = 7 \text{ br}$
 $|AC| = 8 \text{ br}$
 $|BC| = 9 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $6\sqrt{5}$ B) $6\sqrt{7}$ C) $9\sqrt{5}$ D) $12\sqrt{7}$ E) $12\sqrt{5}$

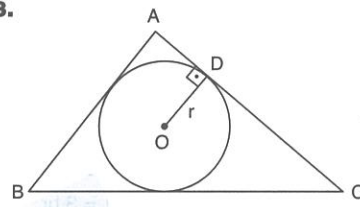
12.



$[OD] \perp [AC]$
 $|AB| = 5 \text{ br}$
 $|AC| = 6 \text{ br}$
 $|BC| = 7 \text{ br}$
 $\Rightarrow |OD| = r = ?$

- A) $\sqrt{6}$ B) $2\sqrt{3}$ C) $\frac{2\sqrt{6}}{3}$ D) $2\sqrt{6}$ E) $3\sqrt{6}$

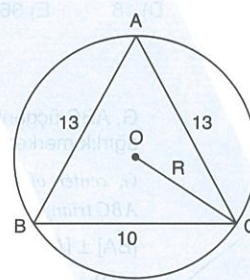
13.



$[OD] \perp [AC]$
 $|AB| = |AC| = 10 \text{ br}$
 $|BC| = 12 \text{ br}$
 $\Rightarrow |OD| = r = ?$

- A) 5 B) 4 C) 3 D) 2 E) 1

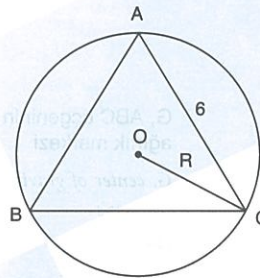
14.



$|AB| = |AC| = 13 \text{ br}$
 $|BC| = 10 \text{ br}$
 $\Rightarrow |OC| = R = ?$

- A) $\frac{5}{72}$ B) $\frac{24}{169}$ C) $\frac{169}{24}$ D) $\frac{72}{5}$ E) 12

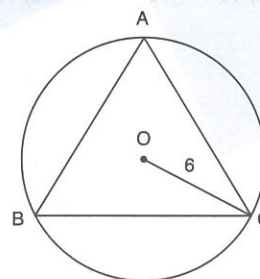
15.



ABC eşkenar üçgen
 ABC equilateral triangle
 $|AC| = 6 \text{ br}$
 $\Rightarrow |OC| = R = ?$

- A) $\sqrt{3}$ B) 2 C) 3 D) $2\sqrt{3}$ E) $4\sqrt{3}$

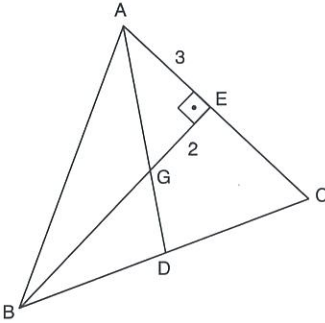
16.

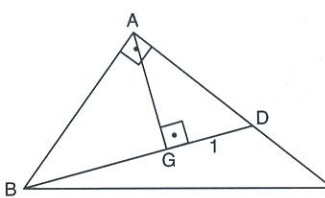


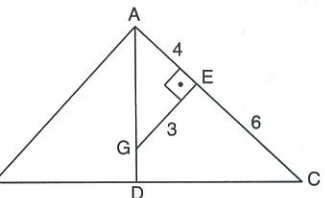
ABC eşkenar üçgen
 ABC equilateral triangle
 $|OC| = 6 \text{ br}$
 $\Rightarrow A(ABC) = ?$

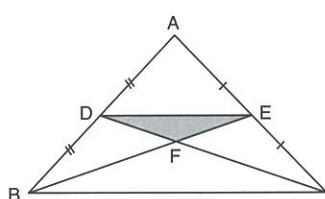
- A) 18 B) $18\sqrt{3}$ C) 27 D) $27\sqrt{3}$ E) 36



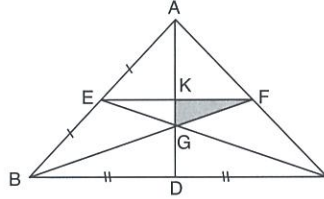
1.  G , ABC üçgeninin ağırlık merkezi
 G , center of gravity ABC triangle's
 $[BE] \perp [AC]$
 $|GE| = 2 \text{ br}$
 $|AE| = 3 \text{ br}$
 $\Rightarrow A(ABC) = ?$
- A) 6 B) 8 C) 12 D) 18 E) 36

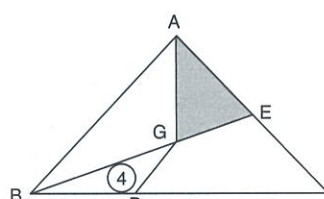
2.  G , ABC üçgeninin ağırlık merkezi
 G , center of gravity ABC triangle's
 $[BA] \perp [AC]$
 $[AG] \perp [BD]$
 $|GD| = 1 \text{ br}$
 $\Rightarrow A(ABC) = ?$
- A) $\sqrt{2}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $6\sqrt{2}$ E) $12\sqrt{2}$

3.  G , ABC üçgeninin ağırlık merkezi
 G , center of gravity ABC triangle's
 $[AC] \perp [GE]$
 $|AE| = 4 \text{ br}$
 $|GE| = 3 \text{ br}$
 $|EC| = 6 \text{ br}$
 $\Rightarrow A(ABC) = ?$
- A) 15 B) 30 C) 45 D) 60 E) 90

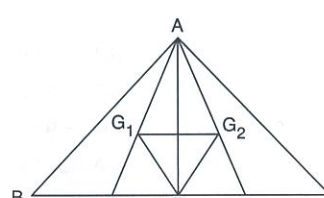
4.  $|AD| = |DB|$
 $|AE| = |EC|$
 $A(DEF) = 4 \text{ br}^2$
 $\Rightarrow A(ABC) = ?$
- A) 16 B) 24 C) 36 D) 48 E) 96

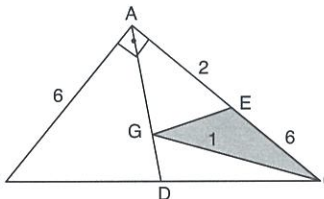
PUZA YAYINLARI

5.  $|AE| = |EB|$
 $|BD| = |DC|$
 $A(ABC) = 96 \text{ br}^2$
 $\Rightarrow A(KFG) = ?$
- A) 4 B) $\frac{16}{3}$ C) 12 D) 16 E) 18

6.  G , ABC üçgeninin ağırlık merkezi
 G , center of gravity ABC triangle's
 $3|BD| = |DC|$
 $A(GBD) = 4 \text{ br}^2$
 $\Rightarrow A(AGE) = ?$
- A) 2 B) 4 C) 6 D) 8 E) 12

PUZA YAYINLARI

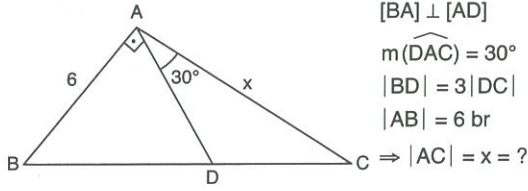
7.  G_1 , ABD üçgeninin ağırlık merkezi
 G_1 , center of gravity ABD triangle's
 G_2 , ADC üçgeninin ağırlık merkezi
 G_2 , center of gravity ADC triangle's
 $A(G_1DG_2) = 6 \text{ br}^2$
 $\Rightarrow A(ABC) = ?$
- A) 54 B) 48 C) 36 D) 27 E) 18

8.  G , ABC üçgeninin ağırlık merkezi
 G , center of gravity ABC triangle's
 $[BA] \perp [AC]$
 $|AB| = |EC| = 6 \text{ br}$
 $|AE| = 2 \text{ br}$
 $\Rightarrow A(EGC) = ?$
- A) 2 B) 4 C) 6 D) 8 E) 12

PUZA YAYINLARI

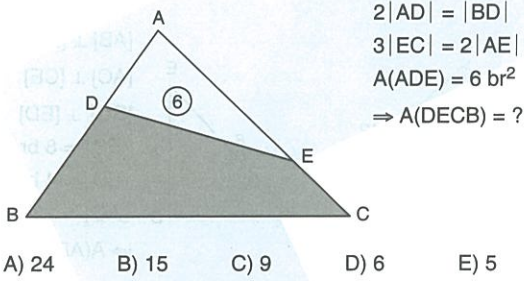


9.



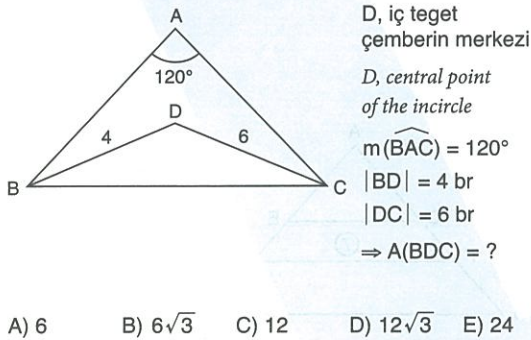
- A) 2 B) 4 C) $4\sqrt{2}$ D) 6 E) 12

10.



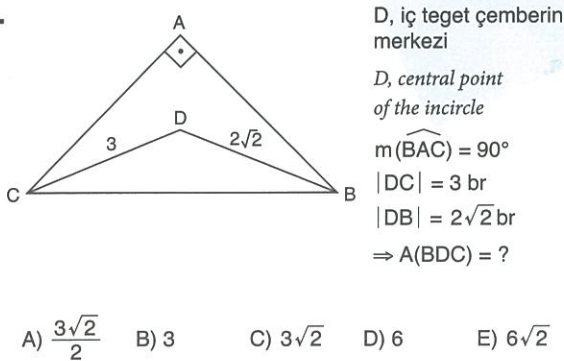
- A) 24 B) 15 C) 9 D) 6 E) 5

11.



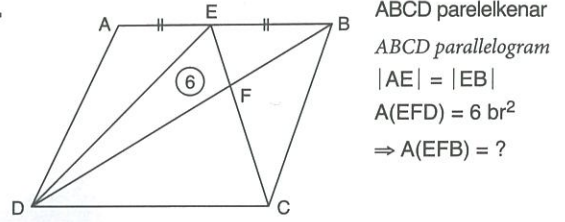
- A) 6 B) $6\sqrt{3}$ C) 12 D) $12\sqrt{3}$ E) 24

12.



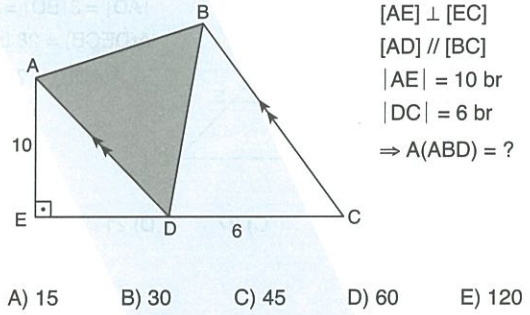
- A) $\frac{3\sqrt{2}}{2}$ B) 3 C) $3\sqrt{2}$ D) 6 E) $6\sqrt{2}$

13.



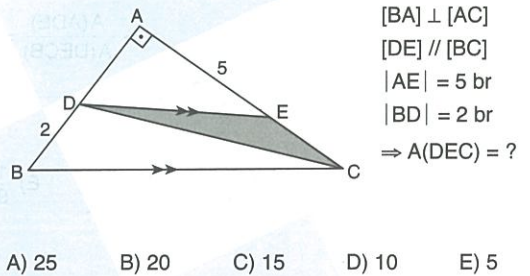
- A) 3 B) 6 C) 9 D) 12 E) 15

14.



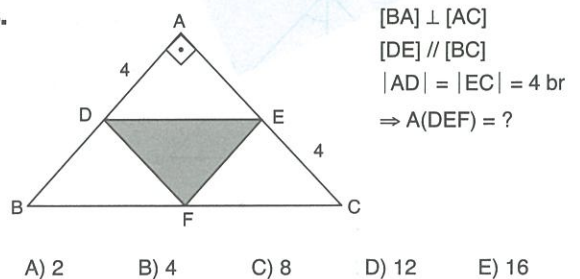
- A) 15 B) 30 C) 45 D) 60 E) 120

15.



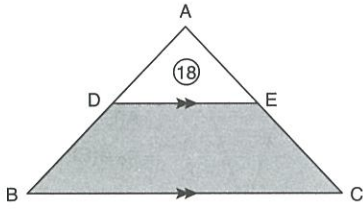
- A) 25 B) 20 C) 15 D) 10 E) 5

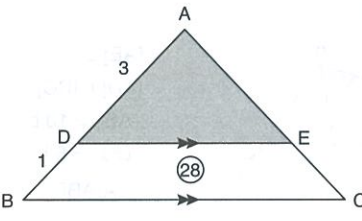
16.

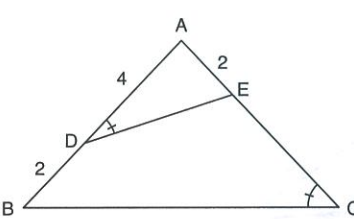


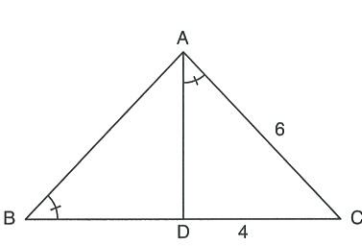
- A) 2 B) 4 C) 8 D) 12 E) 16

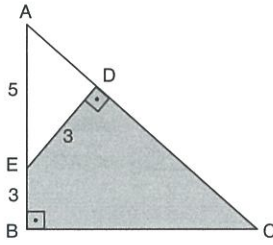


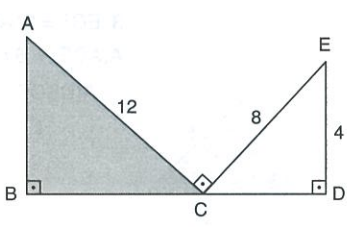
1.  $[DE] \parallel [BC]$
 $5|DE| = 3|BC|$
 $A(ADE) = 18 \text{ br}^2$
 $\Rightarrow A(DECB) = ?$
- A) 9 B) 12 C) 16 D) 30 E) 32

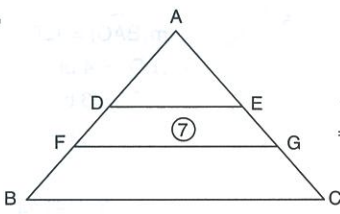
2.  $[DE] \parallel [BC]$
 $|AD| = 3|BD| = 3 \text{ br}$
 $A(DECB) = 28 \text{ br}^2$
 $\Rightarrow A(ADE) = ?$
- A) 45 B) 36 C) 27 D) 21 E) 9

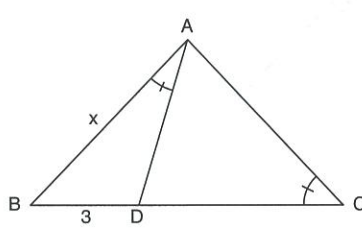
3.  $m(\widehat{ADE}) = m(\widehat{ACB})$
 $|AE| = |BD| = 2 \text{ br}$
 $|AD| = 4 \text{ br}$
 $\Rightarrow \frac{A(ADE)}{A(DECB)} = ?$
- A) 1 B) $\frac{1}{2}$ C) $\frac{1}{3}$ D) $\frac{1}{8}$ E) $\frac{1}{9}$

4.  $m(\widehat{DAC}) = m(\widehat{ABC})$
 $|AC| = 6 \text{ br}$
 $|DC| = 4 \text{ br}$
 $\Rightarrow \frac{A(ADC)}{A(ABD)} = ?$
- A) $\frac{4}{9}$ B) $\frac{2}{3}$ C) $\frac{4}{5}$ D) $\frac{3}{2}$ E) 2

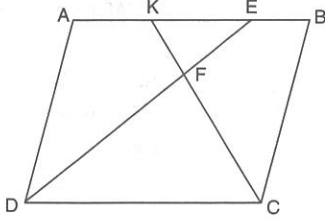
5.  $[AB] \perp [BC]$
 $[ED] \perp [AC]$
 $|ED| = |EB| = 3 \text{ br}$
 $|AE| = 5 \text{ br}$
 $\Rightarrow A(EDCB) = ?$
- A) 42 B) 36 C) 27 D) 18 E) 9

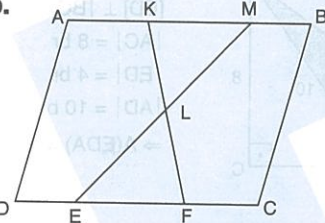
6.  $[AB] \perp [BD]$
 $[AC] \perp [CE]$
 $[BD] \perp [ED]$
 $|EC| = 8 \text{ br}$
 $|ED| = 4 \text{ br}$
 $|AC| = 12 \text{ br}$
 $\Rightarrow A(ABC) = ?$
- A) $36\sqrt{3}$ B) 36 C) $18\sqrt{3}$ D) 18 E) 9

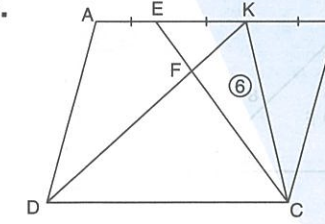
7.  $[DE] \parallel [FG] \parallel [BC]$
 $2|AD| = 6|FD| = 3|FB|$
 $A(DEGF) = 7 \text{ br}^2$
 $\Rightarrow A(ADE) + A(FGCB) = ?$
- A) 40 B) 31 C) 30 D) 29 E) 20

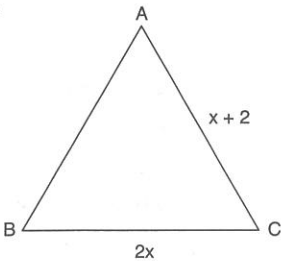
8.  $m(\widehat{BAD}) = m(\widehat{ACB})$
 $8 \cdot A(ABD) = A(ADC)$
 $|BD| = 3 \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) 1 B) 6 C) 9 D) 12 E) 24



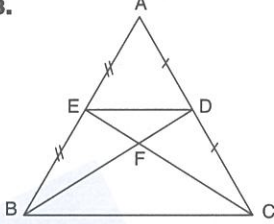
9.  ABCD paralelkenar
ABCD paralelogram
 $2|AK| = 2|EB| = |KE|$
 $\Rightarrow \frac{A(KEF)}{A(DFC)} = ?$
- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) 1 D) 2 E) 4

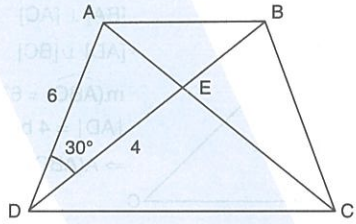
10.  ABCD paralelkenar
ABCD paralelogram
 $6|BM| = 2|KM| = 3|AK|$
 $2|DE| = 2|FC| = |EF|$
 $\Rightarrow \frac{A(KML)}{A(EFL)} = ?$
- A) $\frac{2}{9}$ B) $\frac{1}{4}$ C) 1 D) $\frac{3}{2}$ E) 4

11.  ABCD paralelkenar
ABCD paralelogram
 $|AE| = |EK| = |KB|$
 $A(FKC) = 6 \text{ br}$
 $\Rightarrow A(ABCD) = ?$
- A) 18 B) 24 C) 32 D) 48 E) 60

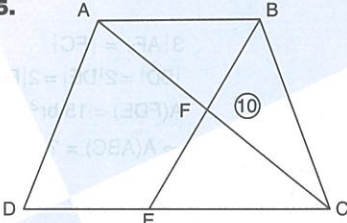
12.  ABC eşkenar üçgen
ABC equilateral triangle
 $|AC| = x + 2$
 $|BC| = 2x$
 $\Rightarrow A(ABC) = ?$
- A) $2\sqrt{3}$ B) $4\sqrt{3}$ C) $16\sqrt{3}$ D) 16 E) 24

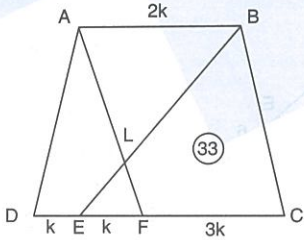
PUZA YAYINLARI

13.  $|AD| = |DC|$
 $|AE| = |EB|$
 $\Rightarrow \frac{A(EDF)}{A(ABC)} = ?$
- A) $\frac{1}{8}$ B) $\frac{1}{4}$ C) $\frac{2}{21}$ D) $\frac{1}{12}$ E) $\frac{1}{24}$

14.  $[AB] \parallel [DC]$
 $2|AB| = |DC|$
 $m(\widehat{ADB}) = 30^\circ$
 $|AD| = 6 \text{ br}$
 $|DE| = 4 \text{ br}$
 $\Rightarrow A(ABCD) = ?$
- A) $9\sqrt{3}$ B) 18 C) $18\sqrt{3}$ D) 27 E) $27\sqrt{3}$

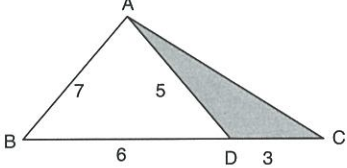
PUZA YAYINLARI

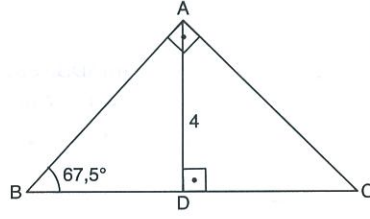
15.  $[AB] \parallel [DC]$
 $6|AB| = 3|EC| = 2|DE|$
 $A(BFC) = 10 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$
- A) 120 B) 90 C) 75 D) 45 E) 30

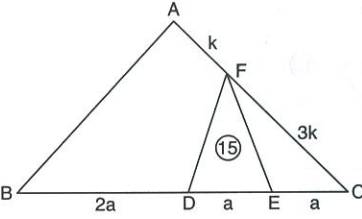
16.  $[AB] \parallel [DC]$
 $|DE| = |EF| = k$
 $|AB| = 2k$
 $|EF| = 3k$
 $A(LBCF) = 33 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$
- A) 99 B) 90 C) 77 D) 63 E) 54

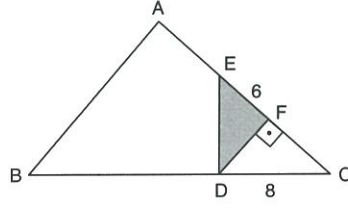
PUZA YAYINLARI

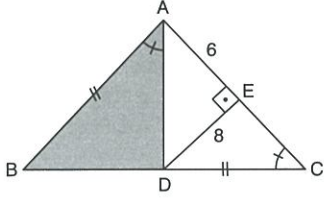


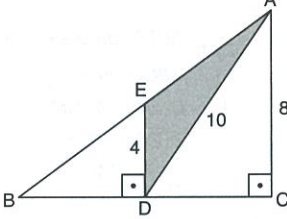
1.  $|AB| = 7 \text{ br}$
 $|AD| = 5 \text{ br}$
 $|BD| = 6 \text{ br}$
 $|DC| = 3 \text{ br}$
 $\Rightarrow A(ADC) = ?$
- A) $12\sqrt{6}$ B) $15\sqrt{2}$ C) $6\sqrt{6}$ D) $4\sqrt{6}$ E) $3\sqrt{6}$

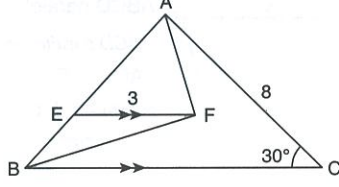
2.  $[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $m(\widehat{ABC}) = 67,5^\circ$
 $|AD| = 4 \text{ br}$
 $\Rightarrow A(ABC) = ?$
- A) $4\sqrt{2}$ B) 6 C) $8\sqrt{2}$ D) 16 E) $16\sqrt{2}$

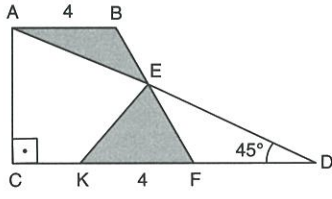
3.  $3|AF| = |FC|$
 $|BD| = 2|DE| = 2|EC|$
 $A(FDE) = 15 \text{ br}^2$
 $\Rightarrow A(ABC) = ?$
- A) 45 B) 60 C) 65 D) 75 E) 80

4.  ABC eşkenar üçgen
 $ABC \text{ equilateral triangle}$
 $|EF| = 6 \text{ br}$
 $|DC| = 8 \text{ br}$
 $[DF] \perp [AC]$
 $\Rightarrow A(EFD) = ?$
- A) 12 B) $12\sqrt{3}$ C) 24 D) $24\sqrt{3}$ E) 48

5.  $m(\widehat{BAD}) = m(\widehat{ACB})$
 $[DE] \perp [AC]$
 $|AB| = |DC|$
 $|AE| = 6 \text{ br}$
 $|DE| = 8 \text{ br}$
 $\Rightarrow A(ABD) = ?$
- A) 20 B) 24 C) 30 D) 40 E) 48

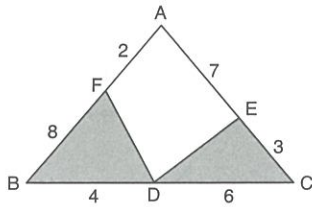
6.  $[AC] \perp [BC]$
 $[ED] \perp [BC]$
 $|AC| = 8 \text{ br}$
 $|ED| = 4 \text{ br}$
 $|AD| = 10 \text{ br}$
 $\Rightarrow A(EDA) = ?$
- A) 30 B) 24 C) 18 D) 12 E) 6

7.  $[EF] \parallel [BC]$
 $m(\widehat{ACB}) = 30^\circ$
 $|AC| = 8 \text{ br}$
 $|EF| = 3 \text{ br}$
 $\Rightarrow A(ABF) = ?$
- A) $24\sqrt{3}$ B) $12\sqrt{3}$ C) 12 D) $6\sqrt{3}$ E) 6

8.  $[AB] \parallel [CD]$
 $[AC] \perp [CD]$
 $m(\widehat{ADC}) = 45^\circ$
 $|AB| = |KF| = 4 \text{ br}$
 $|AD| = 10\sqrt{2} \text{ br}$
 $\Rightarrow A(ABE) + A(EKF) = ?$
- A) 60 B) 50 C) 40 D) 30 E) 20



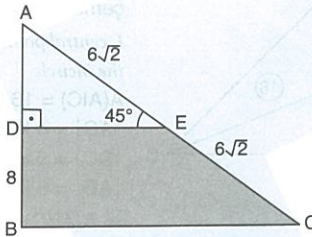
9.



$$\begin{aligned} |BF| &= 8 \text{ br} \\ |AF| &= 2 \text{ br} \\ |AE| &= 7 \text{ br} \\ |EC| &= 3 \text{ br} \\ |DC| &= 6 \text{ br} \\ |BD| &= 4 \text{ br} \\ \Rightarrow A(BFD) + A(ECD) &= ? \end{aligned}$$

- A) $25\sqrt{3}$ B) $\frac{29\sqrt{3}}{2}$ C) $\frac{25\sqrt{3}}{2}$ D) $8\sqrt{3}$ E) $\frac{9\sqrt{3}}{2}$

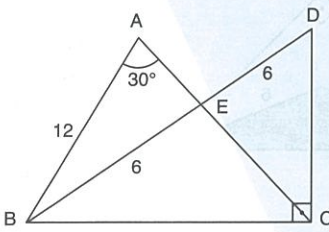
10.



$$\begin{aligned} [ED] &\perp [AB] \\ |AE| &= |EC| = 6\sqrt{2} \text{ br} \\ |BD| &= 8 \text{ br} \\ m(\widehat{AED}) &= 45^\circ \\ \Rightarrow A(DEC) &= ? \end{aligned}$$

- A) 66 B) 56 C) 54 D) 50 E) 48

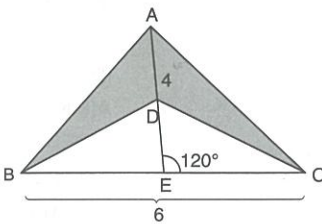
11.



$$\begin{aligned} [DC] &\perp [BC] \\ m(\widehat{BAC}) &= 30^\circ \\ |DE| &= |EB| = 6 \text{ br} \\ |AB| &= 12 \text{ br} \\ \Rightarrow A(BDC) &= ? \end{aligned}$$

- A) 36 B) 27 C) $18\sqrt{3}$ D) 19 E) 9

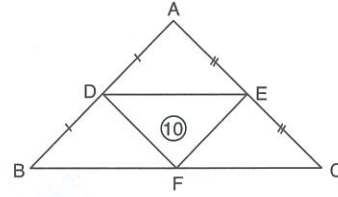
12.



$$\begin{aligned} m(\widehat{AEC}) &= 120^\circ \\ |AD| &= 4 \text{ br} \\ |BC| &= 6 \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 6 B) $4\sqrt{3}$ C) $6\sqrt{3}$ D) 12 E) $12\sqrt{3}$

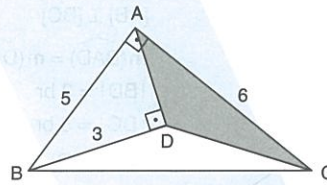
13.



$$\begin{aligned} |AD| &= |DB| \\ |AE| &= |EC| \\ A(DEF) &= 10 \text{ br}^2 \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 20 B) 30 C) 40 D) 60 E) 80

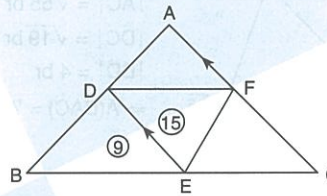
14.



$$\begin{aligned} [BA] &\perp [AC] \\ [AD] &\perp [DB] \\ |AB| &= 5 \text{ br} \\ |AC| &= 6 \text{ br} \\ |BD| &= 3 \text{ br} \\ \Rightarrow A(ADC) &= ? \end{aligned}$$

- A) $\frac{24}{5}$ B) $\frac{48}{5}$ C) 12 D) 15 E) 18

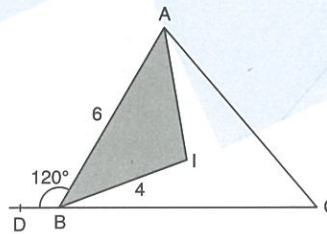
15.



$$\begin{aligned} [DE] &\parallel [AC] \\ A(DEF) &= 15 \text{ br}^2 \\ A(BDE) &= 9 \text{ br}^2 \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) 40 B) 48 C) 54 D) 55 E) 64

16.

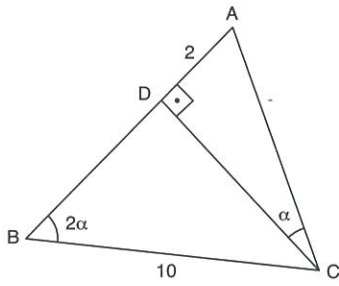


$$\begin{aligned} I &\text{ iç teget çemberin merkezi} \\ I, &\text{ central point of the incircle} \\ m(\widehat{ABD}) &= 120^\circ \\ |AB| &= 6 \text{ br} \\ |BI| &= 4 \text{ br} \\ \Rightarrow A(AIB) &= ? \end{aligned}$$

- A) $6\sqrt{3}$ B) $6\sqrt{2}$ C) $4\sqrt{3}$ D) 6 E) 4



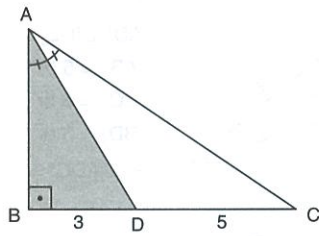
1.



$[CD] \perp [AB]$
 $2m(\widehat{ACD}) = m(\widehat{ABC})$
 $|AD| = 2 \text{ br}$
 $|BC| = 10 \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) 10 B) 20 C) 30 D) 40 E) 60

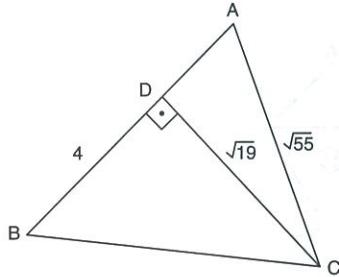
2.



$[AB] \perp [BC]$
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $|BD| = 3 \text{ br}$
 $|DC| = 5 \text{ br}$
 $\Rightarrow A(BAD) = ?$

- A) $\frac{15}{2}$ B) 9 C) 12 D) 24 E) 48

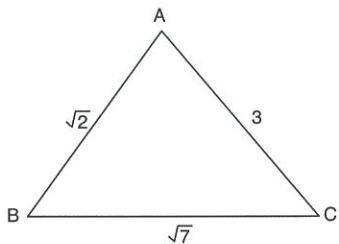
3.



$[CD] \perp [AB]$
 $|AC| = \sqrt{55} \text{ br}$
 $|DC| = \sqrt{19} \text{ br}$
 $|BD| = 4 \text{ br}$
 $\Rightarrow A(BAC) = ?$

- A) $\frac{5}{3}\sqrt{19}$ B) $2\sqrt{19}$ C) $5\sqrt{19}$ D) $10\sqrt{19}$ E) 138

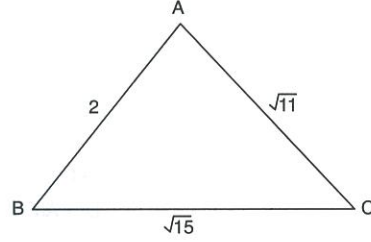
4.



$|AB| = \sqrt{2} \text{ br}$
 $|AC| = 3 \text{ br}$
 $|BC| = \sqrt{7} \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $\frac{3\sqrt{2}}{2}$ B) $\frac{3\sqrt{7}}{2}$ C) $\frac{\sqrt{14}}{2}$ D) $3\sqrt{7}$ E) $7\sqrt{2}$

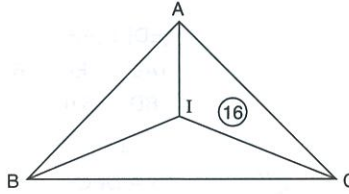
5.



$|AC| = \sqrt{11} \text{ br}$
 $|AB| = 2 \text{ br}$
 $|BC| = \sqrt{15} \text{ br}$
 $\Rightarrow A(ABC) = ?$

- A) $2\sqrt{15}$ B) $2\sqrt{11}$ C) $\frac{\sqrt{165}}{2}$ D) $\sqrt{15}$ E) $\sqrt{11}$

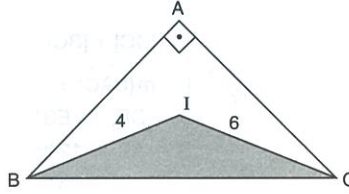
6.



I iç teget çemberin merkezi
 I, central point of the incircle
 $A(AIC) = 16 \text{ br}^2$
 $|AC| = 4 \text{ k}$
 $|BC| = 5 \text{ k}$
 $|AB| = 6 \text{ k}$
 $\Rightarrow A(ABC) = ?$

- A) 32 B) 48 C) 60 D) 64 E) 76

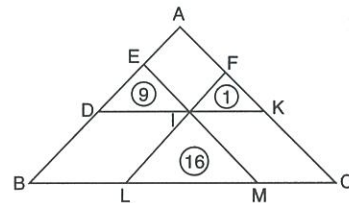
7.



I iç teget çemberin merkezi
 I, central point of the incircle
 $[BA] \perp [AC]$
 $|BI| = 4 \text{ br}$
 $|IC| = 6 \text{ br}$
 $\Rightarrow A(BIC) = ?$

- A) $12\sqrt{3}$ B) 12 C) $6\sqrt{3}$ D) $6\sqrt{2}$ E) 6

8.

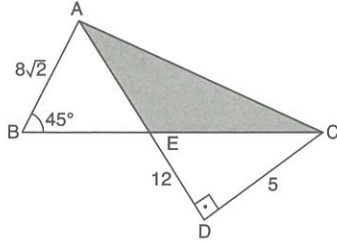


$[FL] \parallel [AB]$
 $[EM] \parallel [AC]$
 $[DK] \parallel [BC]$
 $A(FIK) = 1 \text{ br}^2$
 $A(DEI) = 9 \text{ br}^2$
 $A(ILM) = 16 \text{ br}^2$
 $\Rightarrow A(ABC) = ?$

- A) 36 B) 49 C) 64 D) 81 E) 100



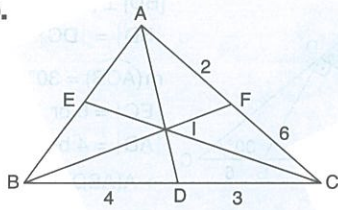
9.



$[AD] \perp [DC]$
 $m(\widehat{ABC}) = 45^\circ$
 $|AB| = 8\sqrt{2}$ br
 $|DC| = 5$ br
 $|ED| = 12$ br
 $\Rightarrow A(AEC) = ?$

- A) $20\sqrt{2}$ B) 42 C) $42\sqrt{2}$ D) 52 E) $52\sqrt{2}$

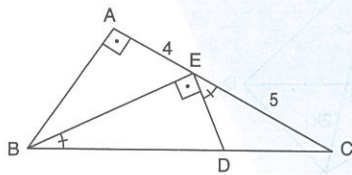
10.



$2|AF| = |BD| = 4$ br
 $2|DC| = |FC| = 6$ br
 $\Rightarrow \frac{A(EAF)}{A(EBF)} = ?$

- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) 1 D) 2 E) 4

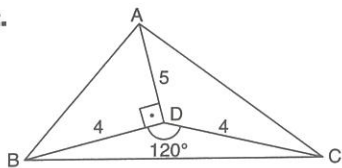
11.



$[BA] \perp [AC]$
 $[BE] \perp [ED]$
 $m(\widehat{EBC}) = m(\widehat{DEC})$
 $|AE| = 4$ br
 $|EC| = 5$ br
 $\Rightarrow A(ABC) = ?$

- A) 10 B) 20 C) 40 D) 48 E) 54

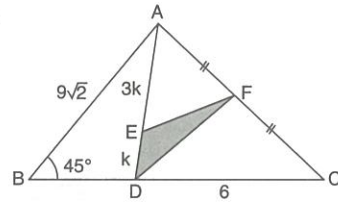
12.



$[AD] \perp [BD]$
 $m(\widehat{BDC}) = 120^\circ$
 $|BD| = |DC| = 4$ br
 $|AD| = 5$ br
 $\Rightarrow A(ABC) = ?$

- A) $20 + 4\sqrt{3}$ B) $15 + 4\sqrt{3}$ C) $10 + 9\sqrt{3}$
 D) $10 + 6\sqrt{3}$ E) 23

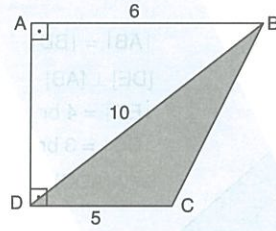
13.



$|AF| = |FC|$
 $|AE| = 3|ED|$
 $m(\widehat{ABC}) = 45^\circ$
 $|AB| = 9\sqrt{2}$ br
 $|DC| = 6$ br
 $\Rightarrow A(EFD) = ?$

- A) 3 B) $\frac{27}{8}$ C) $\frac{27}{2}$ D) 18 E) 27

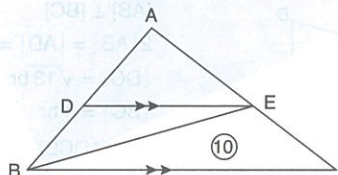
14.



$[BA] \perp [AD]$
 $[AD] \perp [DC]$
 $|AB| = 6$ br
 $2|DC| = |DB| = 10$ br
 $\Rightarrow A(BDC) = ?$

- A) 40 B) 30 C) 25 D) 20 E) 10

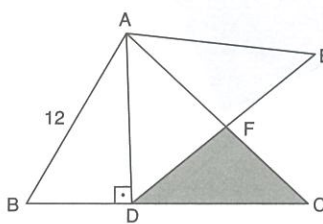
15.



$[DE] \parallel [BC]$
 $|AD| = 2|BD|$
 $\Rightarrow A(ADE) = ?$

- A) 5 B) $\frac{20}{3}$ C) 10 D) 12 E) $\frac{40}{3}$

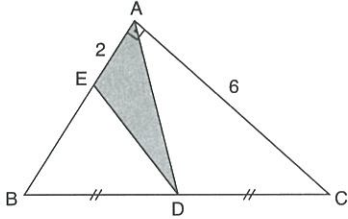
16.

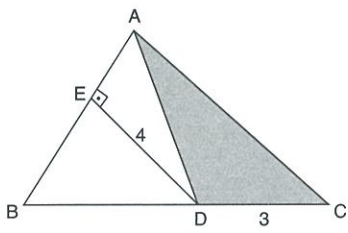


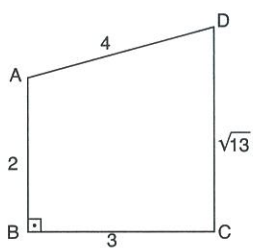
ABC, ADE eşkenar üçgenler
 ABC and ADE are equilateral triangles
 $[AD] \perp [BC]$
 $|AB| = 12$ br
 $\Rightarrow A(DFC) = ?$

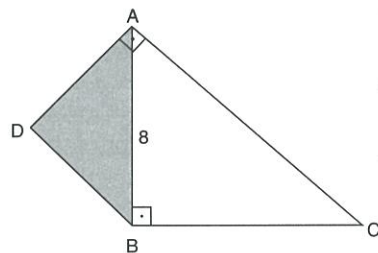
- A) $18\sqrt{3}$ B) 18 C) $9\sqrt{3}$ D) 9 E) $\frac{9\sqrt{3}}{2}$

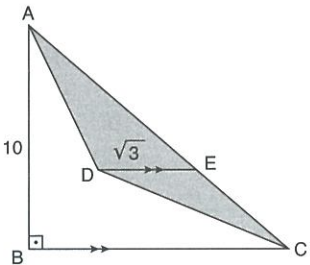


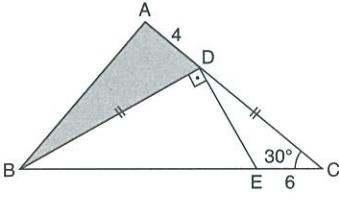
1.  $[BA] \perp [AC]$
 $|BD| = |DC|$
 $|AE| = 2 \text{ br}$
 $|AC| = 6 \text{ br}$
 $\Rightarrow A(AED) = ?$
- A) 3 B) 6 C) 9 D) 12 E) 18

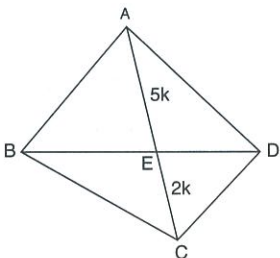
2.  $|AB| = |BD|$
 $[DE] \perp [AB]$
 $|ED| = 4 \text{ br}$
 $|DC| = 3 \text{ br}$
 $\Rightarrow A(ADC) = ?$
- A) 3 B) $3\sqrt{3}$ C) $4\sqrt{3}$ D) 6 E) $6\sqrt{3}$

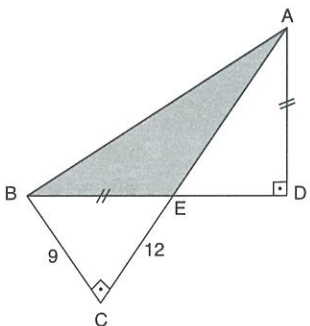
3.  $[AB] \perp [BC]$
 $2|AB| = |AD| = 4 \text{ br}$
 $|DC| = \sqrt{13} \text{ br}$
 $|BC| = 3 \text{ br}$
 $\Rightarrow A(ADCB) = ?$
- A) $\frac{9}{2}$ B) 9 C) $4 + 2\sqrt{3}$
D) $8\sqrt{3}$ E) $16\sqrt{3}$

4.  $[AD] \perp [AC]$
 $[AB] \perp [BC]$
 $3|AD| = |AC|$
 $|AB| = 8 \text{ br}$
 $\Rightarrow A(ADB) = ?$
- A) $\frac{32}{3}$ B) $\frac{64}{3}$ C) 24 D) 32 E) 64

5.  $[AB] \perp [BC]$
 $[DE] \parallel [BC]$
 $|AB| = 10 \text{ br}$
 $|DE| = \sqrt{3} \text{ br}$
 $\Rightarrow A(ADC) = ?$
- A) 30 B) $20\sqrt{3}$ C) 15 D) $10\sqrt{3}$ E) $5\sqrt{3}$

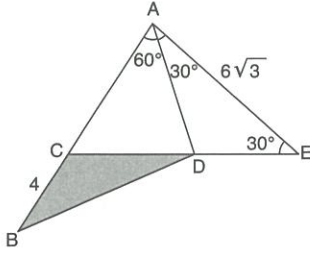
6.  $[BD] \perp [DE]$
 $|BD| = |DC|$
 $m(\widehat{ACB}) = 30^\circ$
 $|EC| = 6 \text{ br}$
 $|AD| = 4 \text{ br}$
 $\Rightarrow A(ABD) = ?$
- A) 36 B) $12\sqrt{3}$ C) 18 D) 9 E) $6\sqrt{3}$

7.  $2|AE| = 5|EC|$
 $\Rightarrow \frac{A(ABD)}{A(ABCD)} = ?$
- A) $\frac{5}{2}$ B) $\frac{3}{2}$ C) $\frac{5}{7}$ D) $\frac{3}{5}$ E) $\frac{2}{5}$

8.  $[AD] \perp [BD]$
 $[BC] \perp [CA]$
 $|BE| = |AD|$
 $|BC| = 9 \text{ br}$
 $|CE| = 12 \text{ br}$
 $\Rightarrow A(ABE) = ?$
- A) $\frac{225}{2}$ B) $\frac{135}{2}$ C) $\frac{125}{2}$ D) 54 E) 48



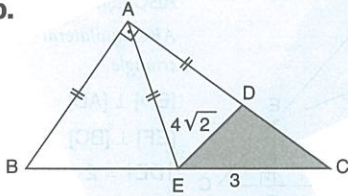
9.



$$\begin{aligned} m(\widehat{DAE}) &= 30^\circ \\ m(\widehat{CEA}) &= 30^\circ \\ m(\widehat{BAD}) &= 60^\circ \\ |BC| &= 4 \text{ br} \\ |AE| &= 6\sqrt{3} \text{ br} \\ \Rightarrow A(BCD) &= ? \end{aligned}$$

- A) $6\sqrt{3}$ B) 9 C) 12 D) $12\sqrt{3}$ E) 24

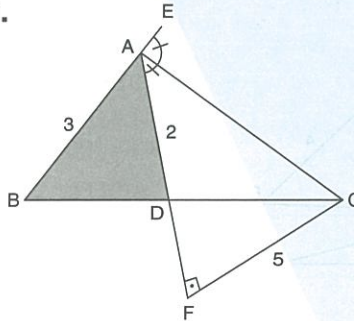
10.



$$\begin{aligned} [BA] &\perp [AC] \\ |AB| &= |AE| = |AD| \\ |ED| &= 4\sqrt{2} \text{ br} \\ |EC| &= 3 \text{ br} \\ \Rightarrow A(EDC) &= ? \end{aligned}$$

- A) $12\sqrt{2}$ B) 12 C) $6\sqrt{2}$ D) 6 E) $3\sqrt{2}$

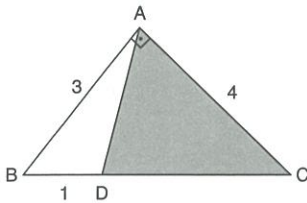
11.



$$\begin{aligned} [AF] &\perp [FC] \\ m(\widehat{EAC}) &= m(\widehat{FAC}) \\ |AD| &= 2 \text{ br} \\ |AB| &= 3 \text{ br} \\ |FC| &= 5 \text{ br} \\ \Rightarrow A(ABD) &= ? \end{aligned}$$

- A) $\frac{5}{4}$ B) $\frac{5}{2}$ C) 5 D) $\frac{15}{2}$ E) 10

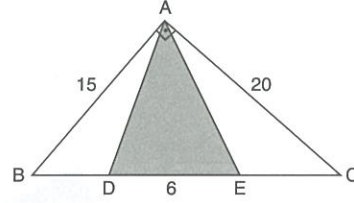
12.



$$\begin{aligned} [BA] &\perp [AC] \\ |AB| &= 3 \text{ br} \\ |AC| &= 4 \text{ br} \\ |BD| &= 1 \text{ br} \\ \Rightarrow A(ADC) &= ? \end{aligned}$$

- A) $\frac{6}{5}$ B) 2 C) $\frac{12}{5}$ D) $\frac{24}{5}$ E) 8

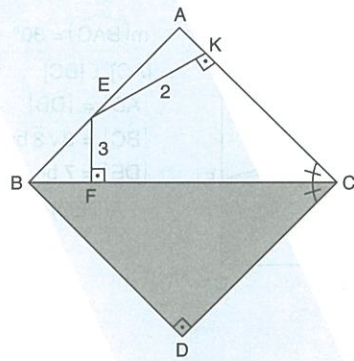
13.



$$\begin{aligned} [BA] &\perp [AC] \\ |AB| &= 15 \text{ br} \\ |AC| &= 20 \text{ br} \\ |DE| &= 6 \text{ br} \\ \Rightarrow A(DAE) &= ? \end{aligned}$$

- A) 75 B) 45 C) 36 D) 30 E) 18

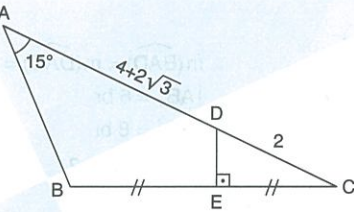
14.



$$\begin{aligned} |AC| &= |BC| \\ [EK] &\perp [AC] \\ [EF] &\perp [BC] \\ [BD] &\perp [DC] \\ m(\widehat{ACB}) &= m(\widehat{BCD}) \\ |EK| &= 2 \text{ br} \\ |EF| &= 3 \text{ br} \\ |BC| &= 13 \text{ br} \\ \Rightarrow A(BDC) &= ? \end{aligned}$$

- A) $\frac{65}{2}$ B) 30 C) 60 D) 65 E) 75

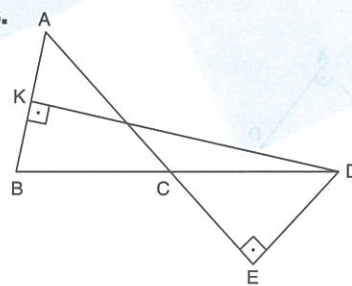
15.



$$\begin{aligned} [DE] &\perp [BC] \\ |BE| &= |EC| \\ m(\widehat{BAC}) &= 15^\circ \\ |DC| &= 2 \text{ br} \\ |AD| &= 4 + 2\sqrt{3} \text{ br} \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

- A) $2 + \sqrt{3}$ B) $2 + 2\sqrt{3}$ C) $4 + 2\sqrt{3}$
D) $6 + 2\sqrt{3}$ E) $8 + 4\sqrt{3}$

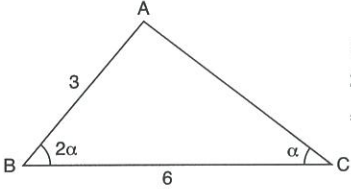
16.

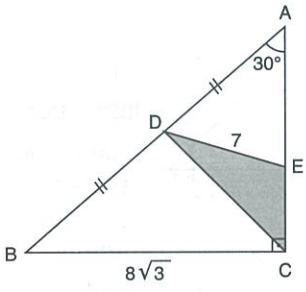


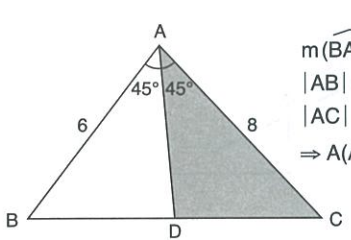
$$\begin{aligned} |AB| &= |AC| = 10 \text{ br} \\ |KD| &= 8 \text{ br} \\ |DE| &= 3 \text{ br} \\ [DK] &\perp [AB] \\ [DE] &\perp [EA] \\ \Rightarrow A(ABC) &= ? \end{aligned}$$

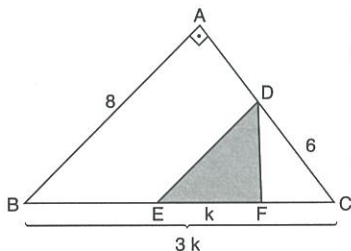
- A) 25 B) 30 C) 40 D) 50 E) 55



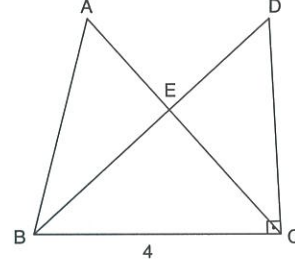
1.  $2m(\widehat{ACB}) = m(\widehat{ABC})$
 $2|AB| = |BC| = 6 \text{ br}$
 $\Rightarrow A(ABC) = ?$
- A) 3 B) $\frac{9\sqrt{3}}{2}$ C) $6\sqrt{3}$ D) 9 E) $9\sqrt{3}$

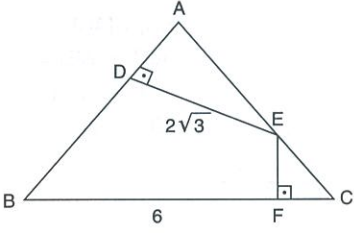
2.  $m(\widehat{BAC}) = 30^\circ$
 $[AC] \perp [BC]$
 $|AD| = |DB|$
 $|BC| = 8\sqrt{3} \text{ br}$
 $|DE| = 7 \text{ br}$
 $\Rightarrow A(DEC) = ?$
- A) 11 B) $11\sqrt{3}$ C) $12\sqrt{3}$ D) $22\sqrt{3}$ E) $24\sqrt{3}$

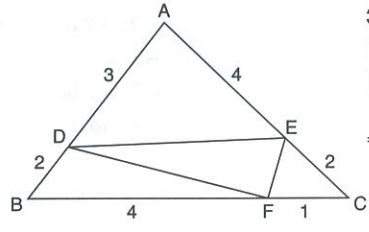
3.  $m(\widehat{BAD}) = m(\widehat{DAC}) = 45^\circ$
 $|AB| = 6 \text{ br}$
 $|AC| = 8 \text{ br}$
 $\Rightarrow A(ADC) = ?$
- A) 24 B) $\frac{24}{7}$ C) $\frac{72}{7}$ D) $\frac{96}{7}$ E) 48

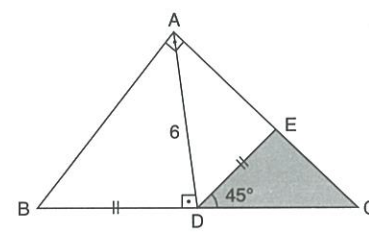
4.  $[BA] \perp [AC]$
 $3|EF| = |BC|$
 $|AB| = 8 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow A(DEF) = ?$
- A) 24 B) 16 C) 12 D) 8 E) 6

PUZA YAYINLARI

5.  ABC eşkenar üçgen
 ABC equilateral triangle
 $[DC] \perp [CB]$
 $A(AEB) = A(EDC)$
 $|BC| = 4 \text{ br}$
 $\Rightarrow |DC| = ?$
- A) $2\sqrt{3}$ B) 5 C) $2\sqrt{7}$ D) $4\sqrt{3}$ E) 8

6.  ABC eşkenar üçgen
 ABC equilateral triangle
 $[ED] \perp [AB]$
 $[EF] \perp [BC]$
 $|DE| = 2\sqrt{3} \text{ br}$
 $|BF| = 6 \text{ br}$
 $\Rightarrow A(ABC) = ?$
- A) 8 B) $8\sqrt{3}$ C) $12\sqrt{3}$ D) $16\sqrt{3}$ E) 24

7.  $3|FC| = |AD| = 3 \text{ br}$
 $|AE| = |BF| = 4 \text{ br}$
 $|EC| = |BD| = 2 \text{ br}$
 $\Rightarrow \frac{A(DEF)}{A(ABC)} = ?$
- A) $\frac{3}{12}$ B) $\frac{5}{12}$ C) $\frac{8}{75}$ D) $\frac{16}{75}$ E) $\frac{28}{75}$

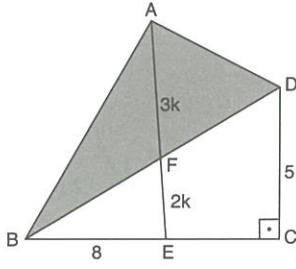
8.  $[BA] \perp [AC]$
 $[AD] \perp [BC]$
 $m(\widehat{EDC}) = 45^\circ$
 $|BD| = |DE|$
 $|AD| = 6 \text{ br}$
 $\Rightarrow A(EDC) = ?$
- A) 3 B) 6 C) $6\sqrt{2}$ D) $9\sqrt{2}$ E) 36

PUZA YAYINLARI

PUZA YAYINLARI



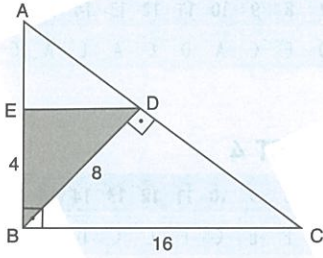
9.



$[DC] \perp [BC]$
 $2|AF| = 3|FE|$
 $|BE| = 8 \text{ br}$
 $|DC| = 5 \text{ br}$
 $\Rightarrow A(ABD) = ?$

- A) 20 B) 30 C) 40 D) 50 E) 60

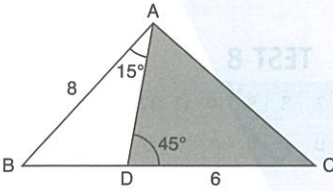
10.



$[AB] \perp [BC]$
 $[BD] \perp [AC]$
 $|BD| = 8 \text{ br}$
 $|EB| = 4 \text{ br}$
 $|BC| = 16 \text{ br}$
 $\Rightarrow A(EDB) = ?$

- A) 4 B) 8 C) $8\sqrt{3}$ D) 16 E) $16\sqrt{3}$

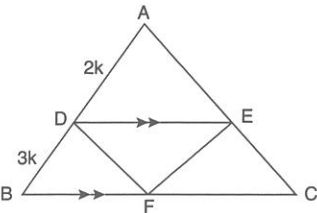
11.



$m(\widehat{BAD}) = 15^\circ$
 $m(\widehat{ADC}) = 45^\circ$
 $|AB| = 8 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow A(ADC) = ?$

- A) $32\sqrt{2}$ B) 32 C) $16\sqrt{2}$ D) 12 E) 8

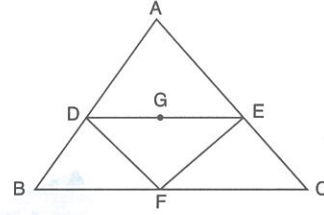
12.



$[DE] \parallel [BC]$
 $A(DEF) = 30 \text{ br}^2$
 $3|AD| = 2|DB|$
 $\Rightarrow A(ABC) = ?$

- A) 50 B) 60 C) 75 D) 90 E) 125

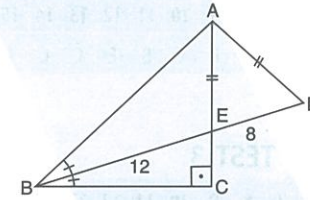
13.



G, ABC üçgeninin
 ağırlık merkezi
 G, center of gravity
 ABC triangle's
 $[DE] \parallel [BC]$
 $A(ABC) = 90 \text{ br}^2$
 $\Rightarrow A(DEF) = ?$

- A) 10 B) 20 C) 30 D) 45 E) 60

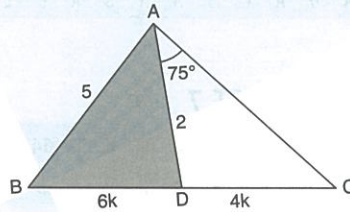
14.



$[AC] \perp [BC]$
 $m(\widehat{ABD}) = m(\widehat{DBC})$
 $|AE| = |AD|$
 $|BE| = 12 \text{ br}$
 $|ED| = 8 \text{ br}$
 $\Rightarrow A(ABD) = ?$

- A) 24 B) 40 C) 48 D) 60 E) 80

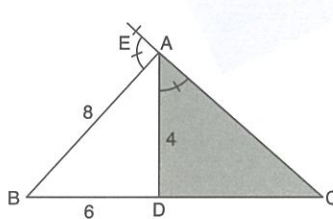
15.



$m(\widehat{DAC}) = 75^\circ$
 $|AB| = 5 \text{ br}$
 $|AD| = 2 \text{ br}$
 $|BD| = 6k$
 $|DC| = 4k$
 $\Rightarrow A(ABD) = ?$

- A) $\frac{5}{4}$ B) $\frac{5}{3}$ C) $\frac{5}{2}$ D) $\frac{5\sqrt{3}}{3}$ E) $\frac{5\sqrt{3}}{2}$

16.



$m(\widehat{DAC}) = m(\widehat{BAE})$
 $|AB| = 2|AD| = 8 \text{ br}$
 $|BD| = 6 \text{ br}$
 $\Rightarrow A(ADC) = ?$

- A) $5\sqrt{3}$ B) $3\sqrt{15}$ C) 12 D) 16 E) 24



ÜÇGENDE ALAN

AREAS OF TRIANGLES

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	A	D	E	C	C	A	B	C	B	E	C	C	A	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	D	D	D	C	D	E	C	A	D	C	A	C	A	C

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	D	C	A	E	B	B	E	E	A	D	D	E	C	D	C

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	A	A	D	C	B	C	E	E	C	E	C	C	D	D	D

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	C	D	A	D	A	C	B	A	A	B	A	B	E	C

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	B	D	C	D	C	D	C	A	C	D	B	D	D	B	D

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	E	E	B	D	D	E	E	C	A	A	C	C	B	E	D

TEST 8

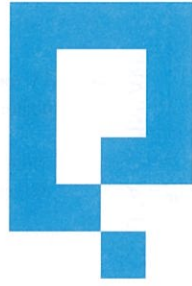
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	C	C	E	C	D	C	D	A	E	B	B	D	E	E

TEST 9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	B	A	E	C	C	A	A	D	B	D	C	B	D	A

TEST 10

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	D	D	A	D	D	D	B	B	D	E	B	E	C	B



ÇOKGENLER POLYGONS



ÖZELLİK|Property 1

- n kenarlı bir konveks çokgen için
 - * Konveks bir çokgenin çizilebilmesi için en az $(2n - 3)$ tane elemanı bilinmelidir. Bunların en az $(n - 2)$ tanesi uzunluk, $(n - 1)$ tanesi açı olmalıdır.
 - * İç açıları toplamı $(n - 2) \cdot 180^\circ$ dir.
 - * Dış açıları toplamı 360° dir.
 - * Bir köşeden çizilen köşegen sayısı $(n - 3)$ 'tür.
 - * Bütün köşegenlerin sayısı $\frac{n(n-3)}{2}$ 'tür.
 - * Bir köşeden çizilen tüm köşegenler, çokgeni $(n - 2)$ tane üçgene ayırır.
- For a polygon with n edges
 - * In order to be drawn a convex polygon, at least $(2n-3)$ elements must be known. At least $(n-2)$ of them must be edge lengths, and $(n-1)$ of them must be angle measurements.
 - * The sum of the interior angles is $(n-2) \cdot 180^\circ$
 - * The sum of exterior angles is 360°
 - * The number of diagonals drawn from a vertex is $(n-3)$
 - * The number of all the diagonals is $\frac{n(n-3)}{2}$
 - * The diagonals that are drawn from a vertex to each other corners separate the polygon into $(n-2)$ triangles

1. İç açıları toplamı 720° olan konveks bir çokgenin kenar sayısı nedir?

What number is the edges of a convex polygon with the sum of interior angles of 720° ?

6

2. Bir köşeden çizilen tüm köşegen sayısı 7 olan konveks bir çokgenin iç açıları toplamı ve tüm köşegenlerinin sayısı nedir?

what number is diagonals and sum of interior angles a convex polygon which the number of diagonals drown from a vertex is 7?

1440, 35

PUZA YAYINLARI

PUZA YAYINLARI

PUZA YAYINLARI

3. İç açıları toplamı dış açıları toplamının 3 katı olan konveks bir çokgenin tüm köşegen sayısı nedir?

What number is the vertex of a convex polygon which the sum of interior angles is 3 times of the sum of exterior angles?

20

4. Bir konveks çokgen 13 elemanı ile belirlenebiliyor. Bu konveks çokgenin bir köşesinden çizilen tüm köşegenler çokgeni kaç tane üçgene ayırır?

A convex polygon can determine by 13 element. How many triangles are produced by drawing diagonals from a vertex of this convex polygon?

6

5. 11 elemanı ile belirlenebilen bir çokgenin bir köşesinden çizilen bütün köşegenlerin sayısı nedir?

What is the diagonals of a polygon which can be determined by 11 element, drawn from a vertex?

4

6. Dış açıları toplamının iç açıları toplamına oranı $\frac{2}{3}$ olan konveks bir çokgenin kenar sayısı nedir?

What number is the edges of a convex polygon which the sum of exterior angles to the sum of interior angles ratio is $\frac{2}{3}$?

5

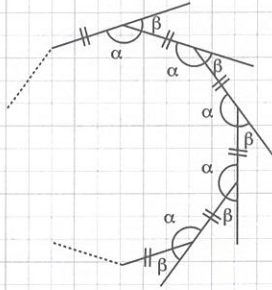
7. Üç iç açısı 120° , 150° , 70° ve diğer iç açıları birbirine eşit ve 140° olan konveks çokgen kaç kenarlıdır?

What number is the edges of a convex polygon which three interior angles are 120° , 150° , 70° and the other angles are equal to each other and 140° ?

7



ÖZELLİK|Property 2



$$\alpha = \frac{(n-2) \cdot 180^\circ}{n}$$

$$\beta = \frac{360^\circ}{n}$$

$$\alpha + \beta = 180^\circ$$

1. Bir dış açısı 30° olan düzgün bir çokgenin kenar sayısı nedir?

What number is the edges of a regular polygon have with an exterior angles of 30° ?

12

2. Bir iç açısı 135° olan düzgün bir çokgenin tüm köşegen sayısı nedir?

what number is the sum of diagonals of a regular polygon with a intensive angle of 135° ?

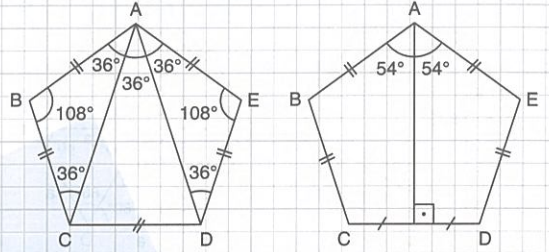
20

3. Bir iç açısı bir dış açısının 5 katı olan düzgün bir çokgenin iç açıları toplamı kaçtır?

What number is the sum of interior angles of a regular polygon which a interior angle is 5 time of an exterior angle?

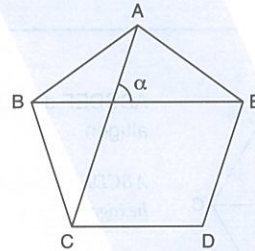
1800

ÖZELLİK|Property 3



Düzgün beşgenin bir iç açısı 108° , dış açısı 72° dir.
One interior angle is 108° and one exterior angle is 72° of a regular pentagon.

1.



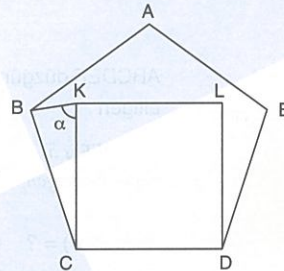
ABCDE düzgün beşgen.

ABCDE is a regular pentagon.

$\Rightarrow \alpha = ?$

72

2.



ABCDE düzgün beşgen, KLDC kare

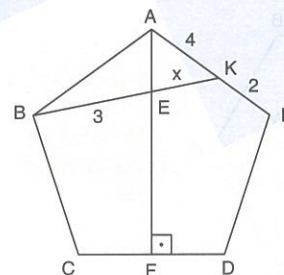
ABCDE is a regular pentagon.

KLDC square

$\Rightarrow \alpha = ?$

81

3.



ABCDE düzgün beşgen

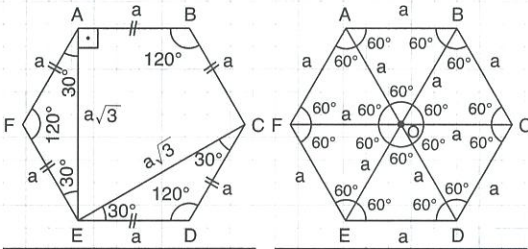
ABCDE is a regular pentagon.

$\Rightarrow x = ?$

2



ÖZELLİK|Property 4

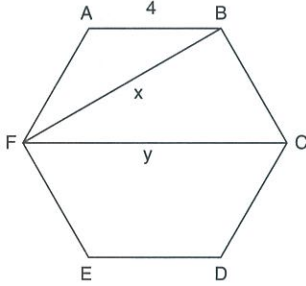


Düzgün bir altıgenin iç açısı 120° , dış açısı 60° 'dir.
One interior angle is 120° and one exterior angle is 60° of a regular hexagon.

$$A(OED) = \frac{a^2 \sqrt{3}}{4}$$

$$A(ABCDEF) = 6 \cdot \frac{a^2 \sqrt{3}}{4}$$

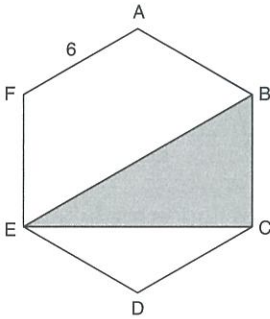
1.



ABCDEF düzgün altıgen
ABCDEF is a regular hexagon
 $\Rightarrow x = ?$
 $\Rightarrow y = ?$

$$4\sqrt{3}, 8$$

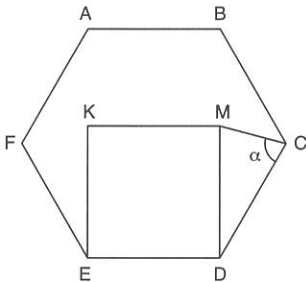
2.



ABCDEF düzgün altıgen
ABCDEF is a regular hexagon
 $\Rightarrow A(EBC) = ?$

$$18\sqrt{3}$$

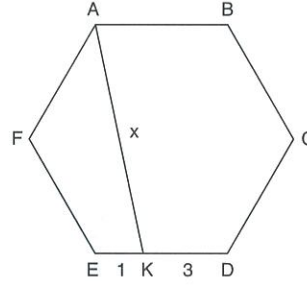
3.



ABCDEF düzgün altıgen, KMDE kare
ABCDEF regular hexagon, KMDE square
 $\Rightarrow \alpha = ?$

$$75$$

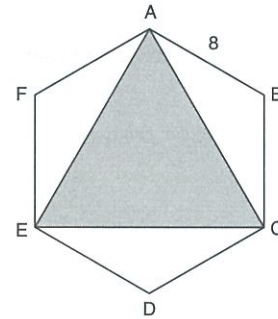
4.



ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $\Rightarrow |AK| = x = ?$

$$7$$

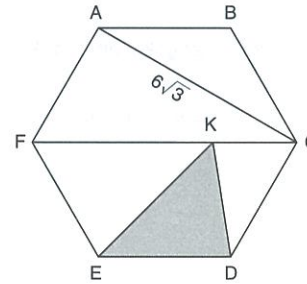
5.



ABCDEF düzgün altıgen
ABCDEF is a regular hexagon
 $\Rightarrow A(AEC) = ?$

$$48\sqrt{3}$$

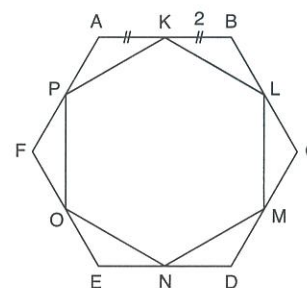
6.



ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $\Rightarrow A(EKD) = ?$

$$9\sqrt{3}$$

7.

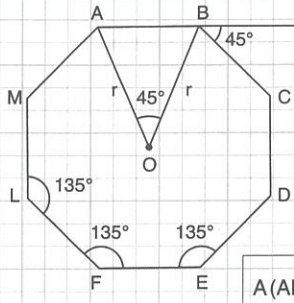


ABCDEF ve KLMNOP düzgün altıgen
ABCDEF and KLMNOP regular hexagon
 $\Rightarrow A(KLMNOP) = ?$

$$18\sqrt{3}$$



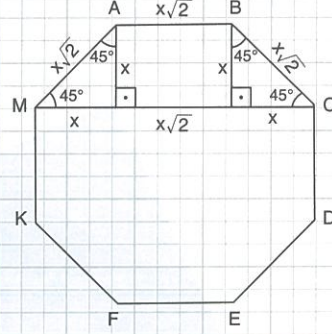
ÖZELLİK|Property 5



O merkezli düzgün sekizgen
A regular octagon with a center O.

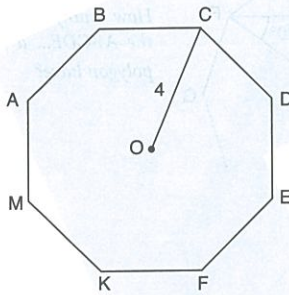
$$A(ABCDEFGH) = 8 \left(\frac{1}{2} \cdot r \cdot r \cdot \sin 45^\circ \right)$$

ÖZELLİK|Property 6



ABCDEFGH düzgün sekizgen
ABCDEFGH regular octagon

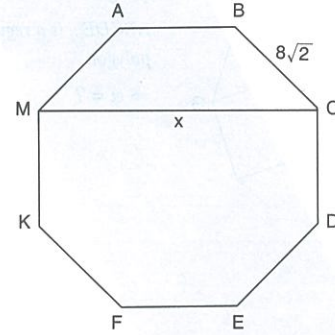
1.



ABCDEFGH düzgün sekizgen
ABCDEFGH regular octagon
 $\Rightarrow A(ABCDEFGH) = ?$

$$32\sqrt{2}$$

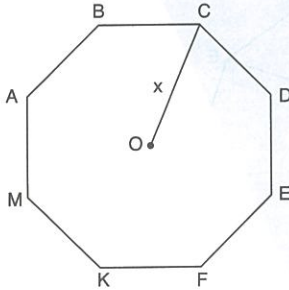
1.



ABCDEFGH düzgün sekizgen
ABCDEFGH regular octagon
 $\Rightarrow x = ?$

$$16 + 8\sqrt{2}$$

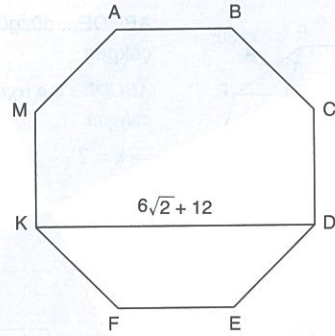
2.



ABCDEFGH düzgün sekizgen
ABCDEFGH regular octagon
 $A(ABCDEFGH) = 72\sqrt{2}$
 $\Rightarrow x = ?$

$$6$$

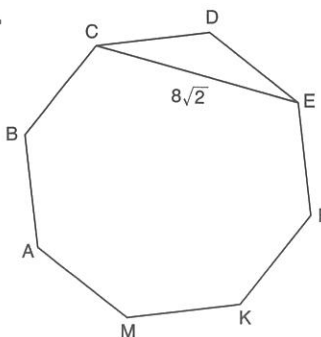
2.



ABCDEFGH düzgün sekizgen
ABCDEFGH regular octagon
 $\Rightarrow \angle(ABCD...) = ?$

$$48\sqrt{2}$$

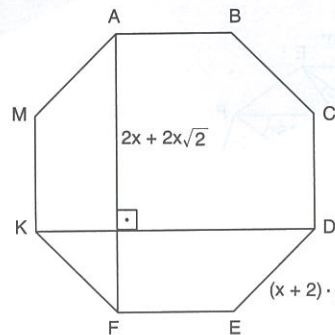
3.



ABCDEFGH düzgün sekizgen
ABCDEFGH regular octagon
 $\Rightarrow A(ABCDEFGH) = ?$

$$128\sqrt{2}$$

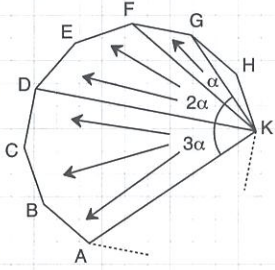
3.



ABCDEFGH düzgün sekizgen
ABCDEFGH regular octagon
 $\Rightarrow x = ?$

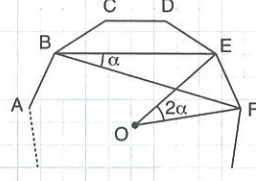
$$2$$

ÖZELLİK|Property 7



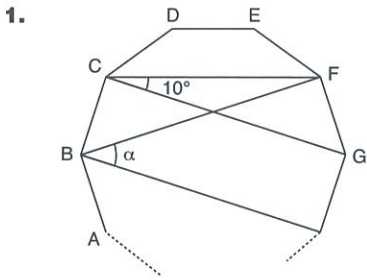
ABCD... düzgün çokgen
ABCDE... is a regular polygon

ÖZELLİK|Property 8



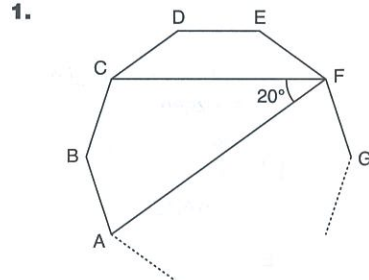
O merkezli n kenarlı
düzgün çokgen
A regular polygon having n edges,
with a center O

$$\Rightarrow \frac{2 \cdot \alpha}{360^\circ} = \frac{1}{n} \Rightarrow n = \frac{180^\circ}{\alpha}$$



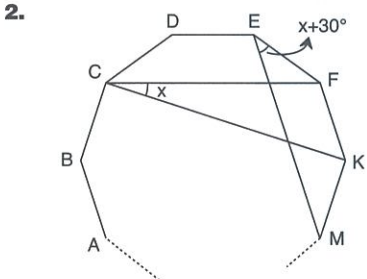
ABCD... düzgün
çokgen
ABCDE... is a regular
polygon
 $\Rightarrow \alpha = ?$

20



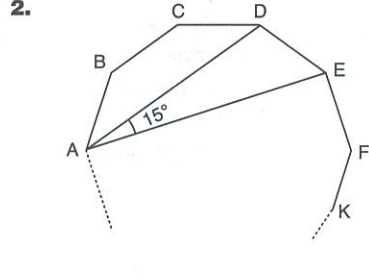
ABCD... düzgün çok-
geni kaç kenarlıdır?
How many edges does
the ABCDE... a regular
polygon have?

18



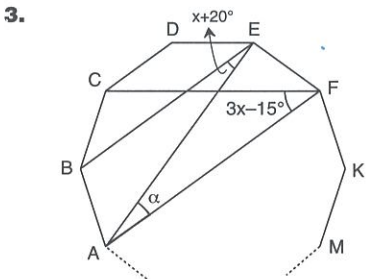
ABCD... düzgün
çokgen
ABCDE... is a regular
polygon
 $\Rightarrow x = ?$

30



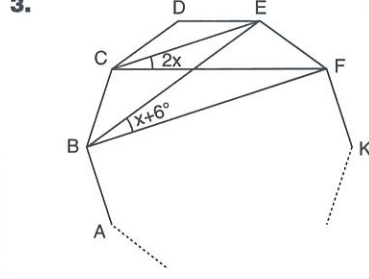
ABCD... düzgün çok-
geni kaç kenarlıdır?
How many edges does
the ABCDE... a regular
polygon have?

12



ABCD... düzgün
çokgen
ABCDE... is a regular
polygon
 $\Rightarrow \alpha = ?$

75

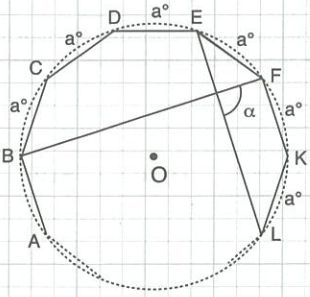


ABCD... düzgün
çokgeni kaç
kenarlıdır?
How many edges does
the ABCDE... a regular
polygon have?

15



ÖZELLİK|Property 9



O merkezli n kenarlı
düzgün çokgen
A regular polygon having
n edges, with a center O

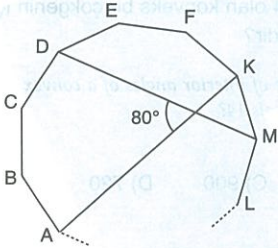
$$\frac{3a + 2a}{2} = \alpha$$

$$a = \frac{2 \cdot \alpha}{5}$$

$$\frac{2\alpha}{5} = \frac{1}{n}$$

$$\frac{2\alpha}{360^\circ} = \frac{1}{n}$$

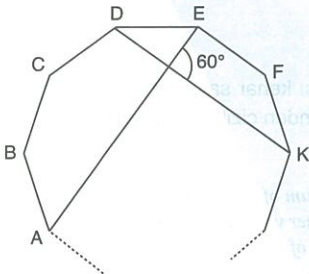
1.



ABCD... düzgün çokge-
ni kaç kenarlıdır?
How many edges does
the ABCDE... a regular
polygon have?

9

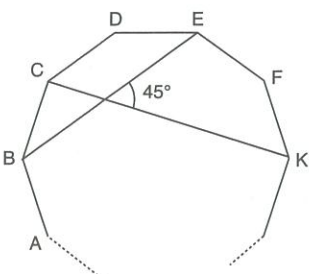
2.



ABCD... düzgün
çokgeni kaç
kenarlıdır?
How many edges does
the ABCDE... a regular
polygon have?

15

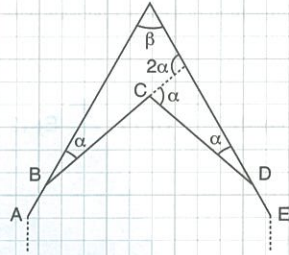
3.



ABCD... düzgün
çokgeni kaç
kenarlıdır?
How many edges does
the ABCDE... a regular
polygon have?

12

ÖZELLİK|Property 10



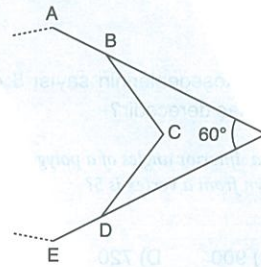
ABCDE... n kenarlı
düzgün çokgen

ABCDE... is a regular
polygon with n edges

$$3\alpha + \beta = 180^\circ$$

$$\frac{360^\circ}{n} = \alpha$$

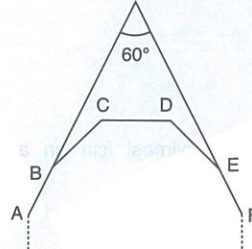
1.



ABCDE... n kenarlı
düzgün çokgen
ABCDE... is a regular
polygon with n edges
 $\Rightarrow n = ?$

9

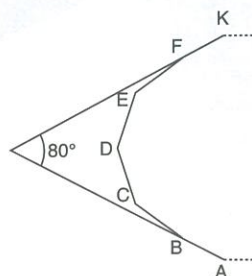
2.



ABCDE... n kenarlı
düzgün çokgen
ABCDE... is a regular
polygon
with n edges
 $\Rightarrow n = ?$

12

3.



ABCDE... n kenarlı
düzgün çokgen
ABCDE... is a regular
polygon
with n edges
 $\Rightarrow n = ?$

18



1. Kenar sayısı 7 olan konverks bir çokgenin tüm köşegenlerinin sayısı nedir?

What number is the sum of diagonals of a convex polygon with the edge number of 7?

A) 28 B) 18 C) 15 D) 14 E) 12

2. Bir köşesinden çizilen tüm köşegenlerinin sayısı 5 olan çokgenin iç açıları toplamı kaç derecedir?

What is the sum of degree of a interior angles of a polygon which the number of diagonals drawn from a vertex is 5?

A) 1440 B) 1080 C) 900 D) 720 E) 540

3. Dış bükey bir yedigenin çizilebilmesi için en az kaç elemanı bilinmelidir?

How many elements should be determined at least, in order to be drawn a convex heptagon?

A) 21 B) 19 C) 17 D) 14 E) 11

4. Bir köşesinden çizilen tüm köşegenlerle dış bükey dokuzgen kaç üçgensel bölgeye ayrılır?

How many triangular sectors is a convex nonagon by diagonals drawn from a vertex to divided into?

A) 9 B) 8 C) 7 D) 6 E) 5

5. Dış açıların toplamının iç açıları toplamına oranı $\frac{1}{4}$ olan çokgenin çizilebilmesi için kaç elemanı bilinmelidir?

How many elements of a polygon should be determined which the ratio of the sum of exterior angles to the sum of interior angles is $\frac{1}{4}$?

A) 21 B) 17 C) 11 D) 10 E) 9

6. Tüm köşegen sayısı 14 olan konveks bir çokgenin iç açıları toplamı kaç derecedir?

What is the sum of degree of interior angles of a convex polygon with the number of diagonals 14?

A) 1440 B) 1080 C) 900 D) 720 E) 540

7. Tüm köşegen sayısı kenar sayısının 3 katı olan konveks çokgenin bir köşesinden çizilen tüm köşegenlerinin sayısı nedir?

What number is the sum of diagonals of a convex polygon drawn from a vertex each other vertex, which the number of diagonals is 3 times of the number of edges?

A) 6 B) 5 C) 4 D) 3 E) 2

8. Dış bükey onikigenin en az kaç iç açısı geniş açı olabilir?

How many of angles of a convex dodecagon can be obtuse angle at least?

A) 10 B) 9 C) 8 D) 7 E) 6



9. Bir iç açısı bir dış açısının 8 katı olan düzgün çokgen kaç kenarlıdır?

How many angles does a regular polygon have, that one of its interior angle is 8 time of an exterior angle?

A) 10 B) 12 C) 16 D) 18 E) 20

10. Bir dış bükey çokgenin iç açılarının üç tanesi 150° , 130° ve 60° dir.

Diğer iç açıları ölçüleri eşit ve 140° olduğuna göre bu çokgen kaç kenarlıdır?

What number is the angles of a polygon which the interior angles of a convex polygon is 150° , 130° , 60° .

The other interior angles are equal and 140° ?

A) 9 B) 8 C) 7 D) 6 E) 5

11. Bir iç açısı 140° olan düzgün bir çokgen kaç kenarlıdır?

What number is the edges of a regular polygon with the a interior angles of 140° ?

A) 5 B) 6 C) 7 D) 8 E) 9

12. Bir dış açısının ölçüsü 30° olan düzgün çokgen kaç kenarlıdır?

What number is the edge of a regular polygon with an exterior angles of 30° ?

A) 15 B) 12 C) 10 D) 8 E) 6

13. Bir iç açısı bir dış açısının 2 katından 30° eksik olan düzgün çokgenin bir iç açısı kaç derecedir?

What is the degree of a interior angles of a regular polygon which, one of interior angle is 30° lack of 2 times of an exterior angles?

A) 70 B) 80 C) 90 D) 100 E) 110

14. Bir iç açısı bir dış açısının 6 katından 40° fazla olan düzgün çokgenin tüm köşegenlerinin sayısı nedir?

What number is the sum of diagonals of a regular polygon that one of interior angles is 40° surplus of 6 times of an exterior angles?

A) 45 B) 90 C) 104 D) 135 E) 170

15. Bir dış açısının ölçüsünün bir iç açısının ölçüsüne oranı $\frac{1}{5}$ olan düzgün çokgenin tüm köşegenlerinin sayısı nedir?

What is the sum of diagonals of a regular polygon which the ratio of an exterior angle measurement to interior angle measurement is $1/5$?

A) 12 B) 20 C) 28 D) 54 E) 80

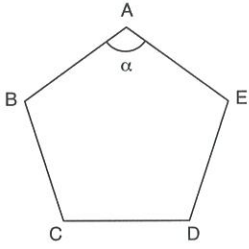
16. Düzgün bir onikigenin ağırlık merkezinden geçen kaç köşegeni vardır?

What is the number of diagonals in a regular dodecagon which goes throw the center of gravity?

A) 6 B) 12 C) 27 D) 36 E) 54



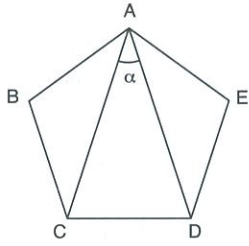
1.



ABCDE düzgün beşgen
ABCDE regular pentagon
 $\Rightarrow m(\widehat{BAE}) = \alpha = ?$

- A) 36 B) 72 C) 108 D) 120 E) 150

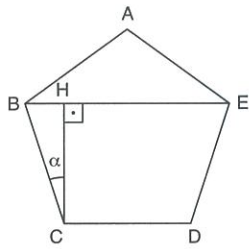
2.



ABCDE düzgün beşgen
ABCDE regular pentagon
 $\Rightarrow m(\widehat{CAD}) = \alpha = ?$

- A) 18 B) 36 C) 72 D) 90 E) 108

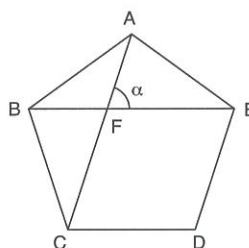
3.



ABCDE düzgün beşgen
ABCDE regular pentagon
 $[CH] \perp [BE]$
 $\Rightarrow m(\widehat{BCH}) = \alpha = ?$

- A) 9 B) 18 C) 36 D) 54 E) 72

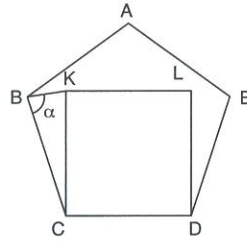
4.



ABCDE düzgün beşgen
ABCDE regular pentagon
 $\Rightarrow m(\widehat{AFE}) = \alpha = ?$

- A) 144 B) 108 C) 72 D) 54 E) 36

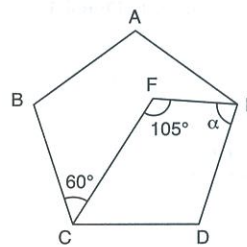
5.



ABCDE düzgün beşgen
ABCDE regular pentagon
 KLDC kare
KLDC square
 $\Rightarrow m(\widehat{KBC}) = \alpha = ?$

- A) 72 B) 78 C) 80 D) 81 E) 85

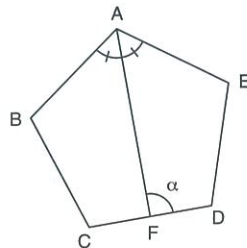
6.



ABCDE düzgün beşgen
ABCDE regular pentagon
 $m(\widehat{BCF}) = 60^\circ$
 $m(\widehat{CFE}) = 105^\circ$
 $\Rightarrow m(\widehat{FED}) = \alpha = ?$

- A) 89 B) 95 C) 99 D) 105 E) 109

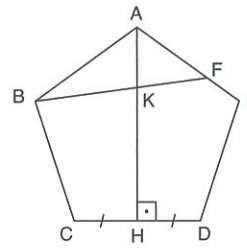
7.



ABCDE düzgün beşgen
ABCDE regular pentagon
 $m(\widehat{BAF}) = m(\widehat{FAE})$
 $\Rightarrow m(\widehat{AFD}) = \alpha = ?$

- A) 108 B) 90 C) 72 D) 54 E) 36

8.

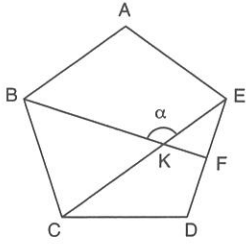


ABCDE düzgün beşgen
ABCDE regular pentagon
 $[AH] \perp [CD]$
 $|CH| = |HD|$
 $|AF| = 4 \text{ br}$
 $|FE| = 2 \text{ br}$
 $|BK| = 4 \text{ br}$
 $\Rightarrow |KF| = x = ?$

- A) $\frac{5}{3}$ B) 2 C) $\frac{8}{3}$ D) 4 E) 6



9.



ABCDE düzgün beşgen

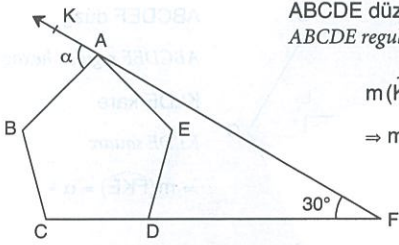
ABCDE regular pentagon

$$|EF| = |FD|$$

$$\Rightarrow m(\widehat{BKE}) = \alpha = ?$$

- A) 144 B) 126 C) 108 D) 90 E) 72

10.



ABCDE düzgün beşgen

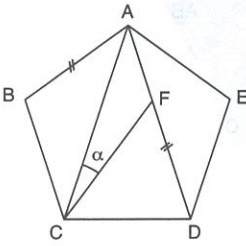
ABCDE regular pentagon

$$m(\widehat{KFC}) = 30^\circ$$

$$\Rightarrow m(\widehat{KAB}) = \alpha = ?$$

- A) 54 B) 60 C) 66 D) 76 E) 82

11.



ABCDE düzgün beşgen

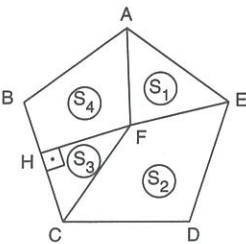
ABCDE regular pentagon

$$|AB| = |FD|$$

$$\Rightarrow m(\widehat{ACF}) = \alpha = ?$$

- A) 18 B) 28 C) 36 D) 54 E) 72

12.



F merkezli

ABCDE düzgün beşgen

With a center F

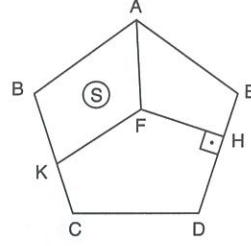
ABCDE regular pentagon

$$[EH] \perp [BC]$$

$$\Rightarrow \frac{S_2 - S_3}{S_1 + S_4} = ?$$

- A) $\frac{1}{3}$ B) $\frac{3}{5}$ C) 1 D) $\frac{3}{2}$ E) $\frac{7}{3}$

13.



F merkezli

ABCDE düzgün beşgen

With a center F

ABCDE regular pentagon

$$[FH] \perp [ED]$$

$$|AE| = 6 \text{ br}$$

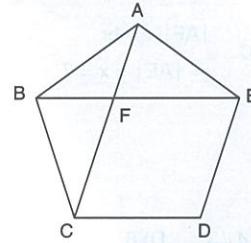
$$|FH| = 4 \text{ br}$$

$$|KC| = 2 \text{ br}$$

$$\Rightarrow A(ABKF) = S = ?$$

- A) 12 B) 14 C) 16 D) 20 E) 24

14.



ABCDE düzgün beşgen

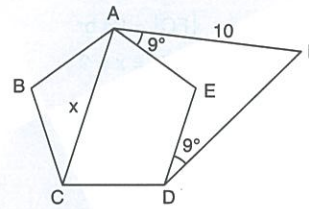
ABCDE regular pentagon

$$Q(FEDC) = 36 \text{ br}$$

$$\Rightarrow Q(ABCDE) = ?$$

- A) 10 B) 15 C) 30 D) 45 E) 60

15.



ABCDE düzgün beşgen

ABCDE regular pentagon

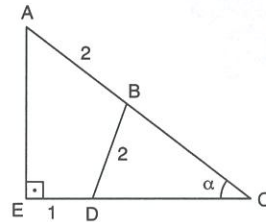
$$m(\widehat{FAE}) = m(\widehat{EDF}) = 9^\circ$$

$$|AF| = 10 \text{ br}$$

$$\Rightarrow |AC| = x = ?$$

- A) 5 B) $5\sqrt{2}$ C) 10 D) $10\sqrt{2}$ E) $10\sqrt{3}$

16.



$$|AB| = 2 \text{ br}$$

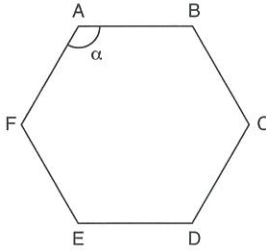
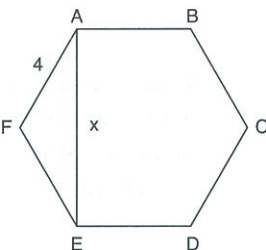
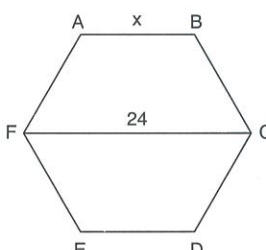
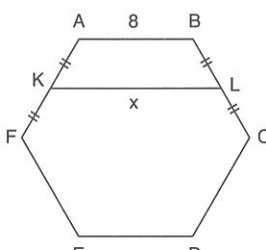
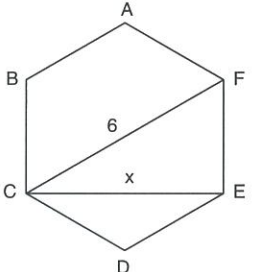
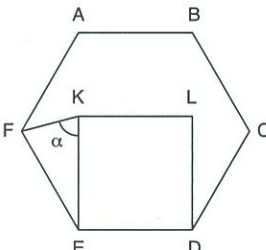
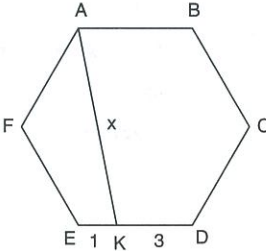
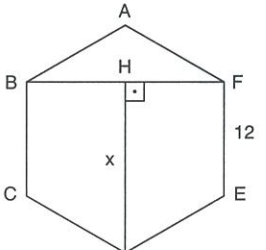
$$|BD| = 2 \text{ br}$$

$$|ED| = 1 \text{ br}$$

$$\Rightarrow m(\widehat{ACE}) = \alpha = ?$$

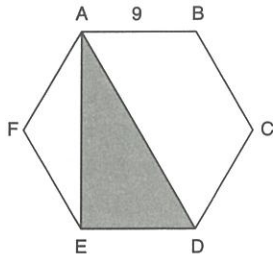
- A) 36 B) 48 C) 54 D) 72 E) 81



1.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $\Rightarrow m(\widehat{BAF}) = \alpha = ?$
- A) 150 B) 135 C) 120 D) 110 E) 108
2.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|AF| = 4$ br
 $\Rightarrow |AE| = x = ?$
- A) 2 B) 4 C) $4\sqrt{3}$ D) 8 E) $8\sqrt{3}$
3.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|FC| = 24$ br
 $|AB| = x = ?$
- A) 6 B) 8 C) 10 D) 12 E) 16
4.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|AK| = |KF|$
 $|BL| = |LC|$
 $|AB| = 8$ br
 $\Rightarrow |KL| = x = ?$
- A) 10 B) 11 C) 12 D) 13 E) 14
5.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|CF| = 6$ br
 $\Rightarrow |CE| = x = ?$
- A) 3 B) $3\sqrt{2}$ C) $3\sqrt{3}$ D) 16 E) $6\sqrt{3}$
6.  ABCDEF düzgün altıgen,
ABCDEF regular hexagon
KLDE kare
KLDE square
 $\Rightarrow m(\widehat{FKE}) = \alpha = ?$
- A) 30 B) 45 C) 60 D) 75 E) 81
7.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|EK| = 1$ br
 $|KD| = 3$ br
 $\Rightarrow |AK| = x = ?$
- A) 4 B) $2\sqrt{3}$ C) $4\sqrt{3}$ D) 7 E) $4\sqrt{2}$
8.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $[DH] \perp [BF]$
 $|FE| = 12$ br
 $\Rightarrow |HD| = x = ?$
- A) 12 B) 14 C) 16 D) 18 E) 24



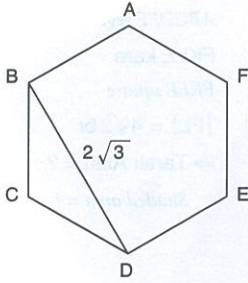
9.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|AB| = 9$ br
 $\Rightarrow A(AED) = ?$

- A) $\frac{27\sqrt{3}}{2}$ B) 50 C) $81\sqrt{3}$ D) 81 E) $\frac{81\sqrt{3}}{2}$

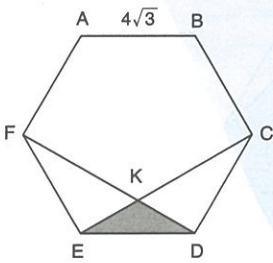
10.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|BD| = 2\sqrt{3}$ br
 $\Rightarrow A(ABCDEF) = ?$

- A) $4\sqrt{3}$ B) $6\sqrt{3}$ C) $12\sqrt{3}$ D) $18\sqrt{3}$ E) $24\sqrt{3}$

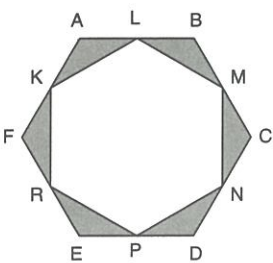
11.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|AB| = 4\sqrt{3}$ br
 $\Rightarrow A(EKD) = ?$

- A) 16 B) $8\sqrt{3}$ C) 8 D) $4\sqrt{3}$ E) 4

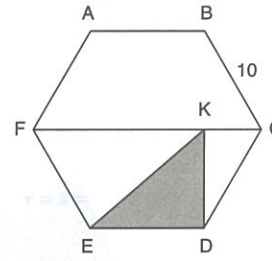
12.



ABCDEF ve KLMNPR düzgün altıgen
 ABCDEF and KLMNPR regular hexagon
 $|BM| = |MC|$
 $|BM| = 4$ br
 $\Rightarrow$ Taralı alan = ?
 Shaded area = ?

- A) $48\sqrt{3}$ B) $24\sqrt{3}$ C) $16\sqrt{3}$ D) $12\sqrt{3}$ E) $8\sqrt{3}$

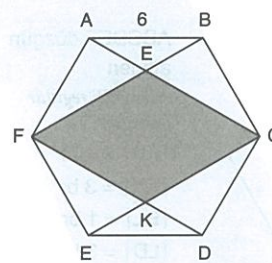
13.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|BC| = 10$ br
 $\Rightarrow A(EKD) = ?$

- A) $25\sqrt{3}$ B) $20\sqrt{3}$ C) 20 D) $10\sqrt{3}$ E) 10

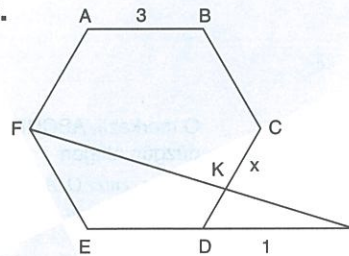
14.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|AB| = 6$ br
 $\Rightarrow$ Taralı Alan = ?
 Shaded area = ?

- A) $24\sqrt{3}$ B) $16\sqrt{3}$ C) $8\sqrt{3}$ D) 8 E) $4\sqrt{3}$

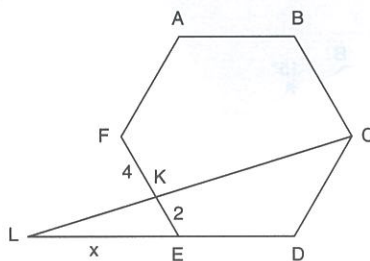
15.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|AB| = 3$ br
 $|DL| = 1$ br
 $\Rightarrow |KC| = x = ?$

- A) 1 B) 2 C) $\frac{18}{7}$ D) $\frac{18}{5}$ E) $\frac{32}{3}$

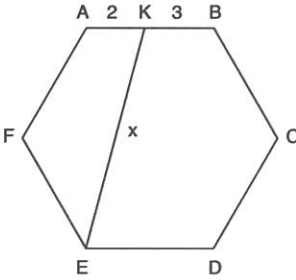
16.

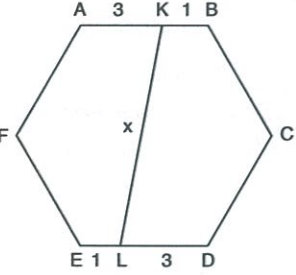


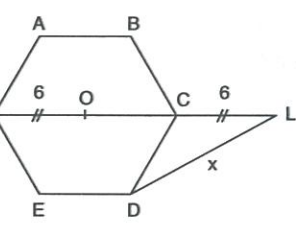
ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|FK| = 4$ br
 $|KE| = 2$ br
 $\Rightarrow |LE| = x = ?$

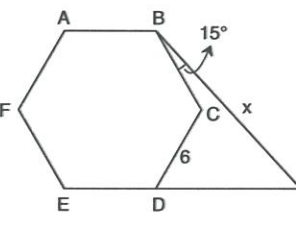
- A) 2 B) 3 C) 4 D) 5 E) 6



1.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|AK| = 2$ br
 $|KB| = 3$ br
 $\Rightarrow |KE| = x = ?$
- A) 5 B) $\sqrt{29}$ C) 8 D) $\sqrt{79}$ E) 13

2.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|KB| = 1$ br
 $|AK| = 3$ br
 $|EL| = 1$ br
 $|LD| = 3$ br
 $\Rightarrow |KL| = x = ?$
- A) 6 B) $4\sqrt{3}$ C) 7 D) $5\sqrt{2}$ E) $2\sqrt{13}$

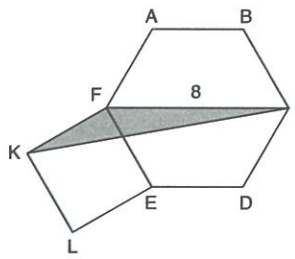
3.  O merkezli, ABCDEF düzgün altıgen
With a center O, ABCDEF regular hexagon
 $|FO| = 6$ br
 $|CL| = 6$ br
 $\Rightarrow |DL| = x = ?$
- A) $6\sqrt{3}$ B) $6\sqrt{2}$ C) 6 D) $3\sqrt{3}$ E) 3

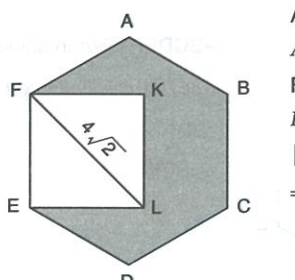
4.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|DC| = 6$ br
 $m(\widehat{CBK}) = 15^\circ$
 $\Rightarrow |BK| = x = ?$
- A) $3\sqrt{2}$ B) $3\sqrt{3}$ C) $6\sqrt{2}$ D) $6\sqrt{3}$ E) $6\sqrt{6}$

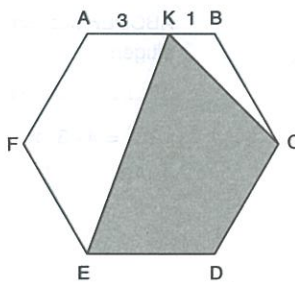
PUZA YAYINLARI

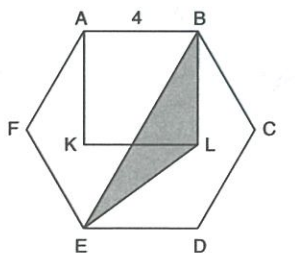
PUZA YAYINLARI

PUZA YAYINLARI

5.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
KLEF kare
KLEF square
 $|FC| = 8$ br
 $\Rightarrow A(KFC) = ?$
- A) $16\sqrt{3}$ B) $8\sqrt{3}$ C) 8 D) $4\sqrt{3}$ E) 4

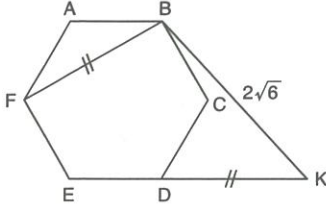
6.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
FKLE kare
FKLE square
 $|FL| = 4\sqrt{2}$ br
 $\Rightarrow$ Taralı Alan = ?
Shaded area = ?
- A) $8\sqrt{3} + 8$ B) $12\sqrt{3} - 12$ C) $24\sqrt{3} - 16$
D) $4\sqrt{3}$ E) $2\sqrt{3}$

7.  ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|KB| = 1$ br
 $|AK| = 3$ br
 $\Rightarrow$ Taralı Alan = ?
Shaded area = ?
- A) $24\sqrt{3}$ B) $17\sqrt{3}$ C) $13\sqrt{3}$ D) $12\sqrt{3}$ E) $11\sqrt{3}$

8.  ABCDEF düzgün altıgen
ABLK regular hexagon
ABLK kare
ABLK square
 $|AB| = 4$ br
 $\Rightarrow$ Taralı Alan = ?
Shaded area = ?
- A) $4\sqrt{3}$ B) 8 C) $8\sqrt{3}$ D) 16 E) $16\sqrt{3}$



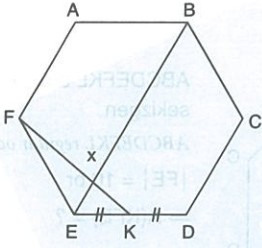
9.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|BK| = 2\sqrt{6}$ br
 $|FB| = |DK|$
 $\Rightarrow A(ABCDEF) = ?$

- A) 24 B) $12\sqrt{3}$ C) $12\sqrt{2}$ D) $8\sqrt{3}$ E) $6\sqrt{3}$

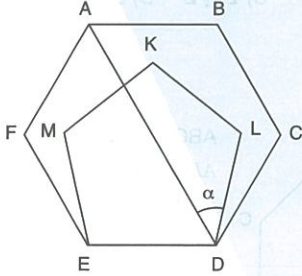
10.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|EB| = 12$ br
 $|EK| = |KD|$
 $\Rightarrow |FK| = x = ?$

- A) $\sqrt{7}$ B) 6 C) $3\sqrt{7}$ D) $6\sqrt{3}$ E) $6\sqrt{7}$

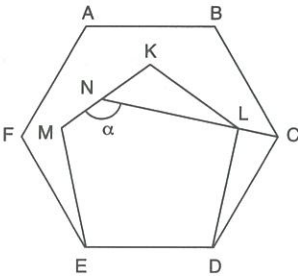
11.



ABCDEF düzgün altıgen,
 ABCDEF regular hexagon
 MKLDE düzgün beşgen
 MKLDE regular pentagon
 $\Rightarrow m(\widehat{ADL}) = \alpha = ?$

- A) 18 B) 30 C) 48 D) 60 E) 72

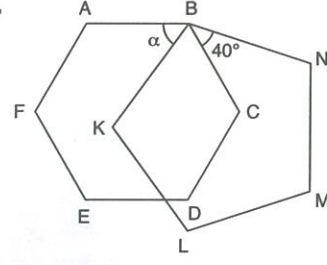
12.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 MKLDE düzgün beşgen
 MKLDE regular pentagon
 $\Rightarrow m(\widehat{MNC}) = \alpha = ?$

- A) 120 B) 118 C) 116 D) 112 E) 110

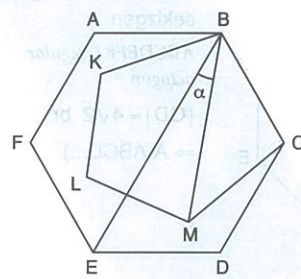
13.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 KBNML düzgün beşgen
 KBNML regular pentagon
 $m(\widehat{CBN}) = 40^\circ$
 $\Rightarrow m(\widehat{ABK}) = \alpha = ?$

- A) 28 B) 52 C) 54 D) 68 E) 70

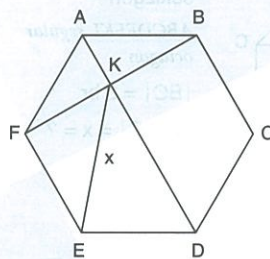
14.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 KBCML düzgün beşgen
 KBCML regular pentagon
 $\Rightarrow m(\widehat{EBM}) = \alpha = ?$

- A) 72 B) 60 C) 36 D) 24 E) 12

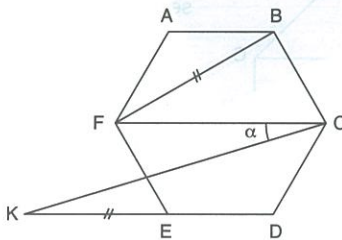
15.



ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|BF| = 12$ br
 $\Rightarrow |KE| = x = ?$

- A) 6 B) $2\sqrt{15}$ C) $\sqrt{21}$ D) $6\sqrt{3}$ E) $2\sqrt{21}$

16.

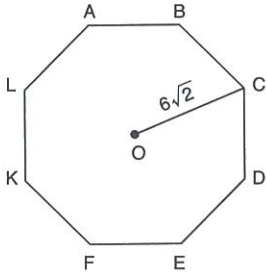


ABCDEF düzgün altıgen
 ABCDEF regular hexagon
 $|FB| = |KE|$
 $\Rightarrow m(\widehat{FCK}) = \alpha = ?$

- A) 9 B) 15 C) 36 D) 54 E) 72



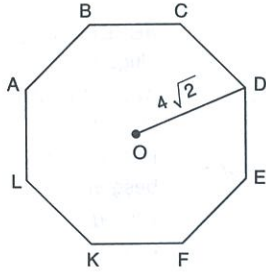
1.



ABCDEFLK düzgün sekizgen
ABCDEFLK regular octagon
 $|OC| = 6\sqrt{2}$
 $\Rightarrow A(ABCDEFLK) = ?$

- A) $12\sqrt{3}$ B) $24\sqrt{2}$ C) $24\sqrt{3}$
D) $48\sqrt{2}$ E) $144\sqrt{2}$

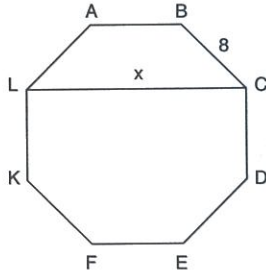
2.



ABCDEFLK düzgün sekizgen
ABCDEFLK regular octagon
 $|OD| = 4\sqrt{2}$ br
 $\Rightarrow A(ABCD...) = ?$

- A) 128 B) $64\sqrt{2}$ C) 64 D) $32\sqrt{2}$ E) 32

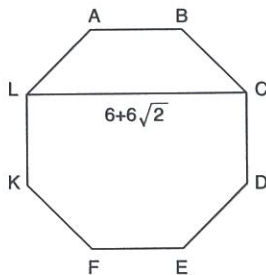
3.



ABCDEFLK düzgün sekizgen
ABCDEFLK regular octagon
 $|BC| = 8$ br
 $\Rightarrow |LC| = x = ?$

- A) $8\sqrt{2} + 8$ B) $4\sqrt{2} + 8$ C) $8\sqrt{2} + 4$
D) $4\sqrt{2} + 4$ E) 8

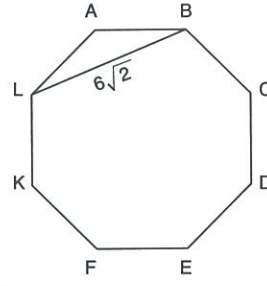
4.



ABCDEFLK düzgün sekizgen
ABCDEFLK regular octagon
 $|LC| = 6 + 6\sqrt{2}$ br
 $\Rightarrow |AB| = ?$

- A) 3 B) 6 C) 8 D) 12 E) 16

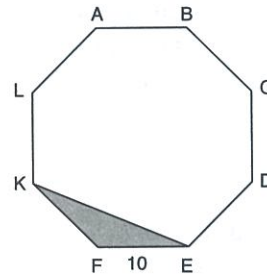
5.



ABCDEFLK düzgün sekizgen
ABCDEFLK regular octagon
 $|LB| = 6\sqrt{2}$ br
 $\Rightarrow A(ABCDEFLK) = ?$

- A) $54\sqrt{2}$ B) $72\sqrt{2}$ C) 108
D) $108\sqrt{2}$ E) $144\sqrt{2}$

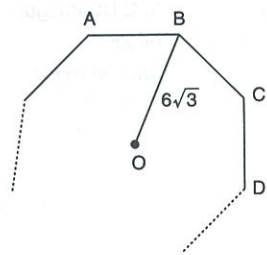
6.



ABCDEFLK düzgün sekizgen
ABCDEFLK regular octagon
 $|FE| = 10$ br
 $\Rightarrow A(KFE) = ?$

- A) 15 B) 25 C) $25\sqrt{2}$ D) 50 E) $50\sqrt{3}$

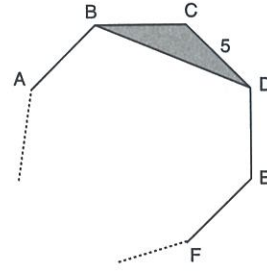
7.



ABCD... düzgün onikigen
ABCD... regular dodecagon
 $|OB| = 6\sqrt{3}$ br
 $\Rightarrow A(ABCD...) = ?$

- A) 324 B) $108\sqrt{3}$ C) 144 D) $52\sqrt{3}$ E) 72

8.

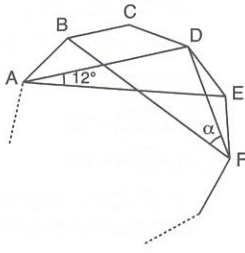


ABCD... düzgün onikigen
ABCD... regular dodecagon
 $|CD| = 5$ br
 $\Rightarrow A(BCD) = ?$

- A) 25 B) $\frac{25}{2}$ C) $\frac{25\sqrt{3}}{4}$ D) $\frac{25}{4}$ E) $\frac{25}{8}$



9.



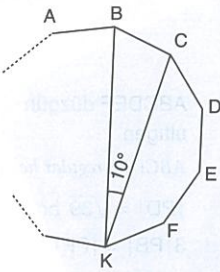
ABCD... düzgün çokgen
ABCD... regular polygon

$$m(\widehat{DAE}) = 12^\circ$$

$$\Rightarrow m(\widehat{BFD}) = \alpha = ?$$

- A) 6 B) 9 C) 12 D) 24 E) 48

10.



ABCD... düzgün çokgen
ABCD... regular polygon

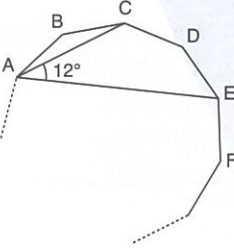
$$m(\widehat{BKC}) = 10^\circ$$

$\Rightarrow$ Düzgün çokgen kaç kenarlıdır?

How many edges does a regular polygon have?

- A) 10 B) 12 C) 14 D) 16 E) 18

11.



ABCD... düzgün çokgen
ABCD... regular polygon

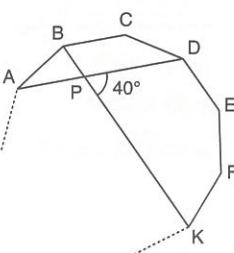
$$m(\widehat{CAE}) = 12^\circ$$

$\Rightarrow$ Düzgün çokgen kaç kenarlıdır?

How many edges does a regular polygon have?

- A) 30 B) 26 C) 24 D) 20 E) 18

12.



ABCD... düzgün çokgen
ABCD... regular polygon

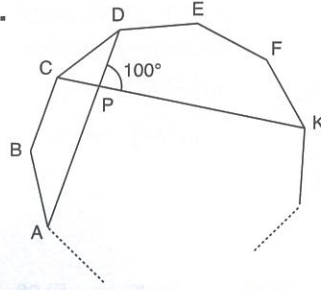
$$m(\widehat{DPK}) = 40^\circ$$

$\Rightarrow$ Düzgün çokgen kaç kenarlıdır?

How many edges does a regular polygon have?

- A) 14 B) 15 C) 16 D) 18 E) 22

13.



ABCD... düzgün çokgen
ABCD... regular polygon

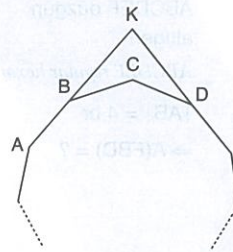
$$m(\widehat{DPK}) = 100^\circ$$

$\Rightarrow$ Düzgün çokgen kaç kenarlıdır?

How many edges does a regular polygon have?

- A) 7 B) 9 C) 11 D) 12 E) 15

14.



ABCD... düzgün çokgen
ABCD... regular polygon

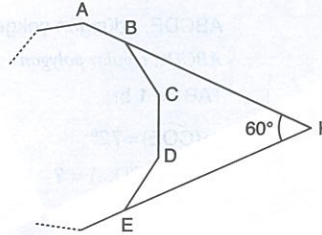
$$m(\widehat{BKD}) = 60^\circ$$

$\Rightarrow$ Düzgün çokgen kaç kenarlıdır?

How many edges does a regular polygon have?

- A) 7 B) 9 C) 10 D) 11 E) 12

15.



ABCD... düzgün çokgen
ABCD... regular polygon

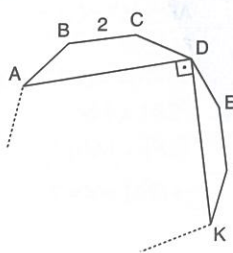
$$m(\widehat{AKE}) = 60^\circ$$

$\Rightarrow$ Düzgün çokgen kaç kenarlıdır?

How many edges does a regular polygon have?

- A) 12 B) 10 C) 9 D) 8 E) 7

16.



ABCD... düzgün çokgen
ABCD... regular polygon

$$[AD] \perp [DK]$$

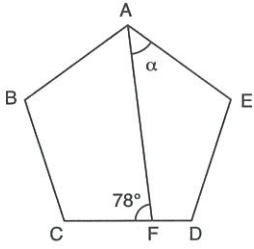
$$|BC| = 2 \text{ br}$$

$$\Rightarrow \angle(ABCD...) = ?$$

- A) 24 B) 18 C) 16 D) 12 E) 8



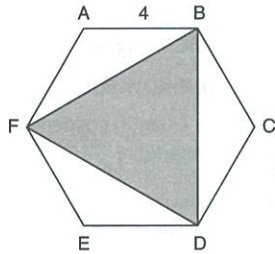
1.



ABCDE düzgün beşgen
ABCDE regular pentagon
 $m(\widehat{AFC}) = 78^\circ$
 $\Rightarrow m(\widehat{FAE}) = \alpha = ?$

- A) 42 B) 48 C) 54 D) 66 E) 96

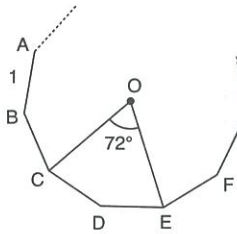
2.



ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|AB| = 4$ br
 $\Rightarrow A(\widehat{FBD}) = ?$

- A) $4\sqrt{3}$ B) 8 C) $8\sqrt{3}$ D) 12 E) $12\sqrt{3}$

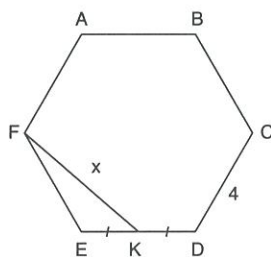
3.



ABCDE... düzgün çokgen
ABCD... regular polygon
 $|AB| = 1$ br
 $m(\widehat{COE}) = 72^\circ$
 $\Rightarrow \angle(ABCD...) = ?$

- A) 15 B) 12 C) 10 D) 8 E) 6

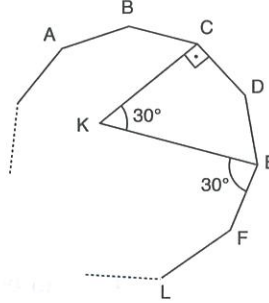
4.



ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|CD| = 4$ br
 $|EK| = |KD|$
 $\Rightarrow |FK| = x = ?$

- A) 7 B) $4\sqrt{3}$ C) $\sqrt{30}$ D) $2\sqrt{7}$ E) 4

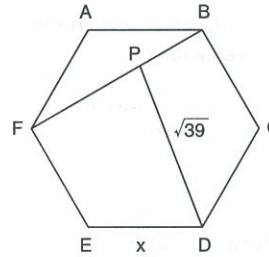
5.



ABCD... düzgün çokgen
ABCD... regular polygon
 $[CD] \perp [CK]$
 $m(\widehat{CKE}) = 30^\circ$
 $m(\widehat{KEF}) = 30^\circ$
 $\Rightarrow$ Düzgün çokgenin bir dış açısı kaç derecedir?
How many degrees is an exterior angle of a regular polygon?

- A) 30 B) 45 C) 48 D) 54 E) 66

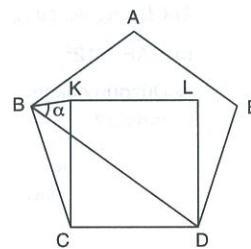
6.



ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|PD| = \sqrt{39}$ br
 $3|PB| = |FP|$
 $\Rightarrow |ED| = x = ?$

- A) 12 B) 10 C) 8 D) 6 E) 4

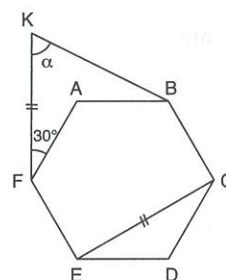
7.



ABCDE düzgün beşgen
ABCDE regular pentagon
KLCD kare
KLCD square
 $\Rightarrow m(\widehat{KBD}) = \alpha = ?$

- A) 81 B) 62 C) 45 D) 39 E) 36

8.

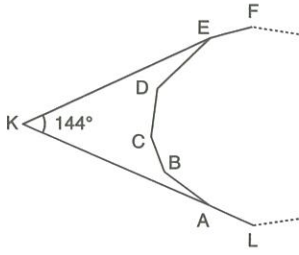


ABCDEF düzgün altıgen
ABCDEF regular hexagon
 $|KF| = |EC|$
 $m(\widehat{KFA}) = 30^\circ$
 $\Rightarrow m(\widehat{FKB}) = \alpha = ?$

- A) 90 B) 75 C) 60 D) 45 E) 30



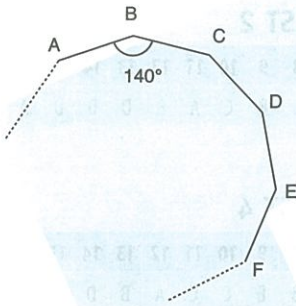
9.



ABCD... düzgün çokgen
 $ABCD... \text{ regular polygon}$
 $m(\widehat{FKL}) = 144^\circ$
 $\Rightarrow$ Düzgün çokgen kaç kenarlıdır?
How many edges does a regular polygon have?

- A) 18 B) 24 C) 32 D) 36 E) 50

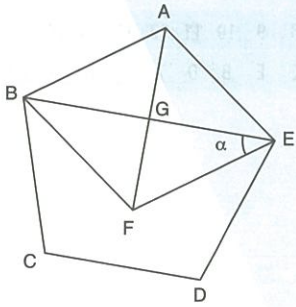
10.



ABCD... düzgün çokgen
 $ABCD... \text{ regular polygon}$
 $m(\widehat{ABC}) = 140^\circ$
 $\Rightarrow$ Düzgün çokgen kaç kenarlıdır?
How many edges does a regular polygon have?

- A) 8 B) 9 C) 10 D) 11 E) 12

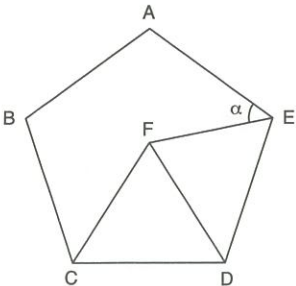
11.



ABCDE düzgün beşgen
 $ABCDE \text{ regular pentagon}$
 ABF eşkenar üçgen
 $ABF \text{ equilateral triangle}$
 $\Rightarrow m(\widehat{BEF}) = \alpha = ?$

- A) 48 B) 42 C) 36 D) 30 E) 24

12.

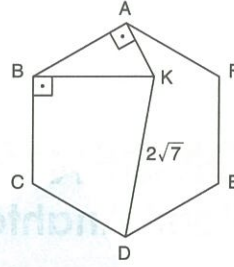


ABCDE düzgün beşgen
 $ABCDE \text{ regular pentagon}$
 CDF eşkenar üçgen
 $CDF \text{ equilateral triangle}$
 $\Rightarrow m(\widehat{FEA}) = \alpha = ?$

- A) 42 B) 40 C) 36 D) 30 E) 18

PUZA YAYINLARI

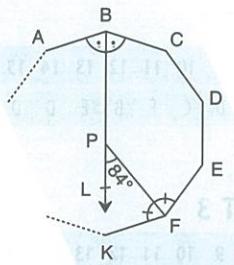
13.



ABCDEF düzgün altıgen
 $ABCDEF \text{ regular hexagon}$
 $[BA] \perp [AK]$
 $[BK] \perp [BC]$
 $|KD| = 2\sqrt{7}$ br
 $\Rightarrow \angle(ABCDEF) = ?$

- A) 12 B) $12\sqrt{3}$ C) 12 D) 24 E) $24\sqrt{3}$

14.

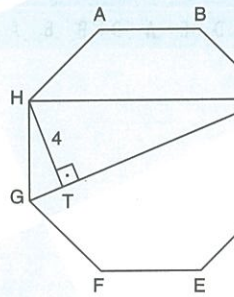


ABCD... düzgün çokgen
 $ABCD... \text{ regular polygon}$
 $m(\widehat{FPL}) = 84^\circ$
 $m(\widehat{ABL}) = m(\widehat{LBC})$
 $m(\widehat{KFP}) = m(\widehat{PFE})$
 $\Rightarrow$ Düzgün çokgen kaç kenarlıdır?
How many edges does a regular polygon have?

- A) 10 B) 12 C) 15 D) 16 E) 18

PUZA YAYINLARI

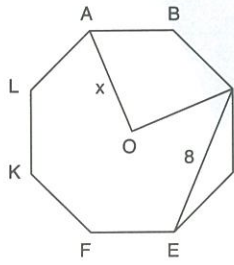
15.



ABCDEFGH düzgün sekizgen
 $ABCDEFGH \text{ regular octagon}$
 $[HT] \perp [GC]$
 $|HT| = 4$ br
 $\Rightarrow \angle(GHC) = ?$

- A) 8 B) $8\sqrt{2}$ C) 16 D) $16\sqrt{2}$ E) 32

16.



O merkezli ABCDEFLK düzgün sekizgen
 $With a center O$
 $ABCDEFLK \text{ regular octagon}$
 $|CE| = 8$ br
 $\Rightarrow |AO| = x = ?$

- A) 2 B) 5 C) $2\sqrt{7}$ D) $4\sqrt{2}$ E) 8



ÇOKGENLER POLYGONS

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	E	C	B	C	A	B	D	C	E	B	E	D	D	A

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	B	C	D	C	B	C	B	C	A	B	D	D	D	A

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	D	C	C	D	D	D	E	B	D	B	A	A	C	E

TEST 4

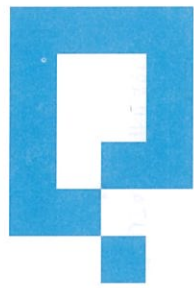
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	E	A	E	C	C	C	B	E	C	C	A	B	D	E	B

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	B	A	B	B	C	A	D	D	E	A	D	B	B	A	A

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	E	C	D	B	E	C	C	E	B	D	A	B	C	D	D

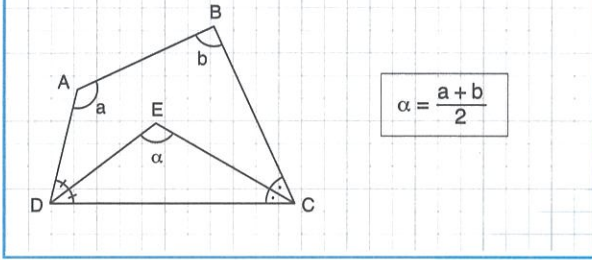


DÖRTGENLER

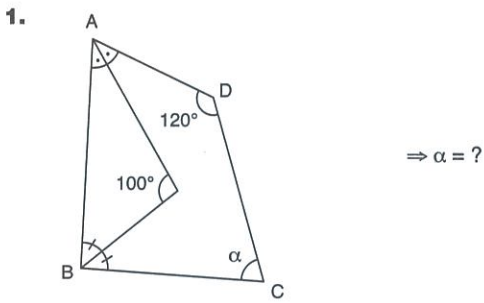
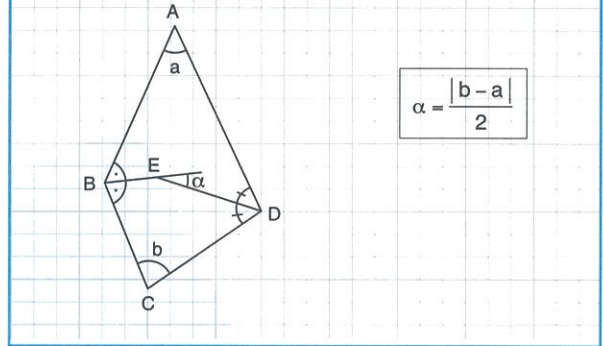
QUADRILATERALS



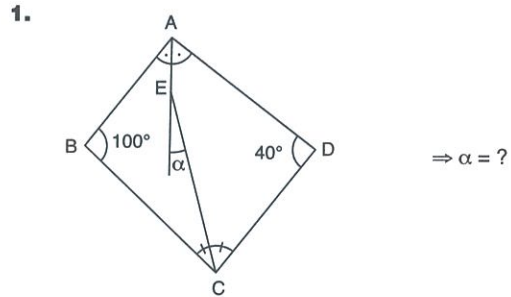
ÖZELLİK|Property 1



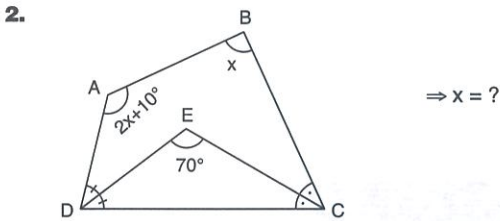
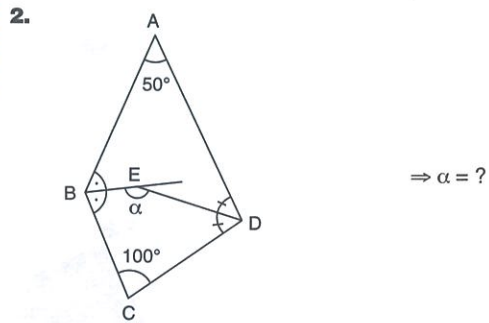
ÖZELLİK|Property 2



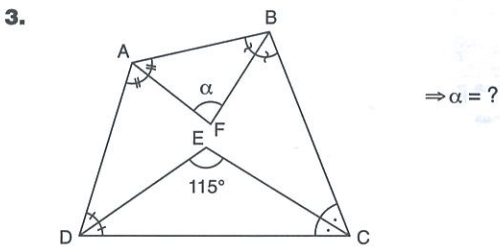
80



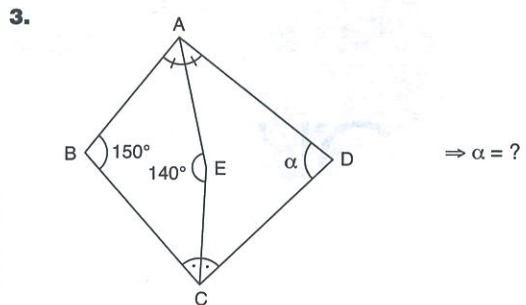
30

 $\frac{130}{3}$ 

155



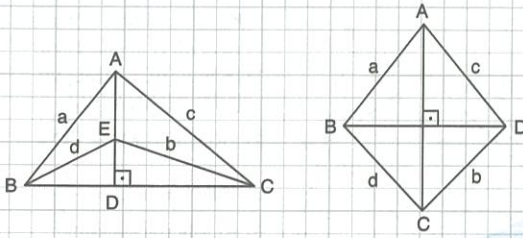
65



70

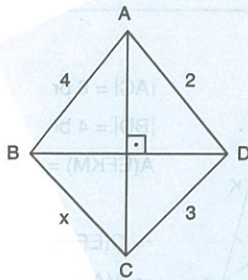


ÖZELLİK|Property 3



$$a^2 + b^2 = c^2 + d^2$$

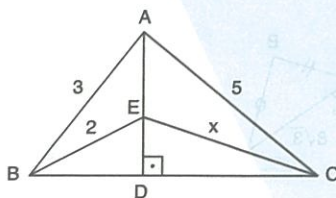
1.



$$\Rightarrow x = ?$$

$$\sqrt{21}$$

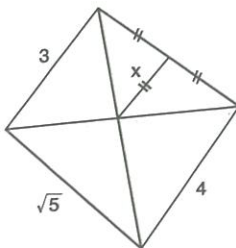
2.



$$\Rightarrow x = ?$$

$$2\sqrt{5}$$

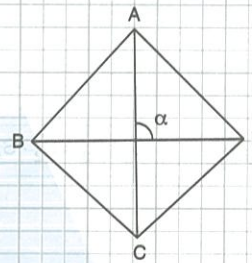
3.



$$\Rightarrow x = ?$$

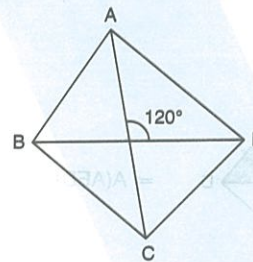
$$\sqrt{5}$$

ÖZELLİK|Property 4



$$A(ABCD) = \frac{1}{2} |AC| \cdot |BD| \cdot \sin \alpha$$

1.



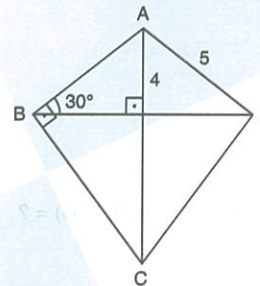
$$|AC| = 6 \text{ br}$$

$$|BD| = 4 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

$$6\sqrt{3}$$

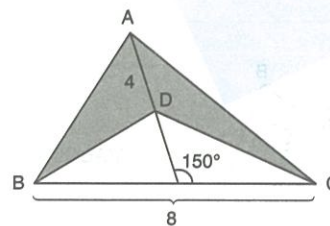
2.



$$\Rightarrow A(ABCD) = ?$$

$$24 + 32\sqrt{3}$$

3.

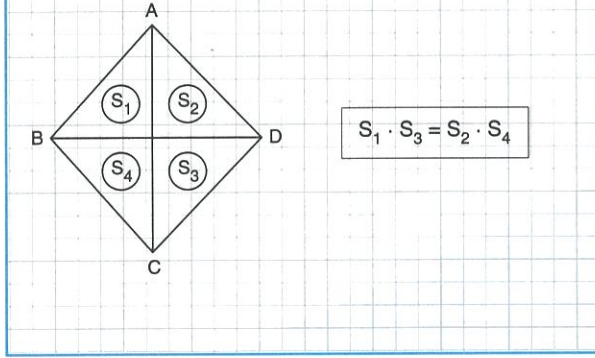


$$\Rightarrow A(ABDC) = ?$$

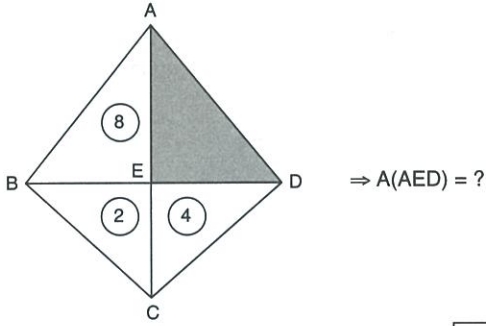
$$8$$



ÖZELLİK|Property 5

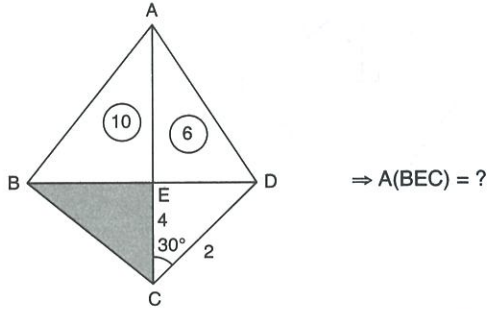


1.

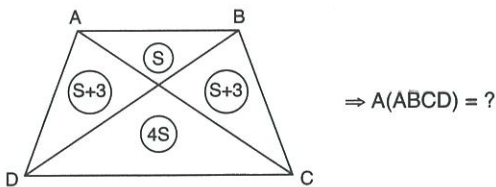


16

2.

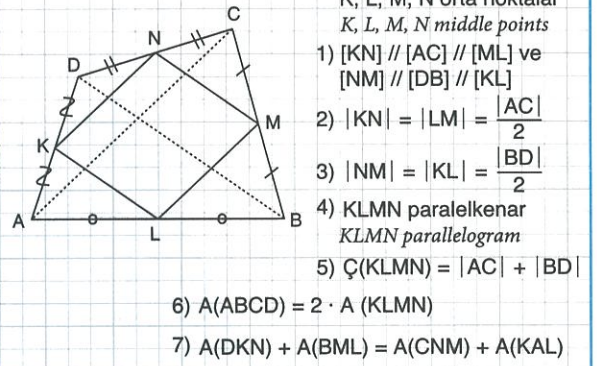
 $\frac{10}{3}$

3.

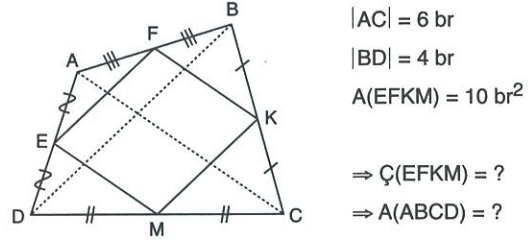


27

ÖZELLİK|Property 6

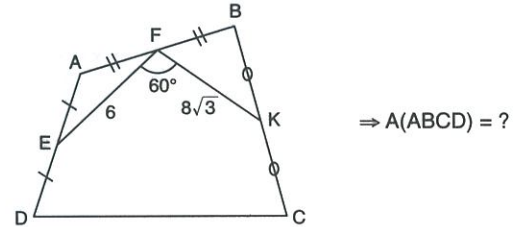


1.



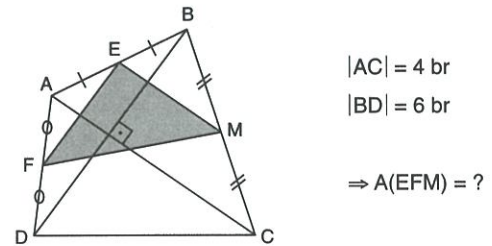
10, 20

2.



144

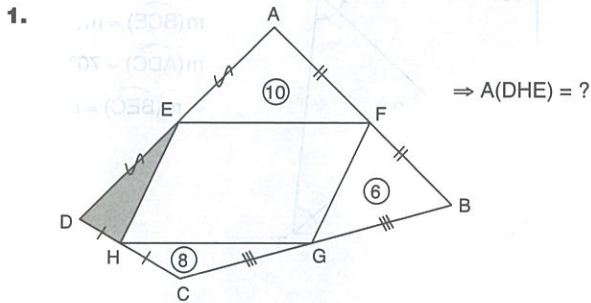
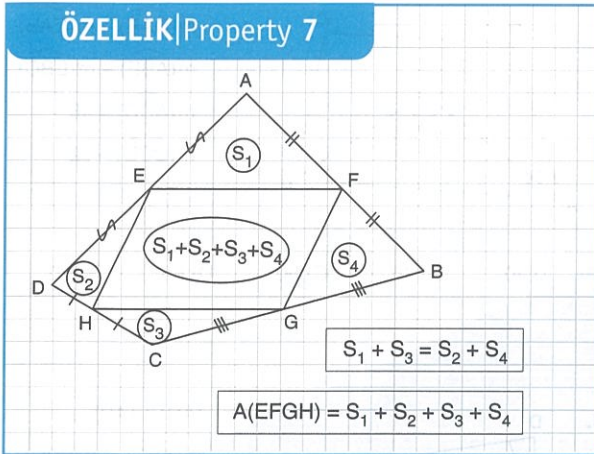
3.



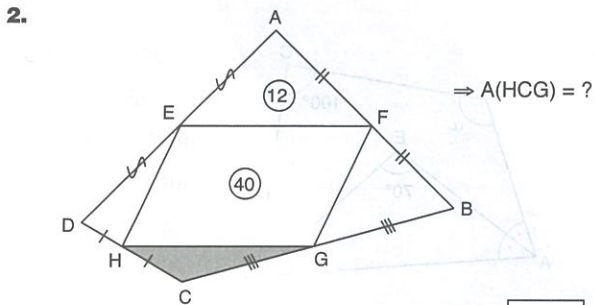
3



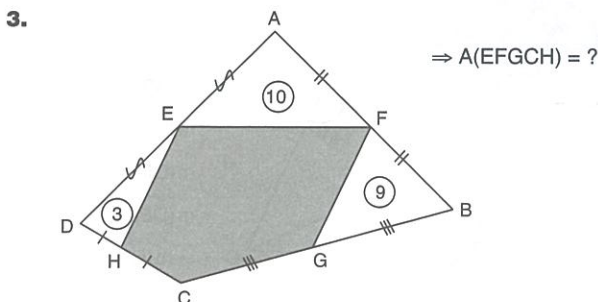
ÖZELLİK|Property 7



12

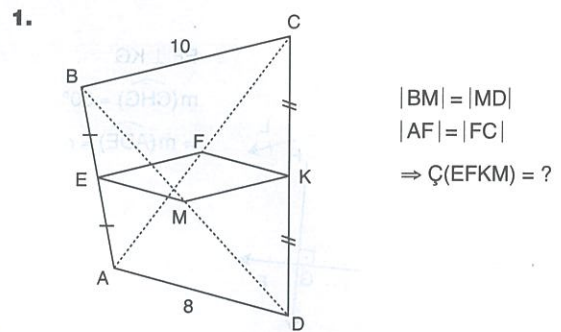
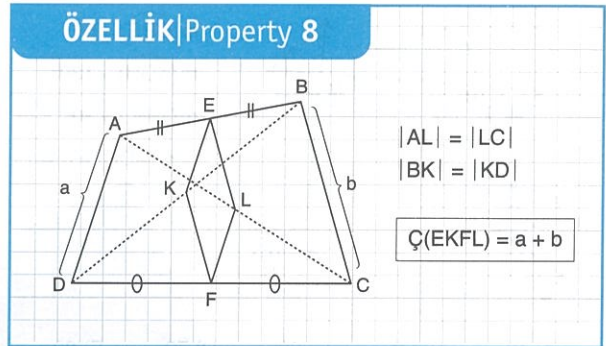


8

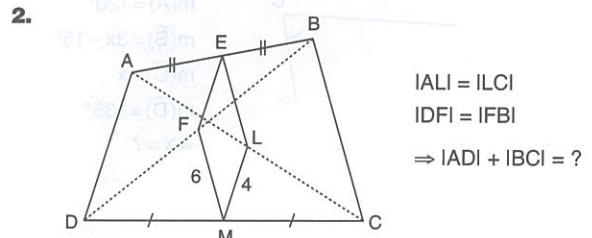


26

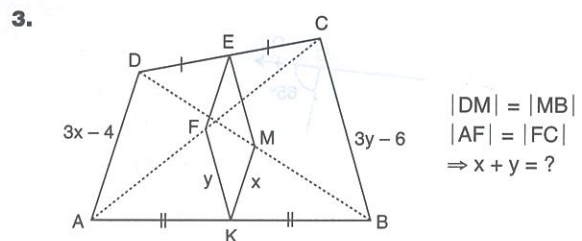
ÖZELLİK|Property 8



18



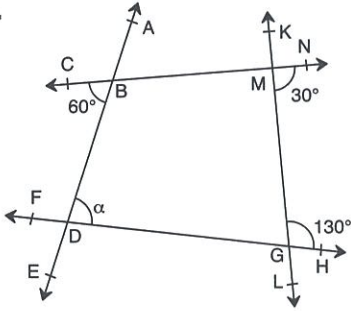
20



10



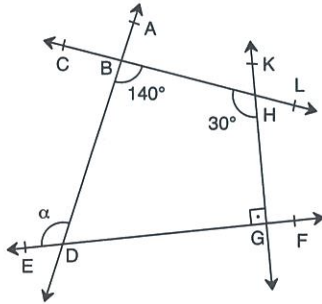
1.



$$\begin{aligned} m(\widehat{CBE}) &= 60^\circ \\ m(\widehat{KGH}) &= 130^\circ \\ m(\widehat{NML}) &= 30^\circ \\ \Rightarrow m(\widehat{ADH}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 50 C) 60 D) 70 E) 80

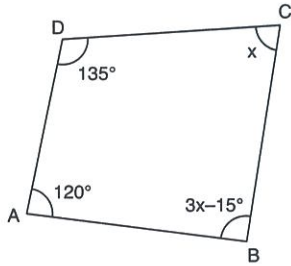
2.



$$\begin{aligned} EF &\perp KG \\ m(\widehat{CHG}) &= 30^\circ \\ \Rightarrow m(\widehat{ADE}) &= \alpha = ? \end{aligned}$$

- A) 120 B) 100 C) 80 D) 70 E) 60

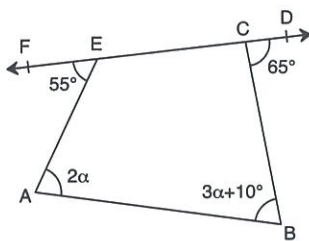
3.



$$\begin{aligned} m(\widehat{A}) &= 120^\circ \\ m(\widehat{B}) &= 3x - 15^\circ \\ m(\widehat{C}) &= x \\ m(\widehat{D}) &= 135^\circ \\ \Rightarrow x &= ? \end{aligned}$$

- A) 30 B) 45 C) 50 D) 60 E) 65

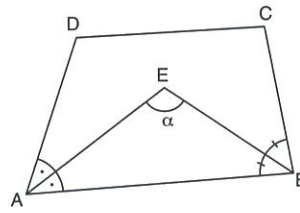
4.



$$\begin{aligned} m(\widehat{FEA}) &= 55^\circ \\ m(\widehat{EAB}) &= 2\alpha \\ m(\widehat{ABC}) &= 3\alpha + 10^\circ \\ m(\widehat{DCB}) &= 65^\circ \\ \Rightarrow \alpha &= ? \end{aligned}$$

- A) 11 B) 18 C) 22 D) 30 E) 36

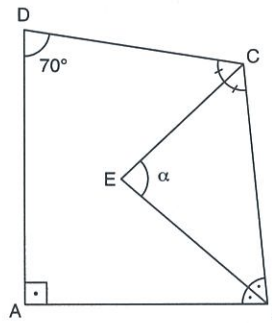
5.



$$\begin{aligned} m(\widehat{DAE}) &= m(\widehat{EAB}) \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ m(\widehat{ADC}) &= 48^\circ \\ m(\widehat{DCB}) &= 62^\circ \\ \Rightarrow m(\widehat{AEB}) &= \alpha = ? \end{aligned}$$

- A) 40 B) 45 C) 50 D) 55 E) 60

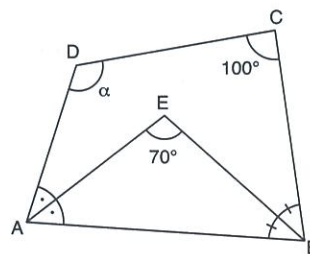
6.



$$\begin{aligned} [AD] &\perp [AB] \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ m(\widehat{BCE}) &= m(\widehat{ECD}) \\ m(\widehat{ADC}) &= 70^\circ \\ \Rightarrow m(\widehat{BEC}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 60 C) 70 D) 80 E) 85

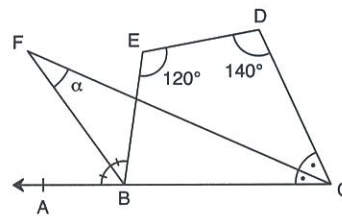
7.



$$\begin{aligned} m(\widehat{DAE}) &= m(\widehat{EAB}) \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ m(\widehat{AEB}) &= 70^\circ \\ m(\widehat{BCD}) &= 100^\circ \\ \Rightarrow m(\widehat{ADC}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 20 C) 30 D) 40 E) 50

8.

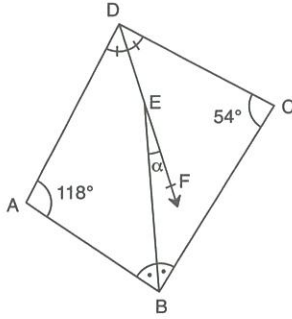


$$\begin{aligned} m(\widehat{ABF}) &= m(\widehat{FBE}) \\ m(\widehat{ACF}) &= m(\widehat{FCD}) \\ m(\widehat{CDE}) &= 140^\circ \\ m(\widehat{DEB}) &= 120^\circ \\ \Rightarrow m(\widehat{BFC}) &= \alpha = ? \end{aligned}$$

- A) 130 B) 100 C) 70 D) 50 E) 40



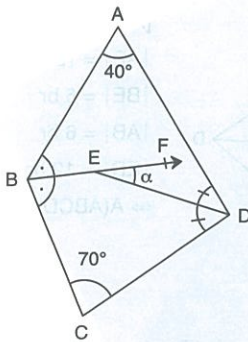
9.



$$\begin{aligned} m(\widehat{ADF}) &= m(\widehat{FDC}) \\ m(\widehat{ABE}) &= m(\widehat{EBC}) \\ m(\widehat{DAB}) &= 118^\circ \\ m(\widehat{DCB}) &= 54^\circ \\ \Rightarrow m(\widehat{BEF}) &= \alpha = ? \end{aligned}$$

- A) 27 B) 32 C) 48 D) 54 E) 64

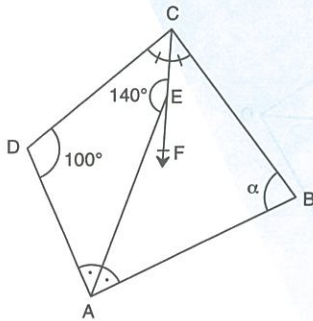
10.



$$\begin{aligned} m(\widehat{ABF}) &= m(\widehat{FBC}) \\ m(\widehat{ADE}) &= m(\widehat{EDC}) \\ m(\widehat{BAD}) &= 40^\circ \\ m(\widehat{BCD}) &= 70^\circ \\ \Rightarrow m(\widehat{FED}) &= \alpha = ? \end{aligned}$$

- A) 70 B) 50 C) 40 D) 30 E) 15

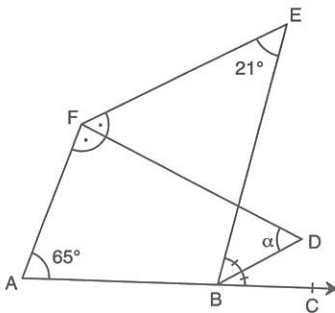
11.



$$\begin{aligned} m(\widehat{DCF}) &= m(\widehat{FCB}) \\ m(\widehat{DAE}) &= m(\widehat{EAB}) \\ m(\widehat{CEA}) &= 140^\circ \\ m(\widehat{CDA}) &= 100^\circ \\ \Rightarrow m(\widehat{CBA}) &= \alpha = ? \end{aligned}$$

- A) 10 B) 20 C) 30 D) 40 E) 50

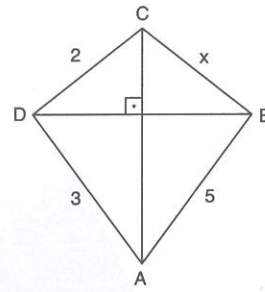
12.



$$\begin{aligned} m(\widehat{EFD}) &= m(\widehat{DFA}) \\ m(\widehat{EBD}) &= m(\widehat{DBC}) \\ m(\widehat{FEB}) &= 21^\circ \\ m(\widehat{FAC}) &= 65^\circ \\ \Rightarrow m(\widehat{FDB}) &= \alpha = ? \end{aligned}$$

- A) 22 B) 44 C) 46 D) 56 E) 68

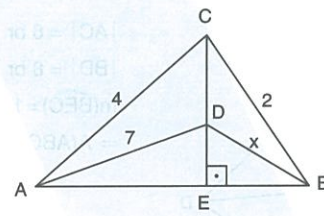
13.



$$\begin{aligned} [AC] &\perp [DB] \\ |AB| &= 5 \text{ br} \\ |CD| &= 2 \text{ br} \\ |DA| &= 3 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 4 B) $2\sqrt{5}$ C) $2\sqrt{6}$ D) $3\sqrt{6}$ E) $4\sqrt{6}$

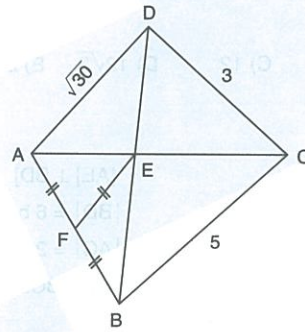
14.



$$\begin{aligned} [EC] &\perp [AB] \\ |AC| &= 4 \text{ br} \\ |AD| &= 7 \text{ br} \\ |BC| &= 2 \text{ br} \\ \Rightarrow |BD| &= x = ? \end{aligned}$$

- A) $2\sqrt{10}$ B) $\sqrt{39}$ C) $\sqrt{38}$ D) $\sqrt{37}$ E) 6

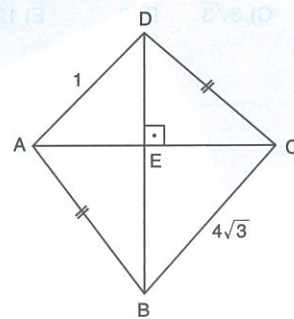
15.



$$\begin{aligned} |AF| &= |FB| = |FE| \\ |AD| &= \sqrt{30} \text{ br} \\ |DC| &= 3 \text{ br} \\ |BC| &= 5 \text{ br} \\ \Rightarrow |AB| &= ? \end{aligned}$$

- A) 6 B) $2\sqrt{11}$ C) $\sqrt{46}$ D) $4\sqrt{3}$ E) 7

16.

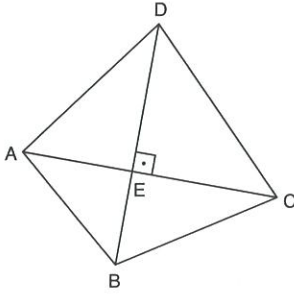


$$\begin{aligned} [AC] &\perp [BD] \\ |AD| &= 1 \text{ br} \\ |BC| &= 4\sqrt{3} \text{ br} \\ |AB| &= |DC| \\ \Rightarrow |AB| &= ? \end{aligned}$$

- A) $\sqrt{7}$ B) $\frac{7\sqrt{2}}{2}$ C) $\frac{7}{2}$ D) 7 E) 14



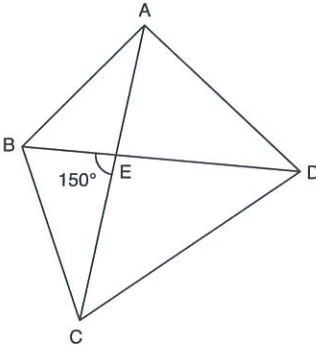
1.



$$\begin{aligned} |AC| &= 6 \text{ br} \\ |BD| &= 4 \text{ br} \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) 6 B) $6\sqrt{3}$ C) 12 D) $12\sqrt{3}$ E) 24

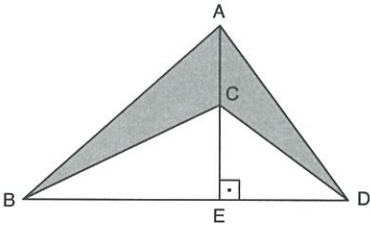
2.



$$\begin{aligned} |AC| &= 6 \text{ br} \\ |BD| &= 8 \text{ br} \\ m(\widehat{BEC}) &= 150^\circ \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) 6 B) $6\sqrt{3}$ C) 12 D) $12\sqrt{3}$ E) 24

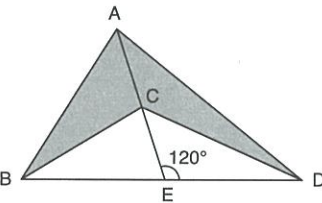
3.



$$\begin{aligned} [AE] &\perp [BD] \\ |BD| &= 6 \text{ br} \\ |AC| &= 2 \text{ br} \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) 3 B) $3\sqrt{2}$ C) $3\sqrt{3}$ D) 6 E) 12

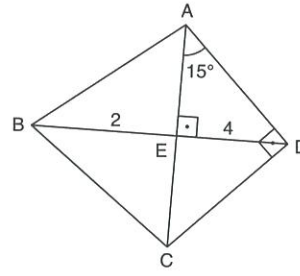
4.



$$\begin{aligned} |BD| &= 8 \text{ br} \\ |AC| &= 4 \text{ br} \\ m(\widehat{AED}) &= 120^\circ \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) 8 B) $8\sqrt{2}$ C) $8\sqrt{3}$ D) 16 E) $16\sqrt{3}$

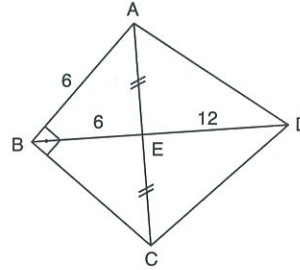
5.



$$\begin{aligned} [AE] &\perp [BD] \\ |BE| &= 2 \text{ br} \\ |ED| &= 4 \text{ br} \\ m(\widehat{DAC}) &= 15^\circ \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) 48 B) $16\sqrt{3}$ C) $16\sqrt{2}$ D) 16 E) $8\sqrt{3}$

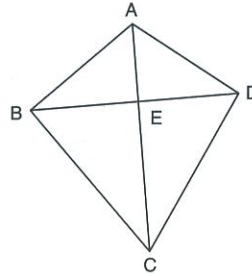
6.



$$\begin{aligned} [AB] &\perp [BC] \\ |AE| &= |EC| \\ |BE| &= 6 \text{ br} \\ |AB| &= 6 \text{ br} \\ |ED| &= 12 \text{ br} \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) 27 B) $27\sqrt{2}$ C) $48\sqrt{3}$ D) 54 E) $54\sqrt{3}$

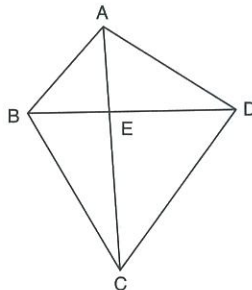
7.



$$\begin{aligned} |EC| &= 2|AE| \\ A(ABD) &= 40 \text{ br}^2 \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) 20 B) 40 C) 60 D) 80 E) 120

8.

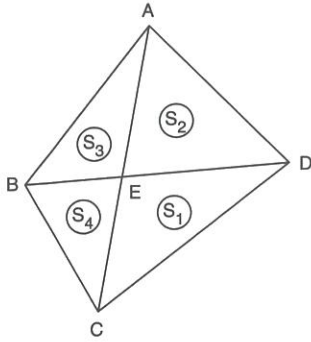


$$\begin{aligned} 3|AE| &= 2|EC| \\ A(ABCD) &= 60 \text{ br}^2 \\ \Rightarrow A(ABD) &= ? \end{aligned}$$

- A) 60 B) 48 C) 36 D) 24 E) 12



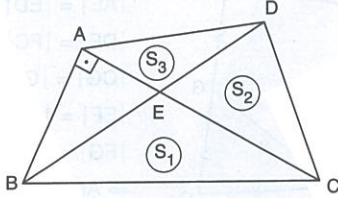
9.



$$\begin{aligned} S_2 &= 6 \text{ br}^2 \\ S_3 &= 2 \text{ br}^2 \\ S_4 &= 4 \text{ br}^2 \\ \Rightarrow S_1 &= ? \end{aligned}$$

- A) 2 B) 4 C) 6 D) 12 E) 18

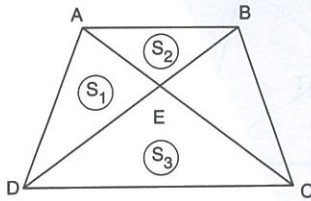
10.



$$\begin{aligned} [AB] &\perp [CA] \\ S_3 &= 4 \text{ br}^2 \\ S_2 &= 4\sqrt{3} \text{ br}^2 \\ |AE| &= 2 \text{ br} \\ |BE| &= 4 \text{ br} \\ \Rightarrow S_1 &= ? \end{aligned}$$

- A) 12 B) 6 C) $4\sqrt{3}$ D) $3\sqrt{3}$ E) $2\sqrt{3}$

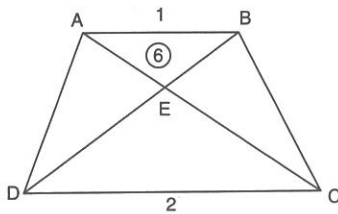
11.



$$\begin{aligned} [AB] &\parallel [DC] \\ S_2 &= 4 \text{ br}^2 \\ S_3 &= 8 \text{ br}^2 \\ \Rightarrow S_1 &= ? \end{aligned}$$

- A) 2 B) $2\sqrt{3}$ C) 4 D) $4\sqrt{2}$ E) $4\sqrt{3}$

12.

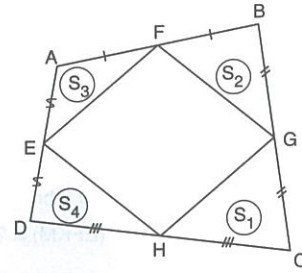


$$\begin{aligned} [AB] &\parallel [DC] \\ |AB| &= 1 \text{ br} \\ |DC| &= 2 \text{ br} \\ A(\text{ABE}) &= 6 \text{ br}^2 \\ \Rightarrow A(\text{ABCD}) &= ? \end{aligned}$$

- A) 18 B) 24 C) 27 D) 36 E) 54

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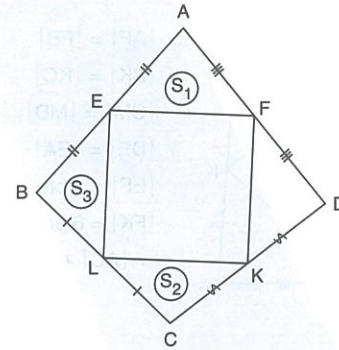
13.



$$\begin{aligned} |AF| &= |FB| \\ |BG| &= |GC| \\ |CH| &= |HD| \\ |DE| &= |EA| \\ S_2 &= 12 \text{ br}^2 \\ S_3 &= 8 \text{ br}^2 \\ S_4 &= 14 \text{ br}^2 \\ \Rightarrow S_1 &= ? \end{aligned}$$

- A) 18 B) 20 C) 24 D) 26 E) 30

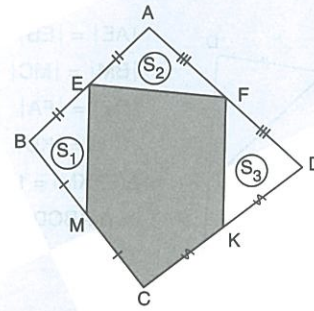
14.



$$\begin{aligned} |AE| &= |EB| \\ |BL| &= |LC| \\ |CK| &= |KD| \\ |DF| &= |FA| \\ S_1 &= 10 \text{ br}^2 \\ S_2 &= 14 \text{ br}^2 \\ S_3 &= 10 \text{ br}^2 \\ \Rightarrow A(\text{EFKL}) &= ? \end{aligned}$$

- A) 12 B) 24 C) 36 D) 48 E) 96

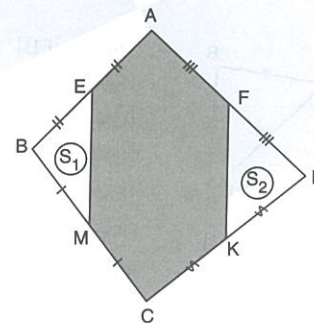
15.



$$\begin{aligned} |AE| &= |EB| \\ |BM| &= |MC| \\ |CK| &= |KD| \\ |DF| &= |FA| \\ S_1 &= 6 \text{ br}^2 \\ S_2 &= 4 \text{ br}^2 \\ S_3 &= 8 \text{ br}^2 \\ \Rightarrow A(\text{EFKCM}) &= ? \end{aligned}$$

- A) 14 B) 28 C) 30 D) 38 E) 40

16.



$$\begin{aligned} |AE| &= |EB| \\ |BM| &= |MC| \\ |CK| &= |KD| \\ |DF| &= |FA| \\ S_1 &= 5 \text{ br}^2 \\ S_2 &= 7 \text{ br}^2 \\ \Rightarrow \text{Taralı Alan} &= ? \\ \text{Shaded Area} &= ? \end{aligned}$$

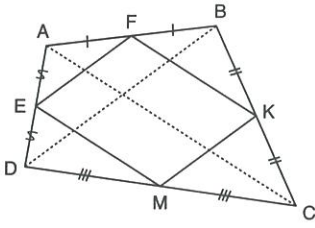
- A) 12 B) 24 C) 36 D) 48 E) 60

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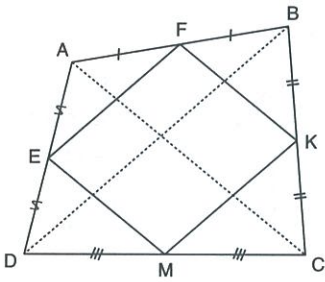
1.



$$\begin{aligned}
 |AF| &= |FB| \\
 |BK| &= |KC| \\
 |CM| &= |MD| \\
 |DE| &= |EA| \\
 |AC| &= 5 \text{ br} \\
 |BD| &= 6 \text{ br} \\
 \Rightarrow \text{Ç(EFKM)} &= ?
 \end{aligned}$$

- A) 6 B) 11 C) 22 D) 44 E) 54

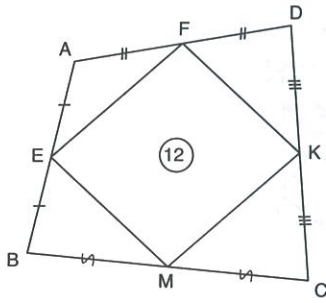
2.



$$\begin{aligned}
 |AF| &= |FB| \\
 |BK| &= |KC| \\
 |CM| &= |MD| \\
 |DE| &= |EA| \\
 |EF| &= 4 \text{ br} \\
 |FK| &= 6 \text{ br} \\
 \Rightarrow |AC| + |BD| &= ?
 \end{aligned}$$

- A) 60 B) 40 C) 30 D) 20 E) 10

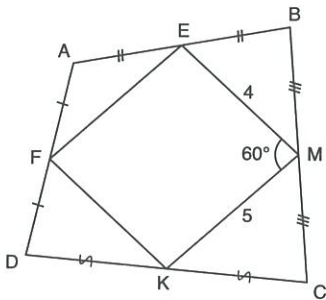
3.



$$\begin{aligned}
 |AE| &= |EB| \\
 |BM| &= |MC| \\
 |DF| &= |FA| \\
 |CK| &= |KD| \\
 A(\text{EFKM}) &= 12 \text{ br}^2 \\
 \Rightarrow A(\text{ABCD}) &= ?
 \end{aligned}$$

- A) 48 B) 24 C) 12 D) 8 E) 6

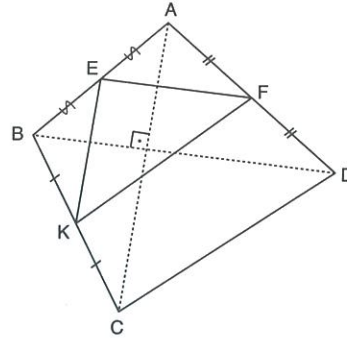
4.



$$\begin{aligned}
 |AE| &= |EB| \\
 |BM| &= |MC| \\
 |CK| &= |KD| \\
 |DF| &= |FA| \\
 |EM| &= 4 \text{ br} \\
 |KM| &= 5 \text{ br} \\
 m(\widehat{KME}) &= 60^\circ \\
 \Rightarrow A(\text{ABCD}) &= ?
 \end{aligned}$$

- A) $5\sqrt{3}$ B) 10 C) $10\sqrt{3}$ D) $15\sqrt{3}$ E) $20\sqrt{3}$

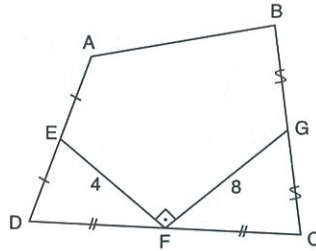
5.



$$\begin{aligned}
 |AF| &= |FD| \\
 |AE| &= |EB| \\
 |BK| &= |KC| \\
 [AC] &\perp [BD] \\
 |AC| &= 4\sqrt{2} \text{ br} \\
 |BD| &= 4 \text{ br} \\
 \Rightarrow A(\text{EFK}) &= ?
 \end{aligned}$$

- A) $2\sqrt{2}$ B) 4 C) $4\sqrt{2}$ D) 8 E) $8\sqrt{2}$

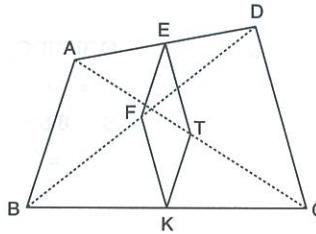
6.



$$\begin{aligned}
 [EF] &\perp [FG] \\
 |AE| &= |ED| \\
 |DF| &= |FC| \\
 |CG| &= |GB| \\
 |EF| &= 4 \text{ br} \\
 |FG| &= 8 \text{ br} \\
 \Rightarrow A(\text{ABCD}) &= ?
 \end{aligned}$$

- A) 16 B) 32 C) 36 D) 48 E) 64

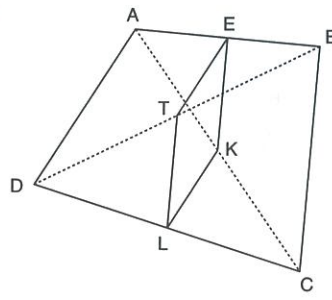
7.



$$\begin{aligned}
 |AE| &= |ED| \\
 |BK| &= |KC| \\
 |AT| &= |TC| \\
 |BF| &= |FD| \\
 |AB| &= 10 \text{ br} \\
 |DC| &= 8 \text{ br} \\
 \Rightarrow \text{Ç(EFKT)} &= ?
 \end{aligned}$$

- A) 8 B) 9 C) 16 D) 18 E) 24

8.

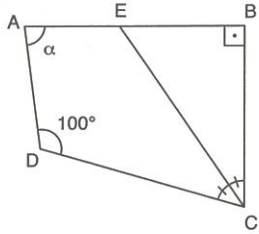


$$\begin{aligned}
 |AE| &= |EB| \\
 |DL| &= |LC| \\
 |AK| &= |KC| \\
 |BT| &= |TD| \\
 |TL| &= 6 \text{ br} \\
 |LK| &= 4 \text{ br} \\
 \Rightarrow |AD| + |BC| &= ?
 \end{aligned}$$

- A) 2 B) 4 C) 6 D) 10 E) 20



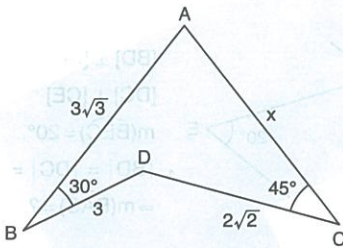
9.



$$\begin{aligned} [AB] &\perp [BC] \\ 2|EB| &= \sqrt{3}|EC| \\ m(\widehat{DCE}) &= m(\widehat{ECB}) \\ m(\widehat{ADC}) &= 100^\circ \\ \Rightarrow m(\widehat{DAB}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 70 C) 80 D) 110 E) 150

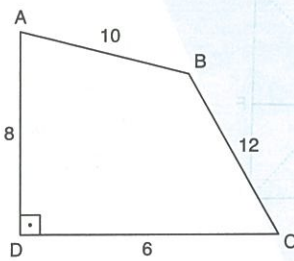
10.



$$\begin{aligned} |AB| &= 3\sqrt{3} \text{ br} \\ |BD| &= 3 \text{ br} \\ |DC| &= 2\sqrt{2} \text{ br} \\ m(\widehat{ABD}) &= 30^\circ \\ m(\widehat{ACD}) &= 45^\circ \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $\sqrt{5}$ B) $2\sqrt{5}$ C) $2+\sqrt{5}$ D) $3+\sqrt{5}$ E) 6

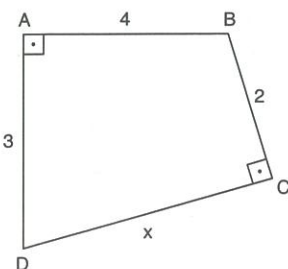
11.



$$\begin{aligned} [AD] &\perp [DC] \\ |AD| &= 8 \text{ br} \\ |DC| &= 6 \text{ br} \\ |BC| &= 12 \text{ br} \\ |AB| &= 10 \text{ br} \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) 16 B) 32 C) 48 D) 72 E) 86

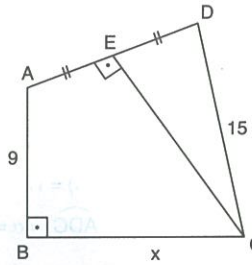
12.



$$\begin{aligned} [AD] &\perp [AB] \\ [BC] &\perp [DC] \\ |AD| &= 3 \text{ br} \\ |AB| &= 4 \text{ br} \\ |BC| &= 2 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) $2\sqrt{3}$ B) $3\sqrt{2}$ C) 4 D) $\sqrt{21}$ E) $\sqrt{29}$

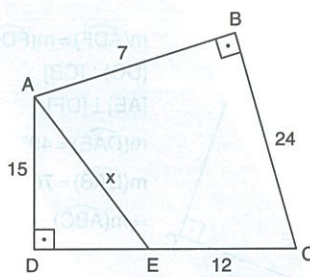
13.



$$\begin{aligned} [AD] &\perp [EC] \\ [AB] &\perp [BC] \\ |AB| &= 9 \text{ br} \\ |AE| &= |ED| \\ |CD| &= 15 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 9 B) 12 C) 15 D) 17 E) 25

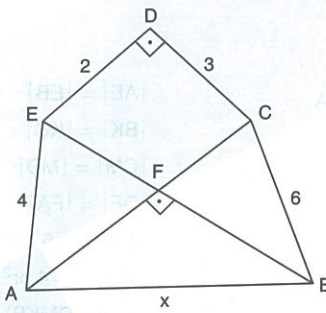
14.



$$\begin{aligned} [AB] &\perp [BC] \\ [AD] &\perp [DC] \\ |AD| &= 15 \text{ br} \\ |AB| &= 7 \text{ br} \\ |BC| &= 24 \text{ br} \\ |EC| &= 12 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) 8 B) 12 C) 17 D) 20 E) 25

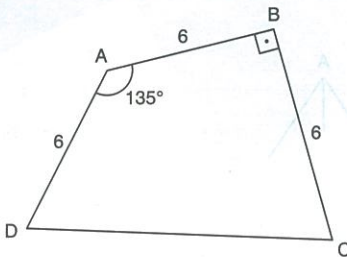
15.



$$\begin{aligned} [ED] &\perp [DC] \\ [AC] &\perp [EB] \\ |DE| &= 2 \text{ br} \\ |EA| &= 4 \text{ br} \\ |BC| &= 6 \text{ br} \\ |CD| &= 3 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 4 B) $3\sqrt{3}$ C) 6 D) $\sqrt{39}$ E) 7

16.

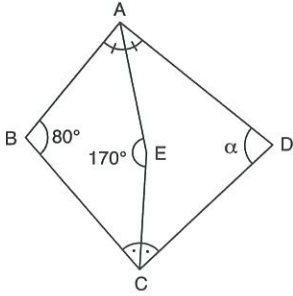


$$\begin{aligned} [AB] &\perp [BC] \\ m(\widehat{DAB}) &= 135^\circ \\ |AB| &= 6 \text{ br} \\ |AD| &= 6 \text{ br} \\ |BC| &= 6 \text{ br} \\ \Rightarrow A(ABCD) &= ? \end{aligned}$$

- A) $18(\sqrt{3}+1)$ B) $18(\sqrt{2}+1)$ C) $9(\sqrt{3}+1)$ D) $9(\sqrt{2}+1)$ E) $9\sqrt{2}$



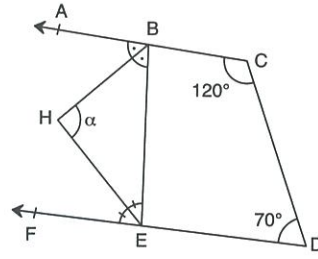
1.



$$\begin{aligned} m(\widehat{D}) &< 100^\circ \\ m(\widehat{BAE}) &= m(\widehat{EAD}) \\ m(\widehat{BCE}) &= m(\widehat{ECD}) \\ m(\widehat{ABC}) &= 80^\circ \\ m(\widehat{AEC}) &= 170^\circ \\ \Rightarrow m(\widehat{ADC}) &= \alpha = ? \end{aligned}$$

- A) 90 B) 80 C) 70 D) 60 E) 50

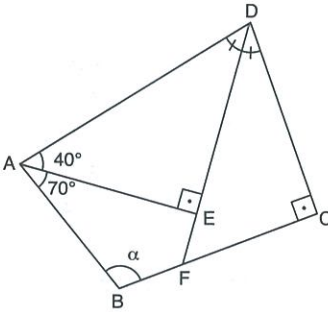
5.



$$\begin{aligned} m(\widehat{ABH}) &= m(\widehat{HBE}) \\ m(\widehat{FEH}) &= m(\widehat{HEB}) \\ m(\widehat{ACD}) &= 120^\circ \\ m(\widehat{CDF}) &= 70^\circ \\ \Rightarrow m(\widehat{BHE}) &= \alpha = ? \end{aligned}$$

- A) 85 B) 95 C) 100 D) 105 E) 110

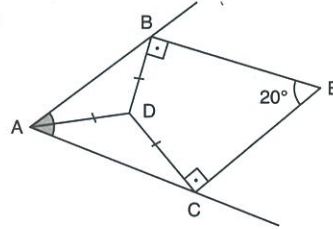
2.



$$\begin{aligned} m(\widehat{ADF}) &= m(\widehat{FDC}) \\ [DC] &\perp [CB] \\ [AE] &\perp [DF] \\ m(\widehat{DAE}) &= 40^\circ \\ m(\widehat{EAB}) &= 70^\circ \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 80 B) 70 C) 60 D) 50 E) 40

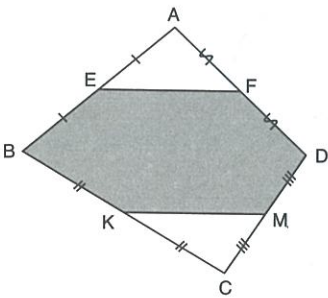
6.



$$\begin{aligned} [BD] &\perp [BE] \\ [DC] &\perp [CE] \\ m(\widehat{BEC}) &= 20^\circ \\ |BD| &= |DC| = |AD| \\ \Rightarrow m(\widehat{BAC}) &= ? \end{aligned}$$

- A) 160 B) 120 C) 100 D) 80 E) 40

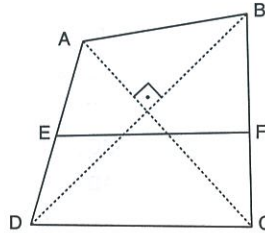
3.



$$\begin{aligned} |AE| &= |EB| \\ |BK| &= |KC| \\ |CM| &= |MD| \\ |DF| &= |FA| \\ A(\widehat{AEF}) &= 6 \text{ br}^2 \\ A(\widehat{KMC}) &= 4 \text{ br}^2 \\ \Rightarrow A(\widehat{EFDKMB}) &= ? \end{aligned}$$

- A) 45 B) 30 C) 20 D) 15 E) 10

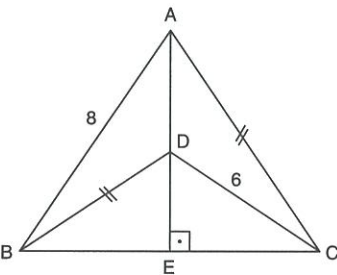
7.



$$\begin{aligned} |AE| &= |ED| \\ |BF| &= |FC| \\ [AC] &\perp [BD] \\ |AC| &= 6 \text{ br} \\ |BD| &= 12 \text{ br} \\ \Rightarrow |EF| &= ? \end{aligned}$$

- A) $3\sqrt{5}$ B) $6\sqrt{5}$ C) $9\sqrt{2}$ D) $12\sqrt{5}$ E) $15\sqrt{2}$

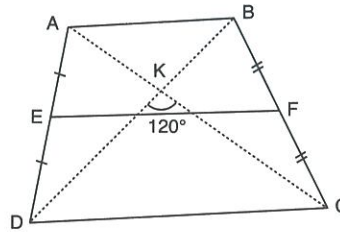
4.



$$\begin{aligned} [AE] &\perp [BC] \\ |AC| &= |BD| \\ |DC| &= 6 \text{ br} \\ |AB| &= 8 \text{ br} \\ \Rightarrow |AC| &= x = ? \end{aligned}$$

- A) $10\sqrt{2}$ B) 10 C) $5\sqrt{2}$ D) 5 E) 4

8.

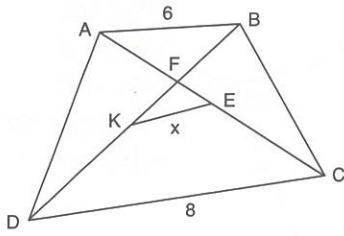


$$\begin{aligned} |AE| &= |ED| \\ |BF| &= |FC| \\ m(\widehat{DKC}) &= 120^\circ \\ |AC| &= 8 \text{ br} \\ |BD| &= 8 \text{ br} \\ \Rightarrow |EF| &= ? \end{aligned}$$

- A) $4\sqrt{3}$ B) 6 C) $8\sqrt{2}$ D) $8\sqrt{3}$ E) 10



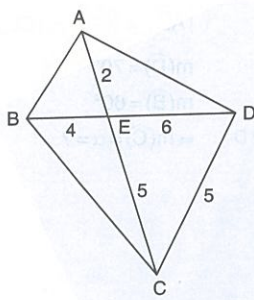
9.



$$\begin{aligned} |KB| &= |DK| \\ |AE| &= |EC| \\ |AB| &= 6 \text{ br} \\ |DC| &= 8 \text{ br} \\ x &\in \mathbb{Z} \\ |KE| &= x \\ \Rightarrow \sum x &=? \end{aligned}$$

- A) 18 B) 20 C) 21 D) 22 E) 24

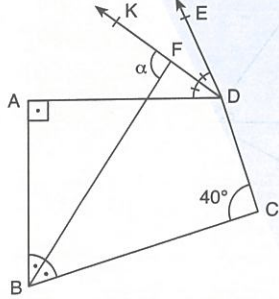
10.



$$\begin{aligned} |AE| &= 2 \text{ br} \\ |BE| &= 4 \text{ br} \\ |CE| &= 5 \text{ br} \\ |CD| &= 5 \text{ br} \\ |DE| &= 6 \text{ br} \\ \Rightarrow A(ABCD) &=? \end{aligned}$$

- A) 14 B) 18 C) 20 D) 28 E) 40

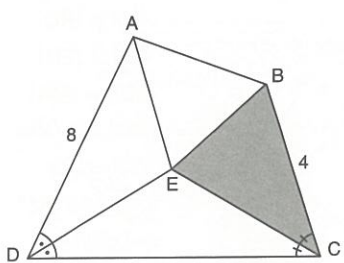
11.



$$\begin{aligned} m(\widehat{ADK}) &= m(\widehat{KDE}) \\ m(\widehat{ABF}) &= m(\widehat{FBC}) \\ m(\widehat{BCE}) &= 40^\circ \\ [AD] &\perp [AB] \\ \Rightarrow m(\widehat{KFB}) &= \alpha = ? \end{aligned}$$

- A) 115 B) 65 C) 50 D) 40 E) 25

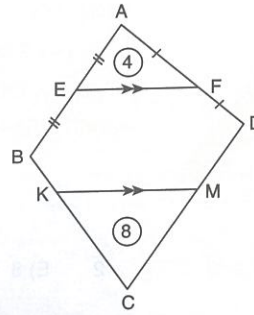
12.



$$\begin{aligned} m(\widehat{ADE}) &= m(\widehat{EDC}) \\ m(\widehat{DCE}) &= m(\widehat{ECB}) \\ |AD| &= 8 \text{ br} \\ |BC| &= 4 \text{ br} \\ A(AED) &= 8\sqrt{3} \text{ br}^2 \\ \Rightarrow A(EBC) &=? \end{aligned}$$

- A) $3\sqrt{3}$ B) $4\sqrt{3}$ C) $6\sqrt{3}$ D) 12 E) $12\sqrt{3}$

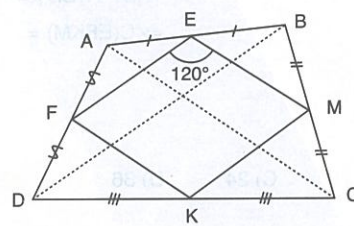
13.



$$\begin{aligned} [EF] &\parallel [KM] \\ |AE| &= |BE| \\ |AF| &= |FD| \\ |KC| &= 2|BK| \\ A(AEF) &= 4 \text{ br}^2 \\ A(KMC) &= 8 \text{ br}^2 \\ \Rightarrow A(ABCD) &=? \end{aligned}$$

- A) 12 B) 16 C) 24 D) 30 E) 34

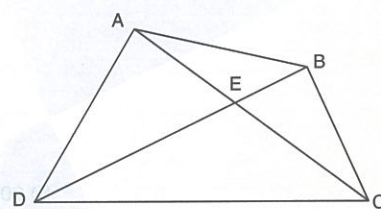
14.



$$\begin{aligned} |AE| &= |EB| \\ |BM| &= |MC| \\ |CK| &= |KD| \\ |DF| &= |FA| \\ m(\widehat{FEM}) &= 120^\circ \\ |AC| &= 8 \text{ br} \\ |BD| &= 6 \text{ br} \\ \Rightarrow A(EFKM) &=? \end{aligned}$$

- A) 3 B) $3\sqrt{3}$ C) 6 D) $6\sqrt{3}$ E) 12

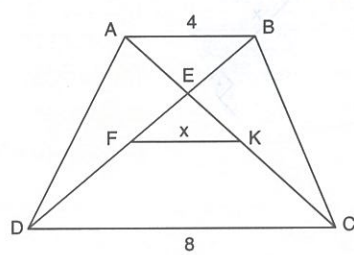
15.



$$\begin{aligned} A(AEB) &= S - 2 \\ A(BEC) &= S - 1 \\ A(DEC) &= 3S - 1 \\ A(AED) &= S + 1 \\ \Rightarrow A(ABCD) &=? \end{aligned}$$

- A) 9 B) 12 C) 15 D) 16 E) 18

16.

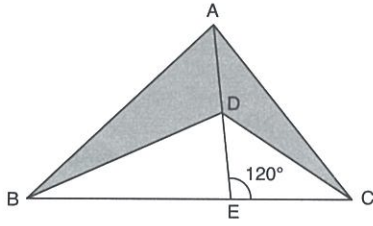


$$\begin{aligned} x &\in \mathbb{Z}^+ \\ |AK| &= |KC| \\ |BF| &= |FD| \\ |AB| &= 4 \text{ br} \\ |DC| &= 8 \text{ br} \\ \Rightarrow \min(|FK|) &= x = ? \end{aligned}$$

- A) 1 B) 2 C) 3 D) 4 E) 5



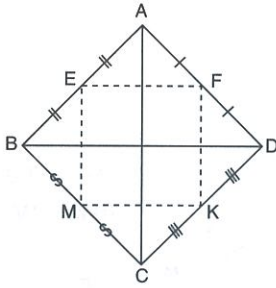
1.



$$\begin{aligned} |AD| &= 2 \text{ br} \\ |BC| &= 4\sqrt{2} \text{ br} \\ m(\widehat{AEC}) &= 120^\circ \\ \Rightarrow A(ABDC) &= ? \end{aligned}$$

- A) $2\sqrt{2}$ B) 4 C) $2\sqrt{6}$ D) $4\sqrt{2}$ E) 8

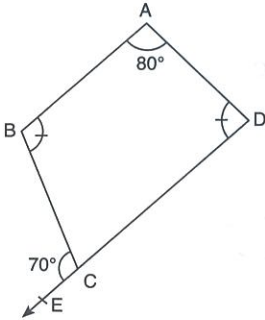
2.



$$\begin{aligned} |BE| &= |EA| \\ |AF| &= |FD| \\ |BM| &= |MC| \\ |CK| &= |KD| \\ |AC| + |BD| &= 12 \text{ br} \\ \Rightarrow \text{Ç}(EFKM) &= ? \end{aligned}$$

- A) 6 B) 12 C) 24 D) 36 E) 48

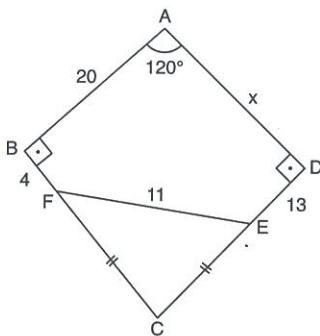
3.



$$\begin{aligned} m(\widehat{A}) &= 80^\circ \\ m(\widehat{BCE}) &= 70^\circ \\ m(\widehat{B}) &= m(\widehat{D}) \\ \Rightarrow m(\widehat{ABC}) &= ? \end{aligned}$$

- A) 65 B) 70 C) 80 D) 85 E) 90

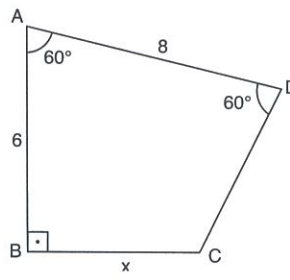
4.



$$\begin{aligned} |AB| &= 20 \text{ br} \\ |BF| &= 4 \text{ br} \\ |DE| &= 13 \text{ br} \\ |FE| &= 11 \text{ br} \\ |FC| &= |CE| \\ m(\widehat{A}) &= 120^\circ \\ \Rightarrow |AD| &= x = ? \end{aligned}$$

- A) 6 B) 7 C) 8 D) 9 E) 10

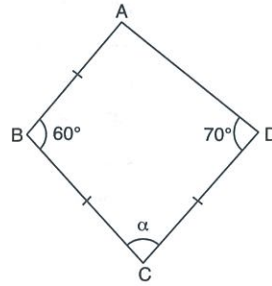
5.



$$\begin{aligned} [AB] &\perp [BC] \\ |AB| &= 6 \text{ br} \\ |AD| &= 8 \text{ br} \\ m(\widehat{A}) &= m(\widehat{D}) = 60^\circ \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) $3\sqrt{3}$ D) $4\sqrt{3}$ E) $6\sqrt{3}$

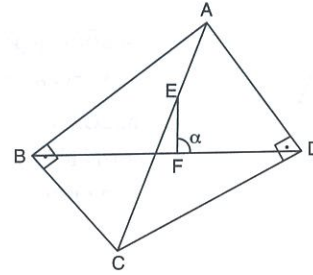
6.



$$\begin{aligned} |AB| &= |BC| = |CD| \\ m(\widehat{D}) &= 70^\circ \\ m(\widehat{B}) &= 60^\circ \\ \Rightarrow m(\widehat{C}) &= \alpha = ? \end{aligned}$$

- A) 100 B) 80 C) 60 D) 50 E) 40

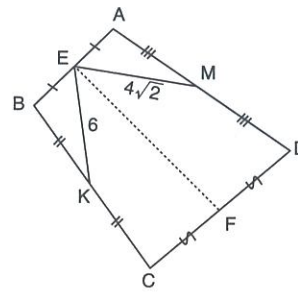
7.



$$\begin{aligned} [AB] &\perp [BC] \\ [AD] &\perp [DC] \\ |BF| &= |FD| \\ |AE| &= |EC| \\ \Rightarrow m(\widehat{EFG}) &= \alpha = ? \end{aligned}$$

- A) 120 B) 110 C) 105 D) 100 E) 90

8.

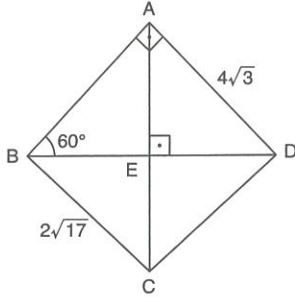


$$\begin{aligned} |AE| &= |EB| \\ |BK| &= |KC| \\ |CF| &= |FD| \\ |DM| &= |MA| \\ |EM| &= 4\sqrt{2} \text{ br} \\ |EK| &= 6 \text{ br} \\ m(\widehat{MEK}) &= 135^\circ \\ \Rightarrow |EF| &= ? \end{aligned}$$

- A) $2\sqrt{5}$ B) $12\sqrt{2}$ C) 18 D) 24 E) 48



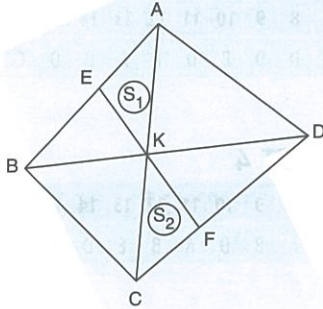
9.



$$\begin{aligned} [BA] &\perp [AD] \\ [AE] &\perp [BD] \\ m(\widehat{ABD}) &= 60^\circ \\ |AD| &= 4\sqrt{3} \\ |BC| &= 2\sqrt{17} \\ \Rightarrow |CD| &= x = ? \end{aligned}$$

- A) 10 B) $\sqrt{79}$ C) 8 D) $2\sqrt{15}$ E) 6

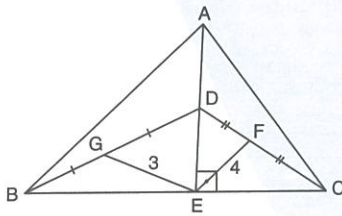
10.



$$\begin{aligned} |AE| &= |EB| \\ 3|CF| &= 2|FD| \\ A(AKD) &= 5 \text{ br}^2 \\ A(BKC) &= 12 \text{ br}^2 \\ A(AEK) &= S_1 \\ A(KFC) &= S_2 \\ \Rightarrow S_1 \cdot S_2 &= ? \end{aligned}$$

- A) 9 B) 10 C) 12 D) 18 E) 24

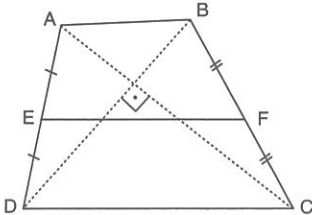
11.



$$\begin{aligned} [AE] &\perp [BC] \\ |BG| &= |GD| \\ |DF| &= |FC| \\ |GE| &= 3 \text{ br} \\ |FE| &= 4 \text{ br} \\ |AC| &= a \\ |AB| &= b \\ \Rightarrow a^2 - b^2 &= ? \end{aligned}$$

- A) 5 B) $2\sqrt{7}$ C) $4\sqrt{3}$ D) 18 E) 28

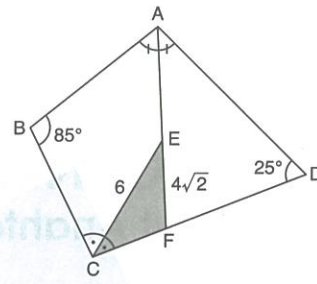
12.



$$\begin{aligned} [AC] &\perp [BD] \\ |AE| &= |ED| \\ |BF| &= |FC| \\ |AC| &= 15 \text{ br} \\ |BD| &= 20 \text{ br} \\ \Rightarrow |EF| &= ? \end{aligned}$$

- A) 50 B) 25 C) 20 D) $\frac{25}{2}$ E) 12

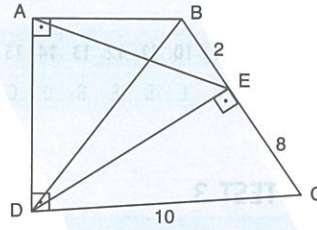
13.



$$\begin{aligned} m(\widehat{BCE}) &= m(\widehat{ECD}) \\ m(\widehat{BAF}) &= m(\widehat{FAD}) \\ m(\widehat{ABC}) &= 85^\circ \\ m(\widehat{ADC}) &= 25^\circ \\ |EF| &= 4\sqrt{2} \text{ br} \\ |CE| &= 6 \text{ br} \\ \Rightarrow A(CEF) &= ? \end{aligned}$$

- A) 6 B) $6\sqrt{2}$ C) $6\sqrt{3}$ D) 12 E) $12\sqrt{2}$

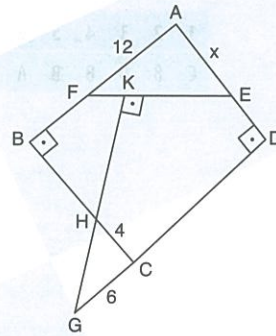
14.



$$\begin{aligned} [AB] &\perp [AD] \\ [AD] &\perp [DC] \\ [DE] &\perp [BC] \\ |BE| &= 2 \text{ br} \\ |EC| &= 8 \text{ br} \\ |DC| &= 10 \text{ br} \\ \Rightarrow |AB| &= ? \end{aligned}$$

- A) 1 B) 2 C) $2\sqrt{3}$ D) 6 E) 8

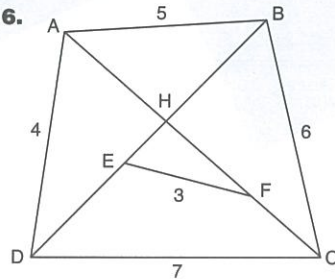
15.



$$\begin{aligned} [GK] &\perp [FE] \\ [AB] &\perp [BC] \\ [AD] &\perp [DG] \\ |AF| &= 12 \text{ br} \\ |HC| &= 4 \text{ br} \\ |GC| &= 6 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) 18 B) 16 C) 12 D) 8 E) 6

16.



$$\begin{aligned} |AF| &= |FC| \\ |BE| &= |ED| \\ |EF| &= 3 \text{ br} \\ |AD| &= 4 \text{ br} \\ |BC| &= 6 \text{ br} \\ |AB| &= 5 \text{ br} \\ |DC| &= 7 \text{ br} \\ \Rightarrow |AC|^2 + |BD|^2 &= ? \end{aligned}$$

- A) 90 B) 81 C) 80 D) 78 E) 72



DÖRTGENLER QUADRILATERALS

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	C	A	C	D	D	D	E	B	E	B	E	B	D	C	B

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	D	C	A	E	E	D	D	B	D	E	A	D	D	C

TEST 3

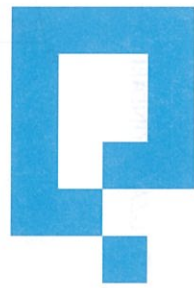
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	B	E	A	E	D	E	A	C	D	D	B	C	D	B

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	B	C	A	D	A	A	B	D	A	B	E	D	C	C

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	D	B	B	A	E	A	A	C	E	D	B	B	A	A

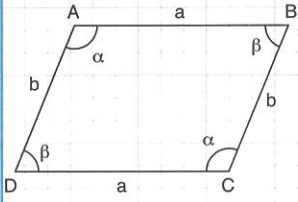


PARALELKENAR

PARALLELOGRAM



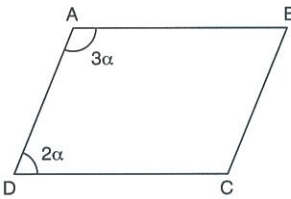
ÖZELLİK|Property 1



ABCD paralelkenar
ABCD parallelogram
 $[AB] \parallel [DC]$
 $[AD] \parallel [BC]$

$$\alpha + \beta = 180^\circ$$

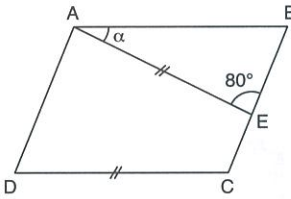
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow m(\widehat{C}) = ?$

108

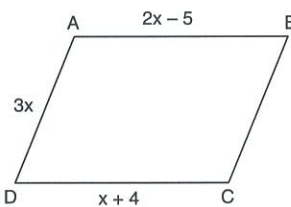
2.



ABCD paralelkenar
ABCD parallelogram
 $|AE| = |DC|$
 $\Rightarrow \alpha = ?$

20

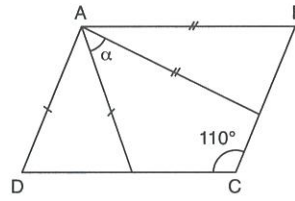
3.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow |BC| = ?$

27

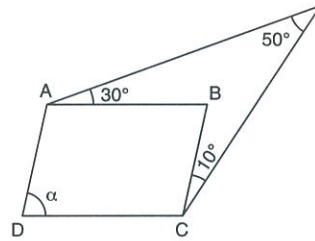
4.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow \alpha = ?$

30

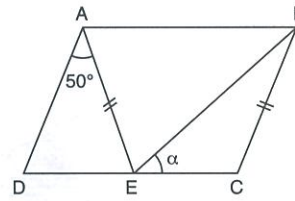
5.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow \alpha = ?$

90

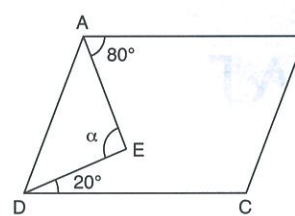
6.



ABCD paralelkenar
ABCD parallelogram
 $|BE| = |DC|$
 $|BC| = |AE|$
 $\Rightarrow \alpha = ?$

50

7.

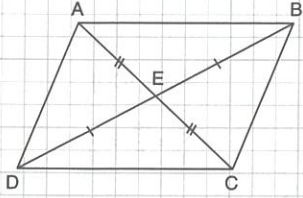


ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow \alpha = ?$

100

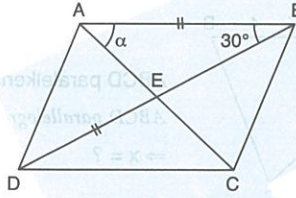


ÖZELLİK|Property 2



ABCD paralelkenar
ABCD parallelogram
 $|AE| = |EC|$
 $|DE| = |EB|$

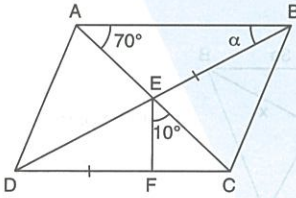
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow \alpha = ?$

75

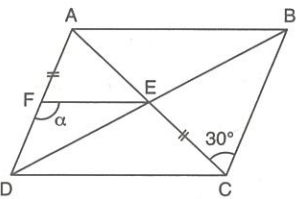
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow \alpha = ?$

20

3.

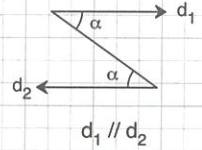
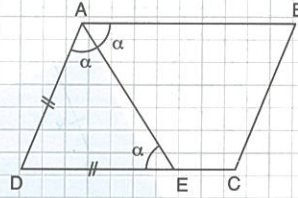


ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow \alpha = ?$

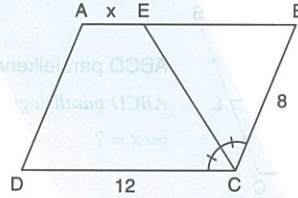
105

ÖZELLİK|Property 3

ABCD paralelkenar
ABCD parallelogram



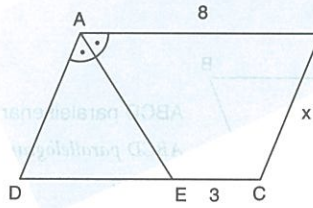
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

4

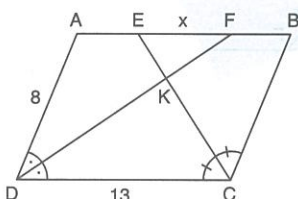
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

5

3.



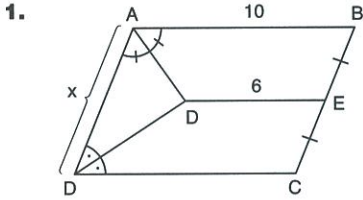
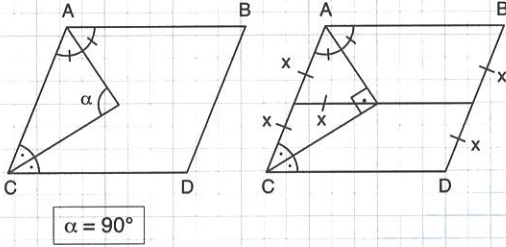
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

3



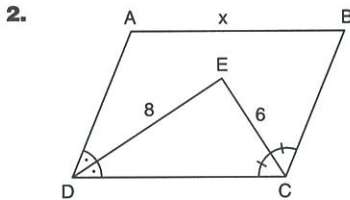
ÖZELLİK|Property 4

ABCD paralelkenar | ABCD parallelogram



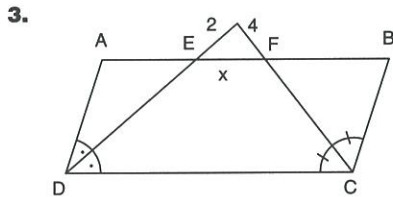
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

8



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

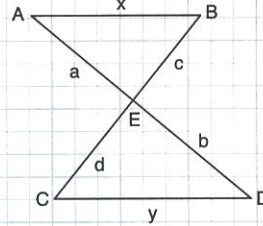
10



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

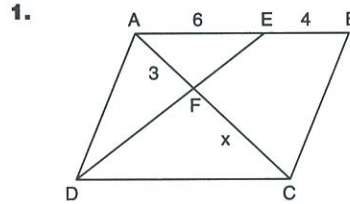
$2\sqrt{5}$

ÖZELLİK|Property 5



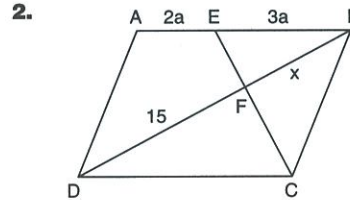
[AB] // [CD]

$$\frac{x}{y} = \frac{a}{b} = \frac{c}{d}$$



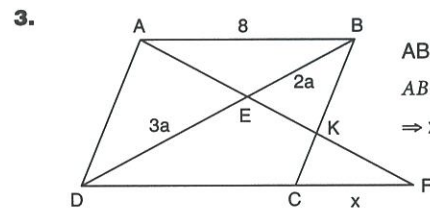
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

5



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

9

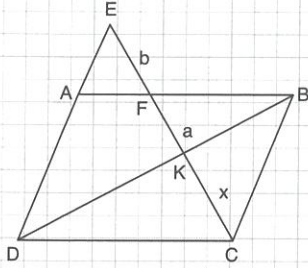


ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

4



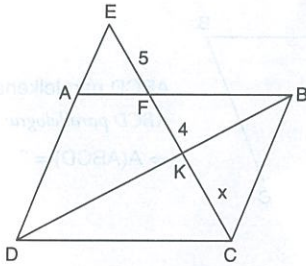
ÖZELLİK|Property 6



ABCD paralelkenar
ABCD parallelogram

$$x^2 = a(a + b)$$

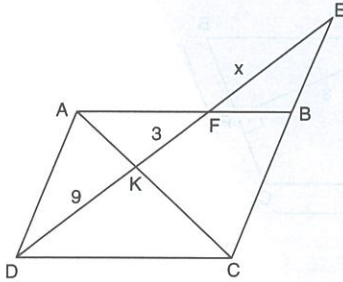
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

6

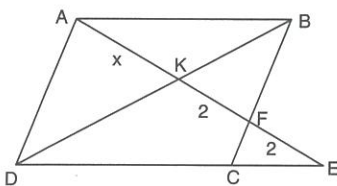
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

24

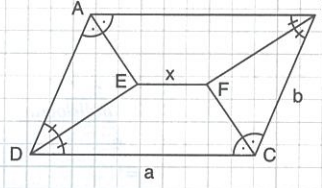
3.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

$2\sqrt{2}$

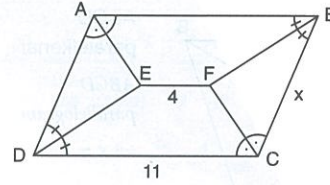
ÖZELLİK|Property 7



ABCD paralelkenar
ABCD parallelogram

$$x = a - b$$

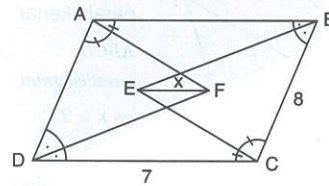
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

7

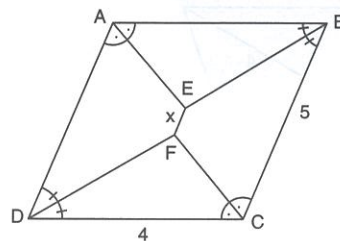
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

1

3.

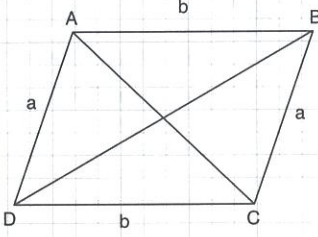


ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

1

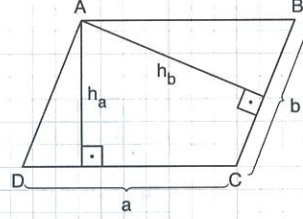


ÖZELLİK|Property 8



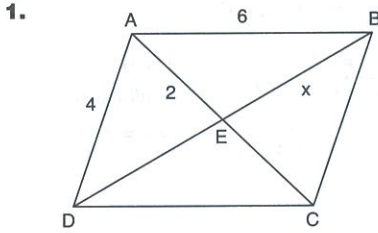
ABCD paralelkenar
ABCD parallelogram
 $|AC| = e$
 $|BD| = f$
 $2(a^2 + b^2) = e^2 + f^2$

ÖZELLİK|Property 9



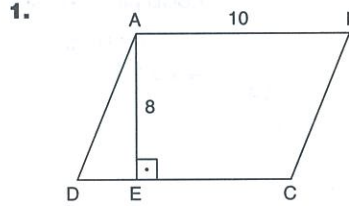
ABCD paralelkenar
ABCD parallelogram

$$A(ABCD) = a \cdot h_a = b \cdot h_b$$



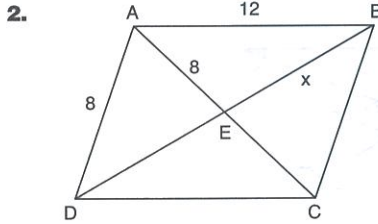
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

$$\sqrt{22}$$



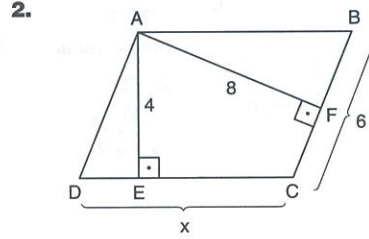
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

$$80$$



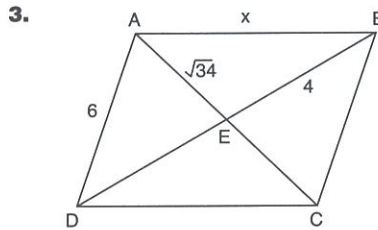
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

$$2\sqrt{10}$$



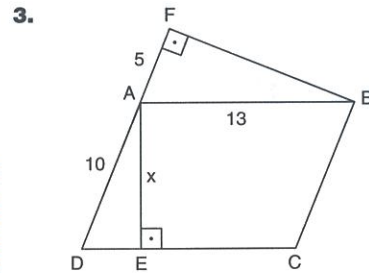
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

$$12$$



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

$$8$$

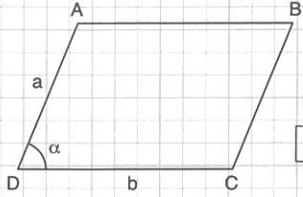


ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

$$\frac{120}{13}$$



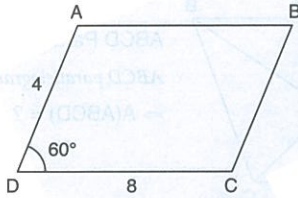
ÖZELLİK|Property 10



ABCD paralelkenar
ABCD parallelogram

$$A(ABCD) = a \cdot b \cdot \sin \alpha$$

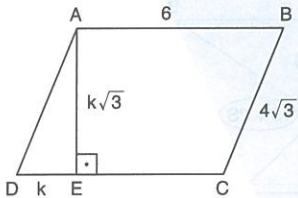
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

$$16\sqrt{3}$$

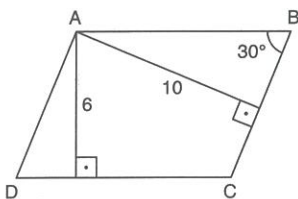
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

$$36$$

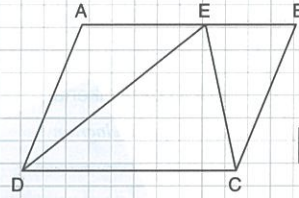
3.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

$$120$$

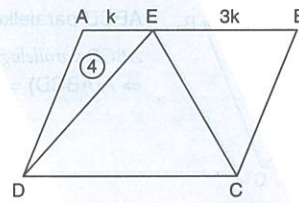
ÖZELLİK|Property 11



ABCD paralelkenar
ABCD parallelogram

$$2 \cdot A(EDC) = A(ABCD)$$

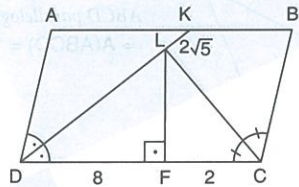
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

$$32$$

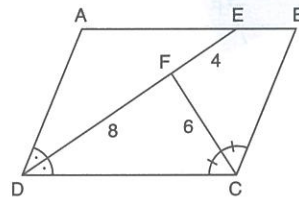
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

$$60$$

3.

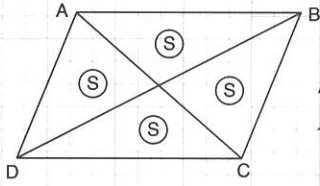


ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

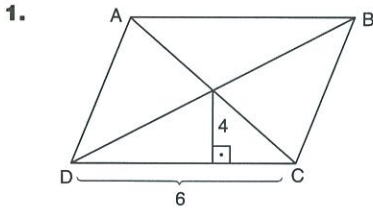
$$72$$



ÖZELLİK|Property 12

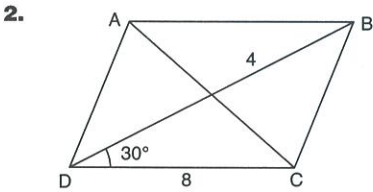


ABCD paralelkenar
ABCD parallelogram



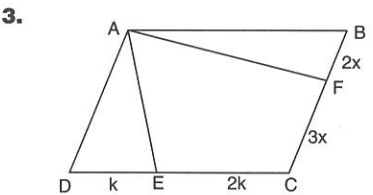
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

48



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

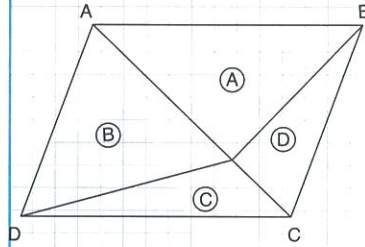
32



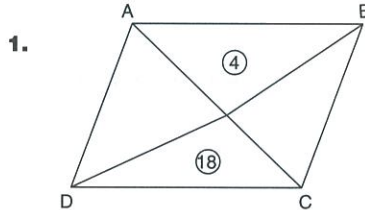
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow \frac{A(ABF)}{A(DAE)} = ?$

$\frac{6}{5}$

ÖZELLİK|Property 13

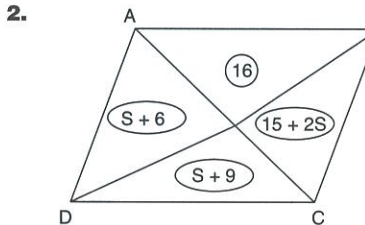


ABCD paralelkenar
ABCD parallelogram
 $A + C = B + D$



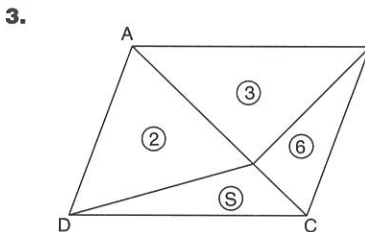
ABCD Paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

44



ABCD Paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

54

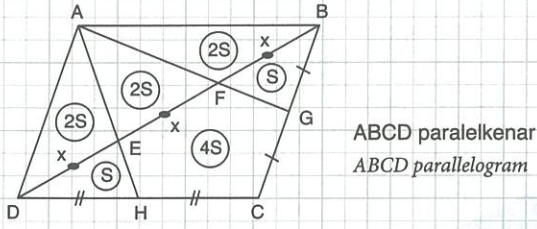


ABCD Paralelkenar
ABCD parallelogram
 $\Rightarrow S = ?$

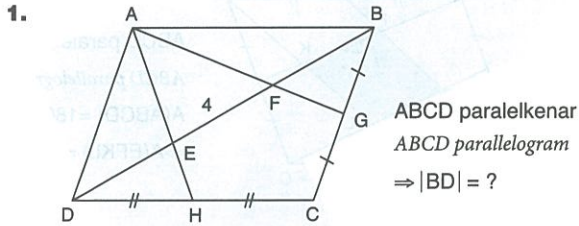
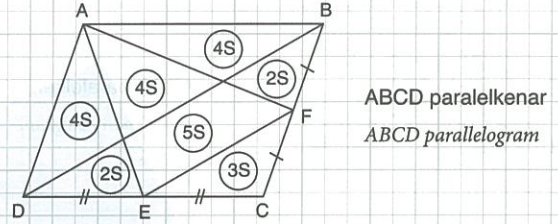
5



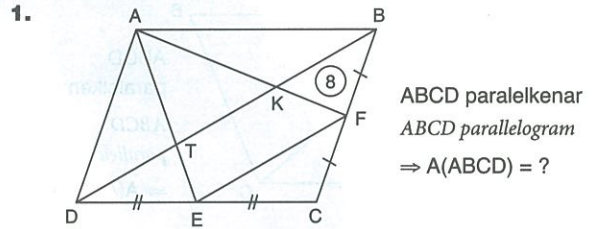
ÖZELLİK|Property 14



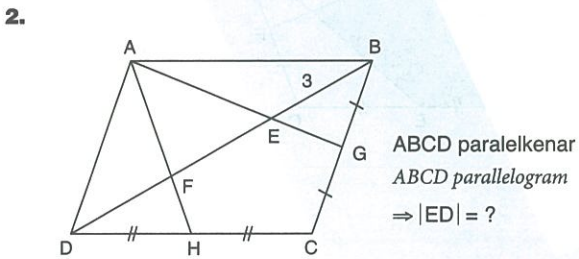
ÖZELLİK|Property 15



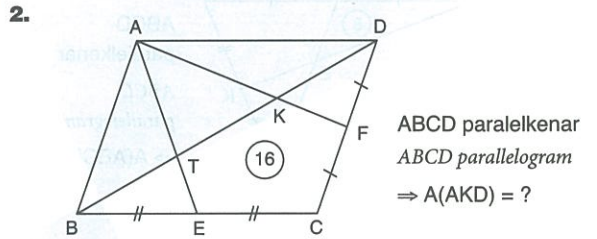
12



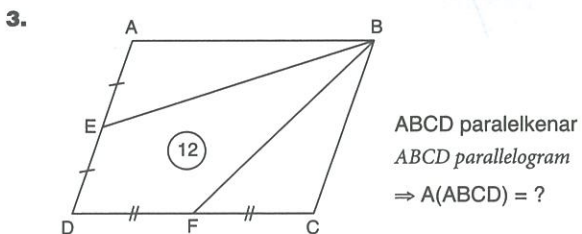
96



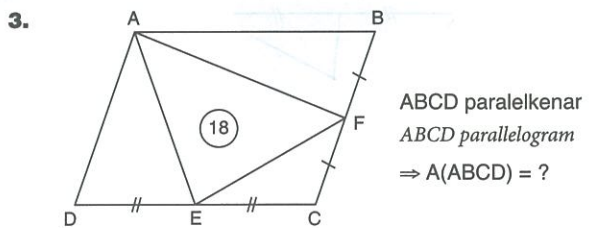
6



8



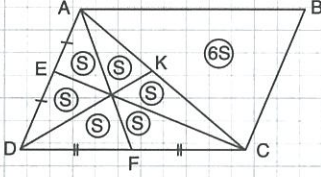
24



48

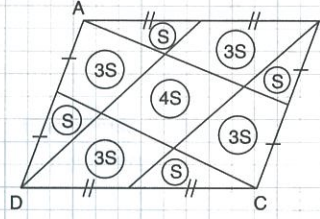


ÖZELLİK|Property 16



ABCD paralelkenar
ABCD paralellogram

ÖZELLİK|Property 17



ABCD paralelkenar
ABCD paralellogram

1. ABCD paralelkenar
ABCD paralellogram
 $\Rightarrow A(ABCD) = ?$

48

1. ABCD paralelkenar
ABCD paralellogram
 $A(ABCD) = 180 \text{ br}^2$
 $\Rightarrow A(EFKL) = ?$

100

2. ABCD paralelkenar
ABCD paralellogram
 $\Rightarrow A(AECD) = ?$

64

2. ABCD paralelkenar
ABCD paralellogram
 $A(AECD) = 55 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

100

3. ABCD paralelkenar
ABCD paralellogram
 $|DC| = 10 \text{ br}$
 $\Rightarrow h = ?$

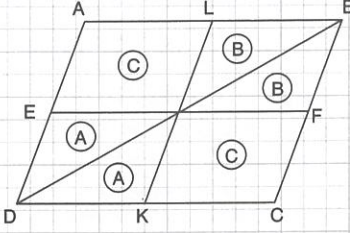
7,2

3. ABCD paralelkenar
ABCD paralellogram
 $\Rightarrow \frac{A(ADK)}{A(EKFB)} = ?$

1

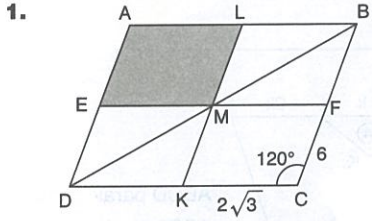


ÖZELLİK|Property 18



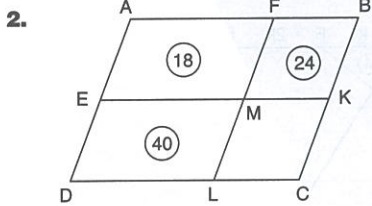
ABCD paralelkenar
ABCD parallelogram
[BD] köşegen
[BD] diagonal

[AB] // [EF] // [DC]
[AD] // [KL] // [BC]



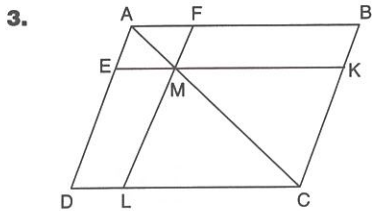
ABCD paralelkenar
ABCD parallelogram
[EF] // [DC]
[KL] // [BC]
 $\Rightarrow A(ALME) = ?$

18



ABCD paralelkenar
ABCD parallelogram
[EK] // [AB]
[FL] // [AD]
 $\Rightarrow A(ABCD) = ?$

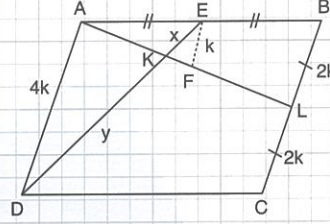
100



ABCD paralelkenar
ABCD parallelogram
[EK] // [AB]
[FL] // [AD]
[AC] köşegen
[AC] diagonal
 $\Rightarrow \frac{A(FBKM)}{A(EMLD)} = ?$

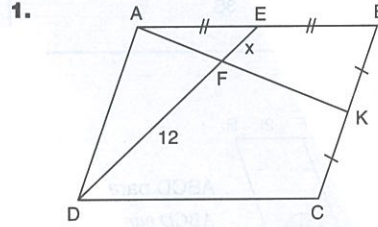
1

ÖZELLİK|Property 19



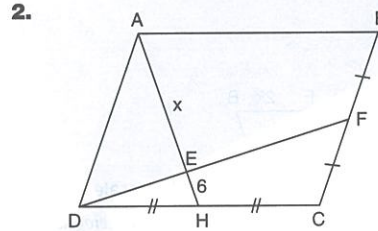
ABCD paralelkenar
ABCD parallelogram

$$\frac{4k}{k} = \frac{y}{x}$$



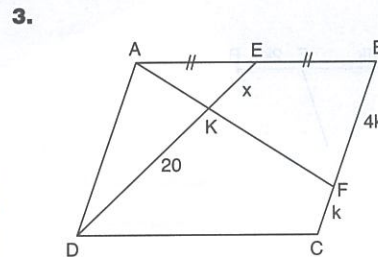
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow |EF| = x = ?$

3



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow |AE| = x = ?$

24



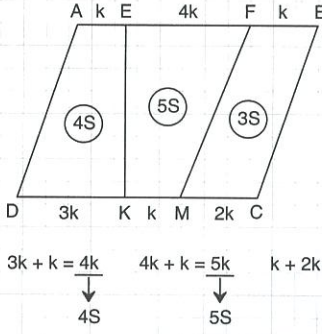
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow |EK| = x = ?$

8

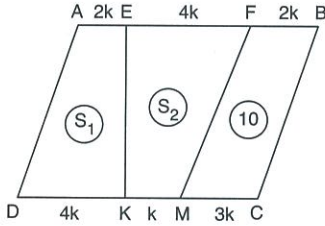


ÖZELLİK|Property 20

ABCD paralelkenar / ABCD parallelogram



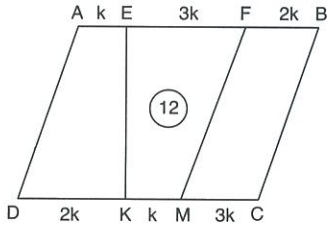
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow S_1 = ?$
 $\Rightarrow S_2 = ?$

12, 10

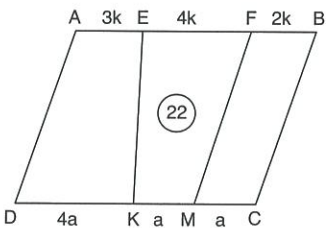
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

36

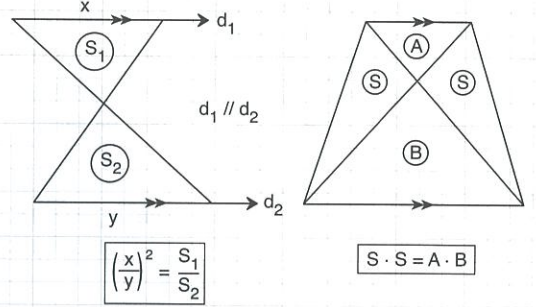
3.



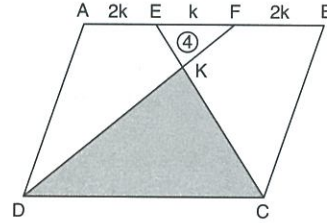
ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

72

ÖZELLİK|Property 21



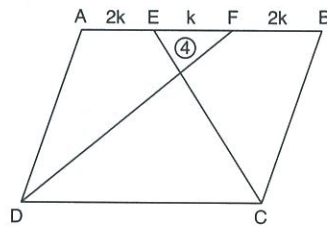
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(DKC) = ?$

100

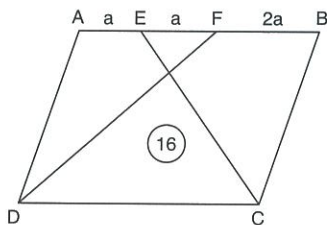
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

240

3.

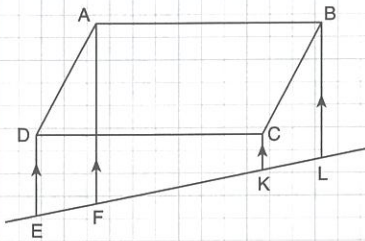


ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow A(ABCD) = ?$

40



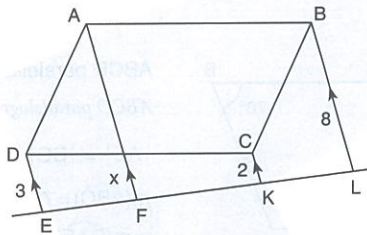
ÖZELLİK|Property 22



ABCD paralelkenar
ABCD parallelogram

$$|AF| + |CK| = |DE| + |BL|$$

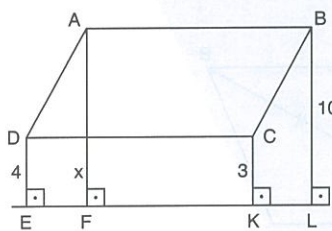
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow |AF| = x = ?$

9

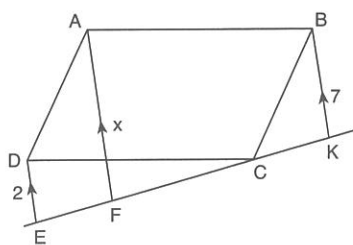
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow |AF| = x = ?$

11

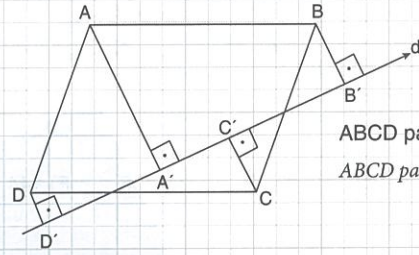
3.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow |AF| = x = ?$

9

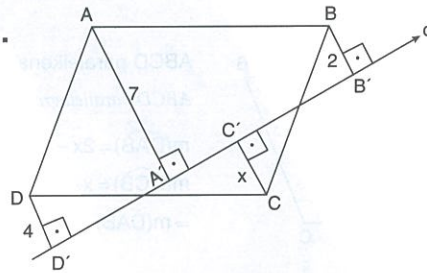
ÖZELLİK|Property 23



ABCD paralelkenar
ABCD parallelogram

$$|AA'| - |CC'| = |DD'| + |BB'|$$

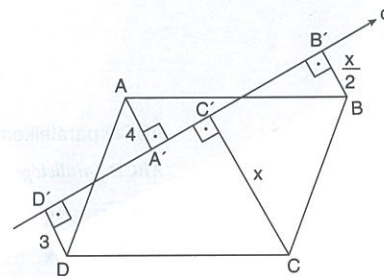
1.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

1

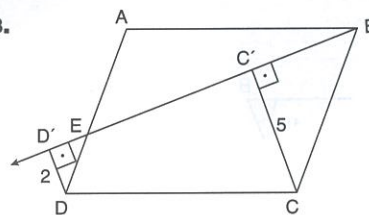
2.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow x = ?$

14

3.

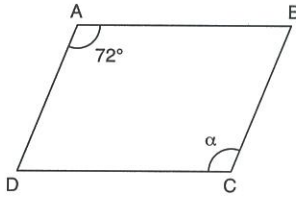


ABCD paralelkenar
ABCD parallelogram
 $|EB| = 18$ br
 $\Rightarrow A(ABE) = ?$

27



1.



ABCD paralelkenar

ABCD parallelogram

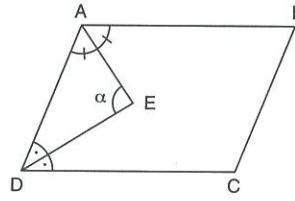
$$m(\widehat{DAB}) = 72^\circ$$

$$\Rightarrow m(\widehat{DCB}) = \alpha = ?$$

- A) 18 B) 36 C) 72 D) 108 E) 144

PUZA YAYINLARI

5.



ABCD paralelkenar

ABCD parallelogram

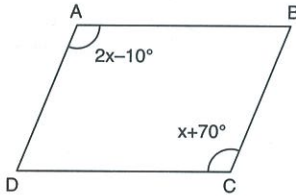
$$m(\widehat{DAE}) = m(\widehat{EAB})$$

$$m(\widehat{ADE}) = m(\widehat{EDC})$$

$$\Rightarrow m(\widehat{AED}) = \alpha = ?$$

- A) 30 B) 45 C) 60 D) 90 E) 120

2.



ABCD paralelkenar

ABCD parallelogram

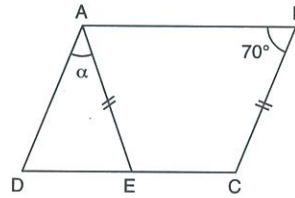
$$m(\widehat{DAB}) = 2x - 10^\circ$$

$$m(\widehat{DCB}) = x + 70^\circ$$

$$\Rightarrow m(\widehat{DAB}) = ?$$

- A) 10 B) 30 C) 80 D) 100 E) 150

6.



ABCD paralelkenar

ABCD parallelogram

$$|AE| = |BC|$$

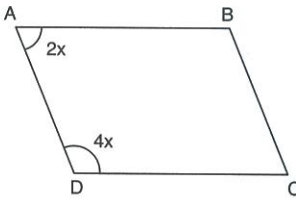
$$m(\widehat{ABC}) = 70^\circ$$

$$\Rightarrow m(\widehat{DAE}) = \alpha = ?$$

- A) 40 B) 70 C) 90 D) 110 E) 140

PUZA YAYINLARI

3.



ABCD paralelkenar

ABCD parallelogram

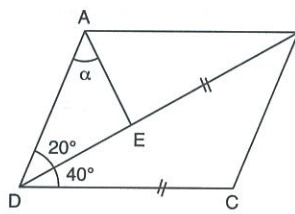
$$m(\widehat{DAB}) = 2x$$

$$m(\widehat{ADC}) = 4x$$

$$\Rightarrow m(\widehat{DAB}) = ?$$

- A) 30 B) 60 C) 90 D) 120 E) 150

7.



ABCD paralelkenar

ABCD parallelogram

$$|BE| = |DC|$$

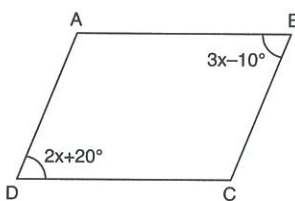
$$m(\widehat{ADB}) = 20^\circ$$

$$m(\widehat{BDC}) = 40^\circ$$

$$\Rightarrow m(\widehat{DAE}) = \alpha = ?$$

- A) 20 B) 40 C) 50 D) 70 E) 120

4.



ABCD paralelkenar

ABCD parallelogram

$$m(\widehat{ADC}) = 2x + 20^\circ$$

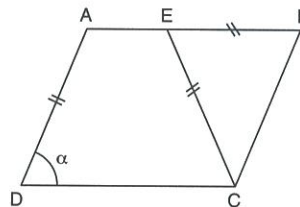
$$m(\widehat{ABC}) = 3x - 10^\circ$$

$$\Rightarrow m(\widehat{DAB}) = ?$$

- A) 6 B) 30 C) 80 D) 100 E) 148

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8.



ABCD paralelkenar

ABCD parallelogram

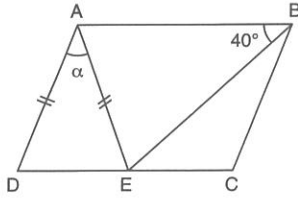
$$|AD| = |EC| = |EB|$$

$$\Rightarrow m(\widehat{ADC}) = \alpha = ?$$

- A) 120 B) 90 C) 75 D) 60 E) 30



9.

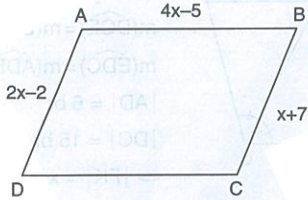


- A) 20 B) 40 C) 70

ABCD paralelkenar
 $ABCD$ parallelogram
 $|AD| = |AE|$
 $|BE| = |DC|$
 $m(\widehat{ABE}) = 40^\circ$
 $\Rightarrow m(\widehat{DAE}) = \alpha = ?$

- D) 100 E) 110

10.

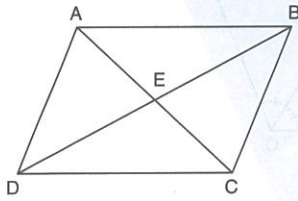


- A) 9 B) 16 C) 31

ABCD paralelkenar
 $ABCD$ parallelogram
 $|AB| = 4x - 5$
 $|AD| = 2x - 2$
 $|BC| = x + 7$
 $\Rightarrow |DC| = ?$

- D) 36 E) 41

11.

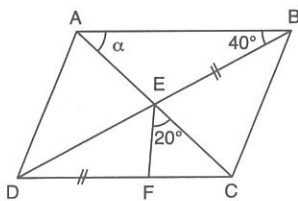


- A) 2 B) 6 C) 7

ABCD paralelkenar
 $ABCD$ parallelogram
 $|BE| = x + 5$
 $|DE| = 2x - 1$
 $\Rightarrow |BD| = ?$

- D) 11 E) 22

12.



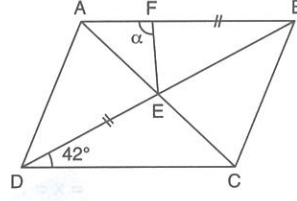
- A) 20 B) 30 C) 40

ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{FEC}) = 20^\circ$
 $m(\widehat{ABD}) = 40^\circ$
 $|DF| = |BE|$
 $\Rightarrow m(\widehat{CAB}) = \alpha = ?$

- D) 50 E) 70

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13.

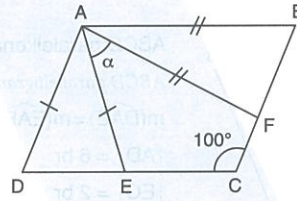


- A) 122 B) 111 C) 84

ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{BDC}) = 42^\circ$
 $|DE| = |BF|$
 $\Rightarrow m(\widehat{AFE}) = \alpha = ?$

- D) 68 E) 42

14.



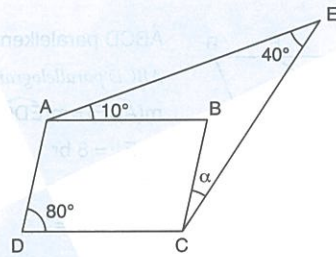
- A) 80 B) 60 C) 50

ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{DCB}) = 100^\circ$
 $m(\widehat{EAF}) = \alpha$
 $|AD| = |AE|$
 $|AF| = |AB|$
 $\Rightarrow m(\widehat{EAF}) = \alpha = ?$

- D) 40 E) 20

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15.

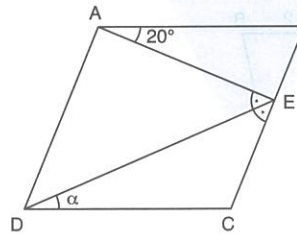


- A) 70 B) 60 C) 50

ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{AEC}) = 40^\circ$
 $m(\widehat{EAB}) = 10^\circ$
 $m(\widehat{ADC}) = 80^\circ$
 $\Rightarrow m(\widehat{BCE}) = \alpha = ?$

- D) 40 E) 30

16.



- A) 30 B) 40 C) 50

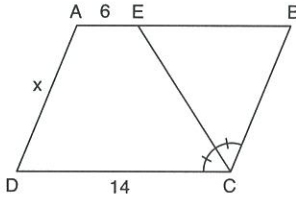
ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{BAE}) = 20^\circ$
 $m(\widehat{AED}) = m(\widehat{DEC})$
 $|AE| = |DC|$
 $\Rightarrow m(\widehat{EDC}) = \alpha = ?$

- D) 60 E) 70

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1.

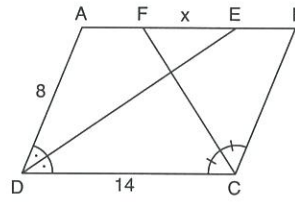


- A) 4 B) 6 C) 7 D) 8 E) 10

ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $|DC| = 14$ br
 $|AE| = 6$ br
 $\Rightarrow |AD| = x = ?$

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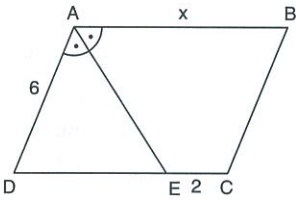
5.



- A) 2 B) 3 C) 4 D) 6 E) 8

ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{DCF}) = m(\widehat{FCB})$
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $|AD| = 8$ br
 $|DC| = 14$ br
 $\Rightarrow |FE| = x = ?$

2.

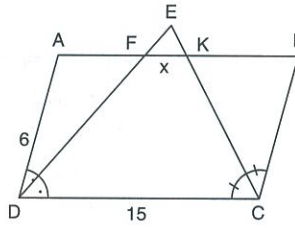


- A) 16 B) 14 C) 12 D) 10 E) 8

ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{DAE}) = m(\widehat{EAB})$
 $|AD| = 6$ br
 $|EC| = 2$ br
 $\Rightarrow |AB| = x = ?$

PUZA YAYINLARI

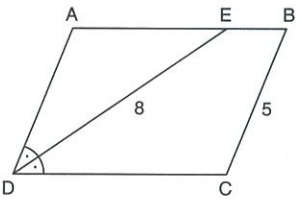
6.



- A) 3 B) 6 C) 9 D) 10 E) 12

ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $m(\widehat{EDC}) = m(\widehat{ADE})$
 $|AD| = 6$ br
 $|DC| = 15$ br
 $\Rightarrow |FK| = x = ?$

3.

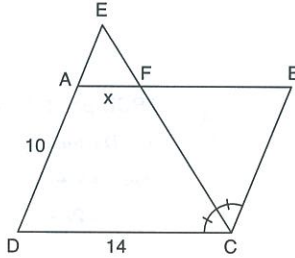


- A) 5 B) 10 C) 12 D) 16 E) 18

ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $|DE| = 8$ br
 $|BC| = 5$ br
 $\Rightarrow \angle(ADE) = ?$

PUZA YAYINLARI

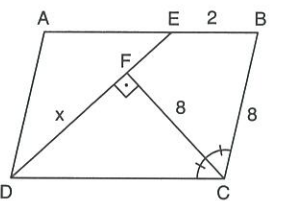
7.



- A) 2 B) 4 C) 6 D) 8 E) 10

ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $|AD| = 10$ br
 $|DC| = 14$ br
 $\Rightarrow |AF| = x = ?$

4.

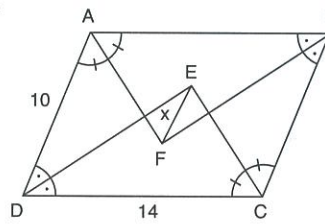


- A) 4 B) 5 C) 6 D) 8 E) 10

ABCD paralelkenar
 $ABCD$ paralelkenar
 $[CF] \perp [DE]$
 $m(\widehat{DCF}) = m(\widehat{FCB})$
 $|FC| = |BC| = 8$ br
 $|EB| = 2$ br
 $\Rightarrow |DF| = x = ?$

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8.

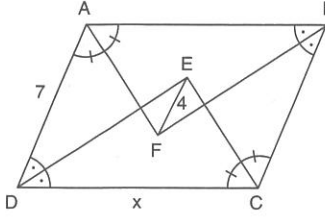


- A) 2 B) 4 C) 6 D) 8 E) 10

ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $m(\widehat{CBF}) = m(\widehat{FBA})$
 $m(\widehat{BAF}) = m(\widehat{FAD})$
 $|AD| = 10$ br
 $|DC| = 14$ br
 $\Rightarrow |EF| = x = ?$



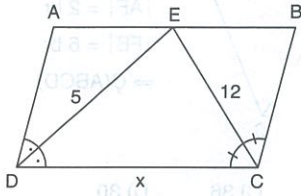
9.



ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{DAF}) = m(\widehat{FAB})$
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $m(\widehat{CBF}) = m(\widehat{FBA})$
 $|AD| = 7$ br
 $|EF| = 4$ br
 $\Rightarrow |DC| = x = ?$

- A) 3 B) 8 C) 10 D) 11 E) 14

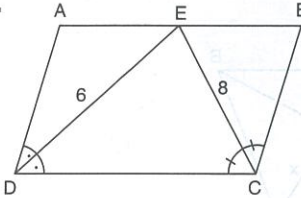
10.



ABCD paralelkenar
 $ABCD$ parallelogram
 $[DE]$ ve $[EC]$ açıortay
 $[DE]$ and $[EC]$ bisector
 $|DE| = 5$ br
 $|EC| = 12$ br
 $\Rightarrow |DC| = x = ?$

- A) 5 B) 10 C) 12 D) 13 E) 17

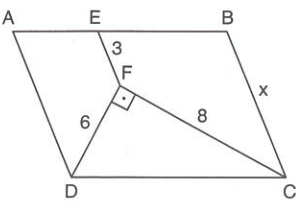
11.



ABCD paralelkenar
 $ABCD$ parallelogram
 $[DE]$ ve $[EC]$ açıortay
 $[DE]$ and $[EC]$ bisector
 $|DE| = 6$ br
 $|CE| = 8$ br
 $\Rightarrow \text{Çevre}(ABCD) = ?$

- A) 10 B) 20 C) 30 D) 40 E) 50

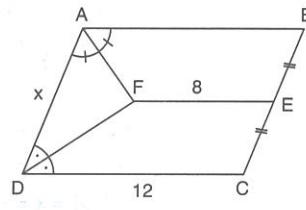
12.



ABCD paralelkenar
 $ABCD$ parallelogram
 $[AD] \parallel [EF] \parallel [BC]$
 $[DF] \perp [FC]$
 $|DF| = 6$ br
 $|FC| = 8$ br
 $|EF| = 3$ br
 $\Rightarrow |BC| = x = ?$

- A) 5 B) 6 C) 8 D) 10 E) 13

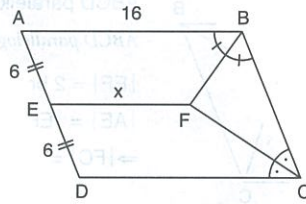
13.



ABCD paralelkenar
 $ABCD$ parallelogram
 $[AF]$ ve $[DF]$ açıortay
 $[AF]$ and $[DF]$ bisector
 $|FE| = 8$ br
 $|DC| = 12$ br
 $|BE| = |EC|$
 $\Rightarrow |AD| = x = ?$

- A) 2 B) 4 C) 6 D) 8 E) 12

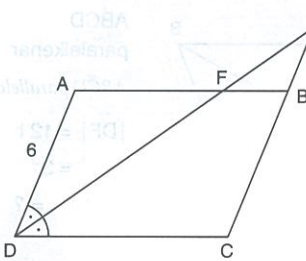
14.



ABCD paralelkenar
 $ABCD$ parallelogram
 $[BF]$ ve $[FC]$ açıortay
 $[BF]$ and $[FC]$ bisector
 $|AB| = 16$ br
 $|AE| = |ED| = 6$
 $\Rightarrow |EF| = x = ?$

- A) 3 B) 6 C) 8 D) 10 E) 11

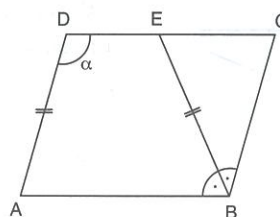
15.



ABCD paralelkenar
 $ABCD$ parallelogram
 $[DE]$ açıortay
 $[DE]$ bisector
 $|AD| = 6$ br
 $|EB| = 2$ br
 $\Rightarrow |DC| = ?$

- A) 6 B) 8 C) 10 D) 12 E) 14

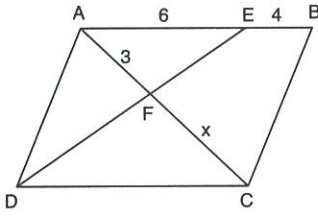
16.

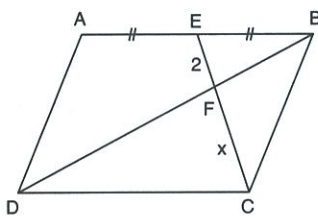


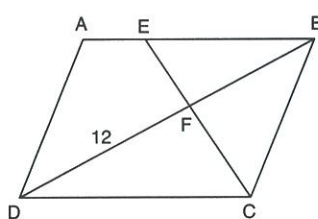
ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{ABE}) = m(\widehat{ECB})$
 $|AD| = |EB|$
 $\Rightarrow m(\widehat{ADC}) = \alpha = ?$

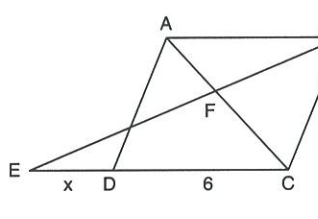
- A) 100 B) 105 C) 110 D) 120 E) 135

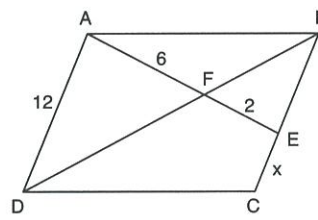


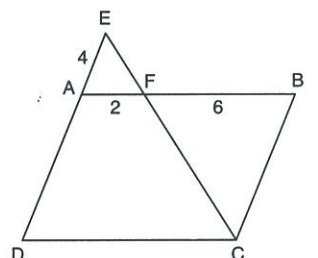
1.  ABCD paralelkenar
ABCD *parallelogram*
 $|AE| = 6$ br
 $|EB| = 4$ br
 $|AF| = 3$ br
 $\Rightarrow |FC| = x = ?$
- A) 2 B) 4 C) 5 D) 10 E) 20

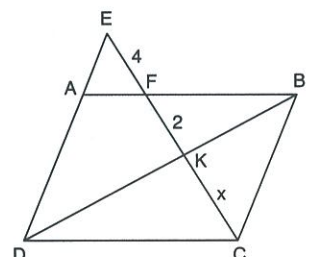
2.  ABCD paralelkenar
ABCD *parallelogram*
 $|EF| = 2$ br
 $|AE| = |EB|$
 $\Rightarrow |FC| = x = ?$
- A) 16 B) 8 C) 4 D) 2 E) 1

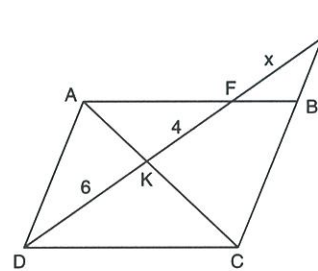
3.  ABCD paralelkenar
ABCD *parallelogram*
 $|DF| = 12$ br
 $|EB| = 3 \cdot |AE|$
 $\Rightarrow |BD| = ?$
- A) 9 B) 18 C) 21 D) 36 E) 48

4.  ABCD paralelkenar
ABCD *parallelogram*
 $2|FC| = 3|AF|$
 $|DC| = 6$ br
 $\Rightarrow |ED| = x = ?$
- A) 1 B) 3 C) 6 D) 9 E) 12

5.  ABCD paralelkenar
ABCD *parallelogram*
 $|AD| = 12$ br
 $|AF| = 6$ br
 $|FE| = 2$ br
 $\Rightarrow |EC| = x = ?$
- A) 4 B) 6 C) 7 D) 8 E) 10

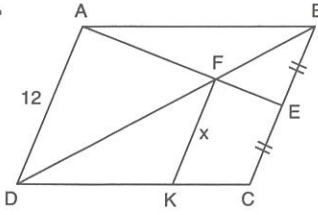
6.  ABCD paralelkenar
ABCD *parallelogram*
 $|AE| = 4$ br
 $|AF| = 2$ br
 $|FB| = 6$ br
 $\Rightarrow \angle(ABCD) = ?$
- A) 42 B) 40 C) 36 D) 30 E) 20

7.  ABCD paralelkenar
ABCD *parallelogram*
 $|EF| = 4$ br
 $|FK| = 2$ br
 $\Rightarrow |KC| = x = ?$
- A) $2\sqrt{3}$ B) 6 C) $4\sqrt{3}$ D) 12 E) $12\sqrt{3}$

8.  ABCD paralelkenar
ABCD *parallelogram*
 $|DK| = 6$ br
 $|KF| = 4$ br
 $\Rightarrow |FE| = x = ?$
- A) 5 B) 4 C) 3 D) 2 E) 1



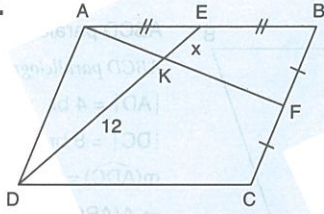
9.



ABCD paralelkenar
 $ABCD$ parallelogram
 $[AD] \parallel [FK]$
 $|BE| = |EC|$
 $|AD| = 12$ br
 $\Rightarrow |FK| = x = ?$

- A) 6 B) 7 C) 8 D) 9 E) 10

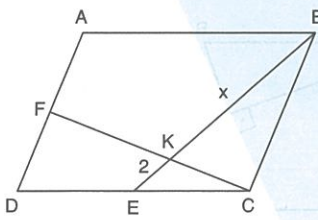
10.



ABCD paralelkenar
 $ABCD$ parallelogram
 $|DK| = 12$ br
 $|AE| = |EB|$
 $|BF| = |FC|$
 $\Rightarrow |KE| = x = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

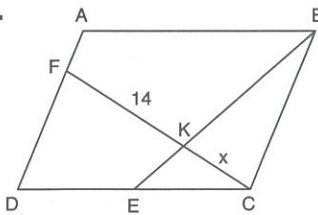
11.



ABCD paralelkenar
 $ABCD$ parallelogram
 $|AF| = |FD|$
 $|DE| = |EC|$
 $|KE| = 2$ br
 $\Rightarrow |BK| = x = ?$

- A) $\frac{5}{2}$ B) 4 C) $\frac{15}{2}$ D) 8 E) $\frac{25}{3}$

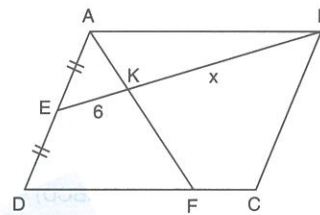
12.



ABCD paralelkenar
 $ABCD$ parallelogram
 $3|AF| = |DF|$
 $|FK| = 14$ br
 $|DE| = |EC|$
 $\Rightarrow |KC| = x = ?$

- A) $\frac{3}{2}$ B) 6 C) 8 D) $\frac{32}{3}$ E) 12

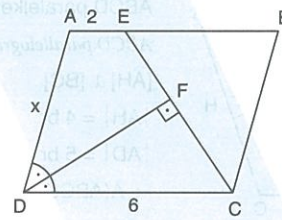
13.



ABCD paralelkenar
 $ABCD$ parallelogram
 $|AE| = |ED|$
 $3|FC| = |DF|$
 $|EK| = 6$ br
 $\Rightarrow |KB| = x = ?$

- A) 6 B) $\frac{20}{3}$ C) 16 D) $\frac{33}{2}$ E) 24

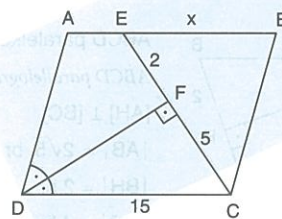
14.



ABCD paralelkenar
 $ABCD$ parallelogram
 $|AE| = 2$ br
 $|DC| = 6$ br
 $[DF] \perp [EC]$
 $[DF]$ açıortay
 $[DF]$ bisector
 $\Rightarrow |AD| = x = ?$

- A) 10 B) 8 C) 6 D) 4 E) 2

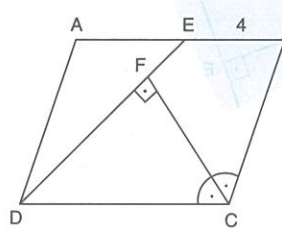
15.



ABCD paralelkenar
 $ABCD$ parallelogram
 $|EF| = 2$ br
 $|FC| = 5$ br
 $|DC| = 15$ br
 $[DF] \perp [EC]$
 $[DF]$ açıortay
 $[DF]$ bisector
 $\Rightarrow |EB| = x = ?$

- A) $\frac{3}{2}$ B) $\frac{9}{2}$ C) $\frac{21}{2}$ D) 12 E) 14

16.

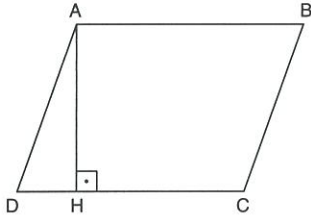


ABCD paralelkenar
 $ABCD$ parallelogram
 $|EB| = 4$ br
 $2|FE| = |DF|$
 $[FC] \perp [DE]$
 $[FC]$ açıortay
 $[FC]$ bisector
 $\Rightarrow |DC| = ?$

- A) 16 B) 12 C) 10 D) 8 E) 6



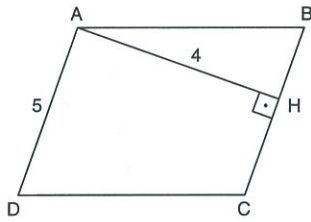
1.



- A) 120 B) 60 C) 30 D) 15 E) 10

ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AH] \perp [DC]$
 $|AH| = 6$ br
 $|DC| = 10$ br
 $\Rightarrow A(ABCD) = ?$

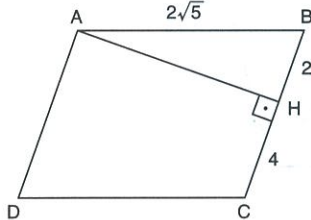
2.



- A) 5 B) 10 C) 20 D) 40 E) 80

ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AH] \perp [BC]$
 $|AH| = 4$ br
 $|AD| = 5$ br
 $\Rightarrow A(ABCD) = ?$

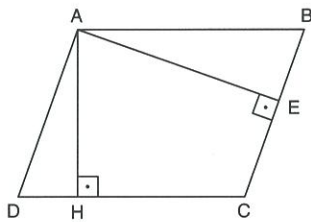
3.



- A) 6 B) 6√5 C) 12 D) 24 E) 12√5

ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AH] \perp [BC]$
 $|AB| = 2\sqrt{5}$ br
 $|BH| = 2$ br
 $|HC| = 4$ br
 $\Rightarrow A(ABCD) = ?$

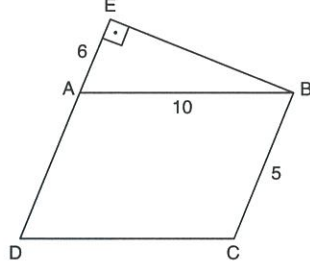
4.



- A) 24 B) 12 C) $\frac{16}{3}$ D) 3 E) $\frac{8}{3}$

ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AE] \perp [BC]$
 $[AH] \perp [DC]$
 $|AE| = 6$ br
 $|AH| = 4$ br
 $|DC| = 8$ br
 $\Rightarrow |BC| = x = ?$

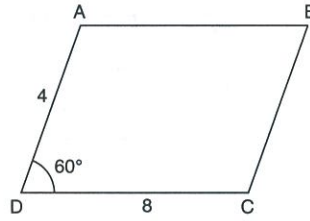
5.



- A) 50 B) 40 C) 30 D) 25 E) 20

ABCD paralelkenar
 $ABCD$ paralelkenar
 $[BE] \perp [DE]$
 $|AE| = 6$ br
 $|AB| = 10$ br
 $|BC| = 5$ br
 $\Rightarrow A(ABCD) = ?$

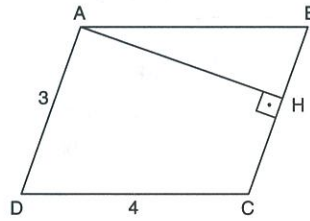
6.



- A) $8\sqrt{3}$ B) $16\sqrt{3}$ C) $24\sqrt{3}$ D) $26\sqrt{3}$ E) $32\sqrt{3}$

ABCD paralelkenar
 $ABCD$ paralelkenar
 $|AD| = 4$ br
 $|DC| = 8$ br
 $m(\widehat{ADC}) = 60^\circ$
 $\Rightarrow A(ABCD) = ?$

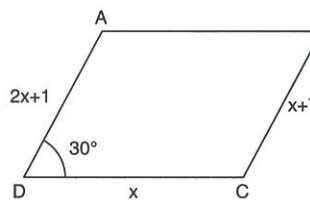
7.



- A) $12\sqrt{3}$ B) $6\sqrt{3}$ C) 6 D) $3\sqrt{3}$ E) 3

ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AH] \perp [BC]$
 $|AD| = 3$ br
 $|DC| = 4$ br
 $|AB| = 2|BH|$
 $\Rightarrow A(ABCD) = ?$

8.

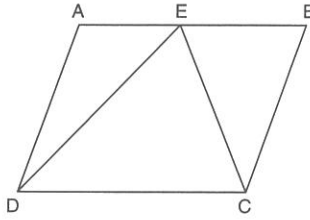


- A) 18 B) 26 C) $26\sqrt{3}$ D) 39 E) $39\sqrt{3}$

ABCD paralelkenar
 $ABCD$ paralelkenar
 $|AD| = (2x + 1)$ br
 $|BC| = (x + 7)$ br
 $|DC| = x$
 $m(\widehat{ADC}) = 30^\circ$
 $\Rightarrow A(ABCD) = ?$



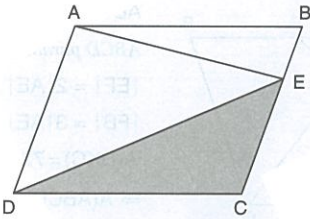
9.



ABCD paralelkenar
ABCD parallelogram
 $A(EDC) = 40 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 20 B) 40 C) 60 D) 70 E) 80

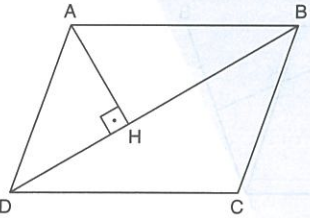
10.



ABCD paralelkenar
ABCD parallelogram
 $A(ABE) = 20 \text{ br}^2$
 $A(AED) = 30 \text{ br}^2$
 $\Rightarrow A(EDC) = ?$

- A) 5 B) 10 C) 20 D) 30 E) 50

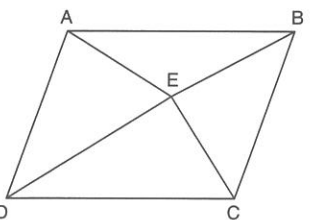
11.



ABCD paralelkenar
ABCD parallelogram
 $[AH] \perp [DB]$
 $|AH| = 4 \text{ br}$
 $|DB| = 8 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 64 B) 48 C) 32 D) 24 E) 18

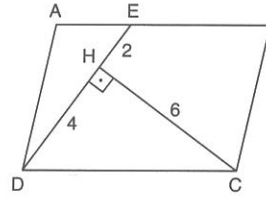
12.



ABCD paralelkenar
ABCD parallelogram
 $A(ABE) = 4 \text{ br}^2$
 $A(EDC) = 12 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 16 B) 24 C) 32 D) 48 E) 60

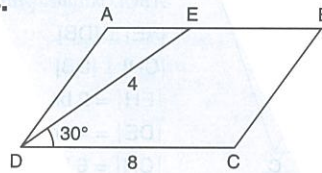
13.



ABCD paralelkenar
ABCD parallelogram
 $[CH] \perp [DE]$
 $|DH| = 4 \text{ br}$
 $|HE| = 2 \text{ br}$
 $|CH| = 6 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 12 B) 18 C) 24 D) 32 E) 36

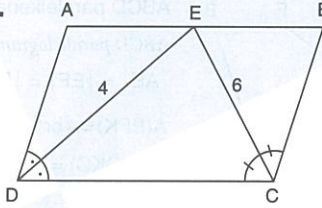
14.



ABCD paralelkenar
ABCD parallelogram
 $m(\widehat{EDC}) = 30^\circ$
 $|DE| = 4 \text{ br}$
 $|DC| = 8 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 16 B) $8\sqrt{3}$ C) $4\sqrt{3}$ D) 8 E) 4

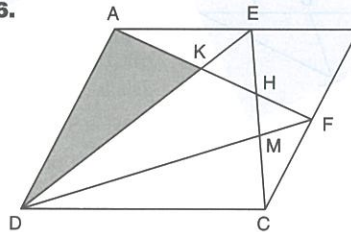
15.



ABCD paralelkenar
ABCD parallelogram
 $|DE| = 4 \text{ br}$
 $|EC| = 6 \text{ br}$
 $[DE]$ ve $[EC]$ açıortay
 $[DE]$ and $[EC]$ bisector
 $\Rightarrow A(ABCD) = ?$

- A) 6 B) 10 C) 12 D) 18 E) 24

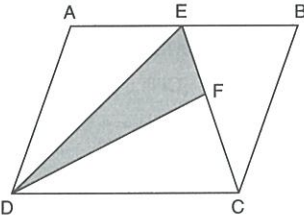
16.

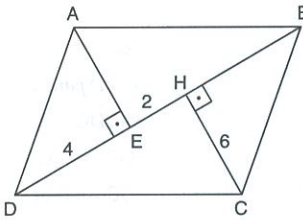


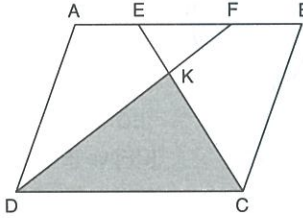
ABCD paralelkenar
ABCD parallelogram
 $A(EKH) = 4 \text{ br}^2$
 $A(HFM) = 3 \text{ br}^2$
 $A(DMC) = 8 \text{ br}^2$
 $\Rightarrow A(AKD) = ?$

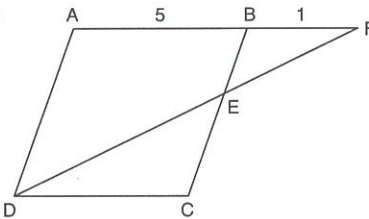
- A) 9 B) 8 C) 7 D) 6 E) 5

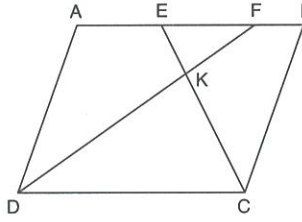


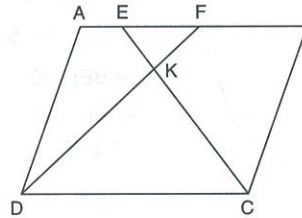
1.  ABCD paralelkenar
ABCD parallelogram
 $|FC| = 2|EF|$
 $A(DEF) = 6br^2$
 $\Rightarrow A(ABCD) = ?$
- A) 12 B) 18 C) 24 D) 36 E) 48

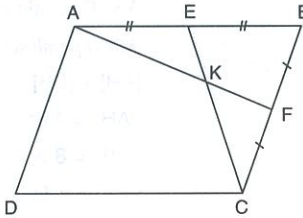
2.  ABCD paralelkenar
ABCD parallelogram
 $[AE] \perp [DB]$
 $[CH] \perp [DB]$
 $|EH| = 2br$
 $|DE| = 4br$
 $|CH| = 6br$
 $\Rightarrow A(ABCD) = ?$
- A) 78 B) 60 C) 54 D) 48 E) 39

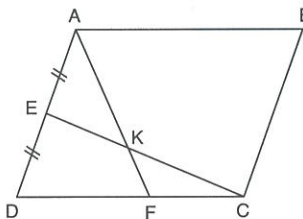
3.  ABCD paralelkenar
ABCD parallelogram
 $|AE| = |EF| = |FB|$
 $A(EFK) = 4br^2$
 $\Rightarrow A(DKC) = ?$
- A) 48 B) 36 C) 24 D) 12 E) 8

4.  ABCD paralelkenar
ABCD parallelogram
 $|AB| = 5br$
 $|BF| = 1br$
 $A(BEF) = 2br^2$
 $\Rightarrow A(ABCD) = ?$
- A) 50 B) 60 C) 80 D) 100 E) 120

5.  ABCD paralelkenar
ABCD parallelogram
 $|AE| = 2|EF| = 2|FB|$
 $A(EFK) = 4br^2$
 $\Rightarrow A(ABCD) = ?$
- A) 48 B) 60 C) 80 D) 120 E) 160

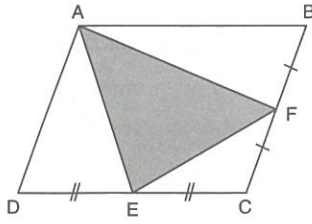
6.  ABCD paralelkenar
ABCD parallelogram
 $|EF| = 2|AE|$
 $|FB| = 3|AE|$
 $A(DKC) = 72br^2$
 $\Rightarrow A(ABCD) = ?$
- A) 16 B) 100 C) 144 D) 192 E) 200

7.  ABCD paralelkenar
ABCD parallelogram
 $|AE| = |EB|$
 $|FB| = |FC|$
 $A(AEK) = 5br^2$
 $\Rightarrow A(ABCD) = ?$
- A) 60 B) 50 C) 45 D) 30 E) 25

8.  ABCD paralelkenar
ABCD parallelogram
 $|AE| = |ED|$
 $|DF| = 2|FC|$
 $A(FCK) = 6br^2$
 $\Rightarrow A(ABCD) = ?$
- A) 96 B) 108 C) 144 D) 180 E) 190



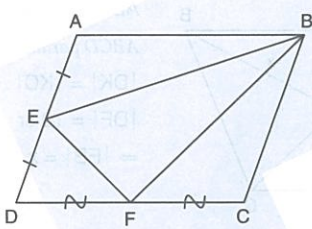
9.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|DE| = |EC|$
 $|BF| = |FC|$
 $A(AEF) = 9br^2$
 $\Rightarrow A(ABCD) = ?$

- A) 12 B) 18 C) 24 D) 36 E) 48

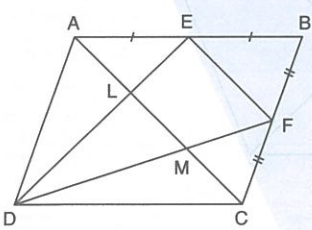
10.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|AE| = |ED|$
 $|DF| = |FC|$
 $A(DEF) = 15br^2$
 $\Rightarrow A(ABCD) = ?$

- A) 180 B) 150 C) 120 D) 110 E) 100

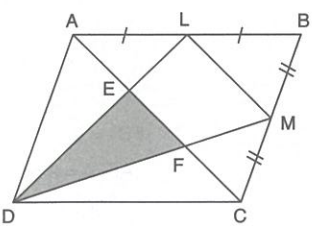
11.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|AE| = |EB|$
 $|BF| = |FC|$
 $A(EFML) = 10br^2$
 $\Rightarrow A(ABCD) = ?$

- A) 24 B) 48 C) 50 D) 60 E) 100

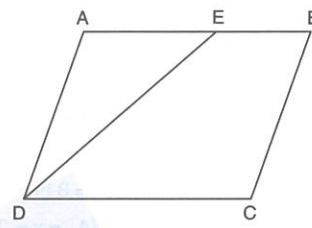
12.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|AL| = |LB|$
 $|BM| = |MC|$
 $A(FMC) = 4br^2$
 $\Rightarrow A(EFD) = ?$

- A) 8 B) 12 C) 16 D) 24 E) 48

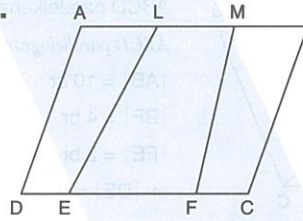
13.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $2|AE| = 3|EB|$
 $A(ABCD) = 50br^2$
 $\Rightarrow A(AED) = ?$

- A) 10 B) 15 C) 20 D) 30 E) 45

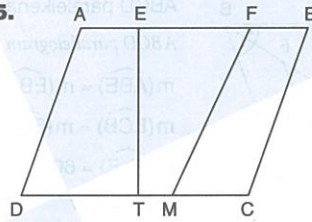
14.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|AL| = |LM| = |MB|$
 $|EF| = 2|DE| = 2|FC|$
 $A(EFML) = 20br^2$
 $\Rightarrow A(ABCD) = ?$

- A) 30 B) 40 C) 48 D) 60 E) 96

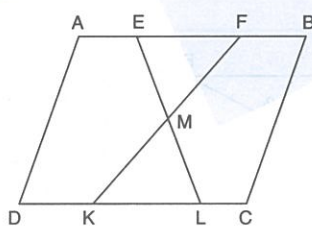
15.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|EF| = 2|AE| = 2|FB|$
 $2|DT| = 6|TM| = 2|MC|$
 $A(ABCD) = 56br^2$
 $\Rightarrow A(EFMT) = ?$

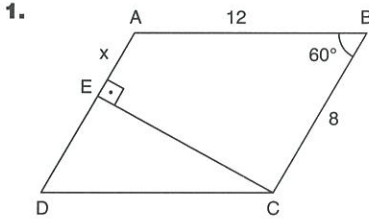
- A) 12 B) 16 C) 18 D) 20 E) 24

16.



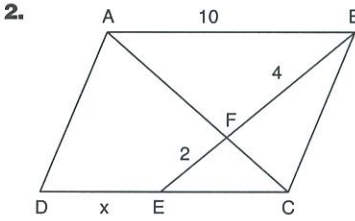
ABCD paralelkenar
 $ABCD$ paralelkenar
 $2|EF| = |AB|$
 $3|KL| = |DC|$
 $A(EFM) = 9br^2$
 $\Rightarrow A(ABCD) = ?$

- A) 30 B) 48 C) 50 D) 54 E) 60



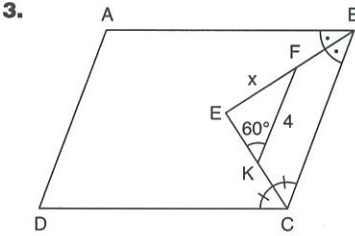
ABCD paralelkenar
 $ABCD$ parallelogram
 $[CE] \perp [AD]$
 $m(\widehat{ABC}) = 60^\circ$
 $|AB| = 12$ br
 $|BC| = 8$ br
 $\Rightarrow |EA| = x = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6



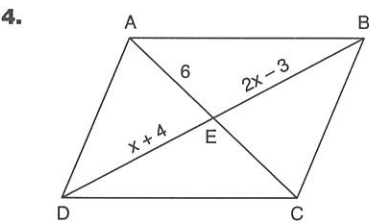
ABCD paralelkenar
 $ABCD$ parallelogram
 $|AB| = 10$ br
 $|BF| = 4$ br
 $|FE| = 2$ br
 $\Rightarrow |DE| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5



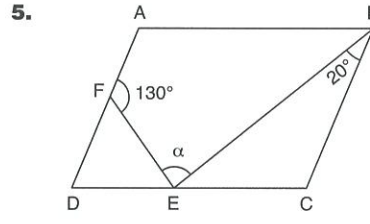
ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{ABE}) = m(\widehat{EBC})$
 $m(\widehat{ECB}) = m(\widehat{ECD})$
 $m(\widehat{FKE}) = 60^\circ$
 $|KF| = 4$ br
 $\Rightarrow |EF| = x = ?$

- A) 2 B) $2\sqrt{3}$ C) 4 D) $4\sqrt{3}$ E) 8



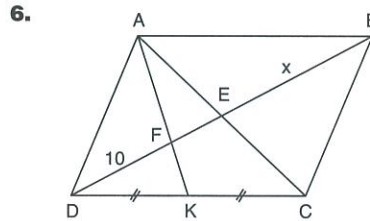
ABCD paralelkenar
 $ABCD$ parallelogram
 $|AE| = 6$ br
 $|EB| = 2x - 3$
 $|KF| = x + 4$
 $\Rightarrow |AC| + |BD| = ?$

- A) 10 B) 13 C) 17 D) 26 E) 34



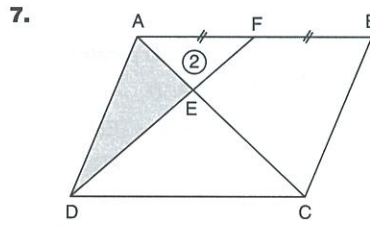
ABCD paralelkenar
 $ABCD$ parallelogram
 $m(\widehat{AFE}) = 130^\circ$
 $m(\widehat{EBC}) = 20^\circ$
 $\Rightarrow m(\widehat{FEB}) = \alpha = ?$

- A) 70 B) 65 C) 60 D) 50 E) 45



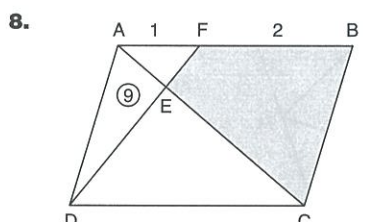
ABCD paralelkenar
 $ABCD$ parallelogram
 $|DK| = |KC|$
 $|DF| = 10$ br
 $\Rightarrow |EB| = x = ?$

- A) 20 B) 18 C) 15 D) 12 E) 10



ABCD paralelkenar
 $ABCD$ parallelogram
 $|AF| = |FB|$
 $A(\widehat{AEF}) = 2$ br²
 $\Rightarrow A(\widehat{AED}) = ?$

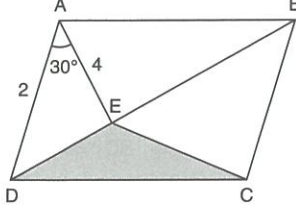
- A) 2 B) 4 C) 6 D) 8 E) 12

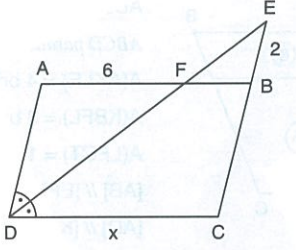


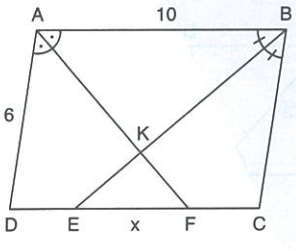
ABCD paralelkenar
 $ABCD$ parallelogram
 $|AF| = 1$ br
 $|FB| = 2$ br
 $A(\widehat{AED}) = 9$ br²
 $\Rightarrow A(\widehat{FBCE}) = ?$

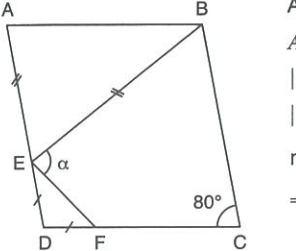
- A) 12 B) 24 C) 33 D) 36 E) 48

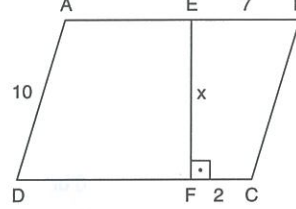


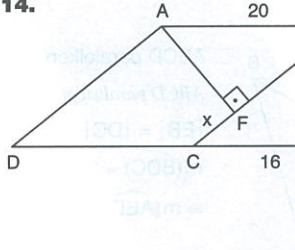
9.  ABCD paralelkenar
ABCD paralelkenar
 $|AD| = 2$ br
 $|AE| = 4$ br
 $m(\widehat{DAE}) = 30^\circ$
 $\Rightarrow A(EDC) = ?$
- A) 1 B) 2 C) $2\sqrt{3}$ D) 4 E) $4\sqrt{3}$

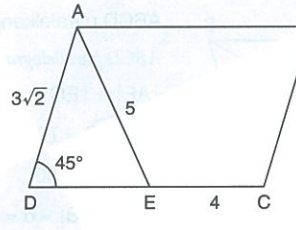
10.  ABCD paralelkenar
ABCD paralelkenar
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $|AF| = 6$ br
 $|EB| = 2$ br
 $\Rightarrow |DC| = x = ?$
- A) 8 B) 9 C) 10 D) 11 E) 12

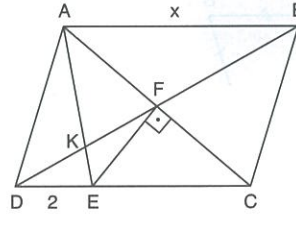
11.  ABCD paralelkenar
ABCD paralelkenar
[AF], [BE] açıortay
[AF], [BE] bisector
 $|AB| = 10$ br
 $|AD| = 6$ br
 $\Rightarrow |EF| = x = ?$
- A) 1 B) 2 C) 4 D) 5 E) 6

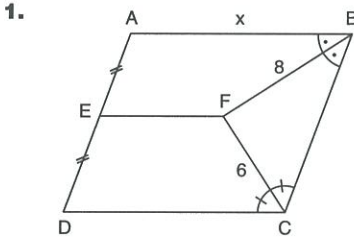
12.  ABCD paralelkenar
ABCD paralelkenar
 $|AE| = |EB|$
 $|ED| = |DF|$
 $m(\widehat{DCB}) = 80^\circ$
 $\Rightarrow m(\widehat{BEF}) = \alpha = ?$
- A) 120 B) 110 C) 100 D) 90 E) 80

13.  ABCD paralelkenar
ABCD paralelkenar
[EF] $\perp$ [DC]
 $|EB| = 7$ br
 $|FC| = 2$ br
 $|AD| = 10$ br
 $\Rightarrow |EF| = x = ?$
- A) 5 B) $5\sqrt{2}$ C) $5\sqrt{3}$ D) 10 E) 15

14.  ABCD paralelkenar
ABCD paralelkenar
[BE] $\perp$ [DE]
[AF] $\perp$ [BC]
 $|AB| = 20$ br
 $|CE| = 16$ br
 $|BE| = 12$ br
 $\Rightarrow |CF| = x = ?$
- A) 2 B) 4 C) 6 D) 8 E) 10

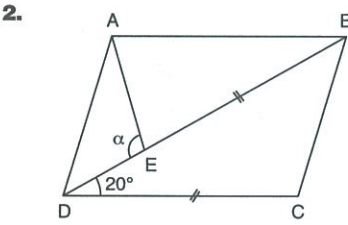
15.  ABCD paralelkenar
ABCD paralelkenar
 $|AE| = 5$ br
 $|EC| = 4$ br
 $|AD| = 3\sqrt{2}$ br
 $m(\widehat{ADC}) = 45^\circ$
 $\Rightarrow A(ABCD) = ?$
- A) 32 B) 33 C) 45 D) 48 E) 52

16.  [EF] $\perp$ [AC]
 $|DE| = 2$ br
 $|AE| = 8$ br
 $\Rightarrow |AB| = x = ?$
- A) 12 B) 10 C) 8 D) 6 E) 4



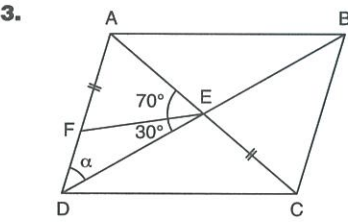
ABCD paralelkenar
 ABCD parallelogram
 [BF], [FC] açıortay
 [BF], [FC] bisector
 $|EF| = 2 \text{ br}$
 $|FC| = 6 \text{ br}$
 $|FB| = 8 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) 4 B) 5 C) 7 D) 8 E) 10



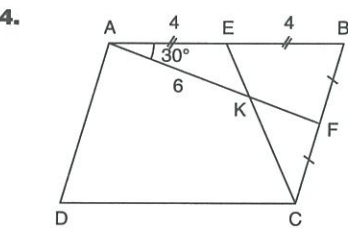
ABCD paralelkenar
 ABCD parallelogram
 $|EB| = |DC|$
 $m(\widehat{BDC}) = 20^\circ$
 $\Rightarrow m(\widehat{AED}) = \alpha = ?$

- A) 80 B) 90 C) 100 D) 120 E) 140



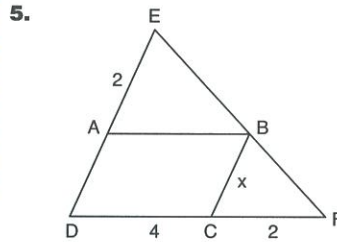
ABCD paralelkenar
 ABCD parallelogram
 $|AF| = |EC|$
 $m(\widehat{AEF}) = 70^\circ$
 $m(\widehat{FED}) = 30^\circ$
 $\Rightarrow m(\widehat{ADB}) = \alpha = ?$

- A) 10 B) 15 C) 20 D) 25 E) 40



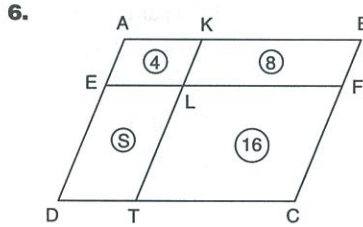
ABCD paralelkenar
 ABCD parallelogram
 $|AK| = 6 \text{ br}$
 $|AE| = |EB| = 4 \text{ br}$
 $|BF| = |FC|$
 $m(\widehat{BAF}) = 30^\circ$
 $\Rightarrow A(ABCD) = ?$

- A) 144 B) 108 C) 72 D) 48 E) 36



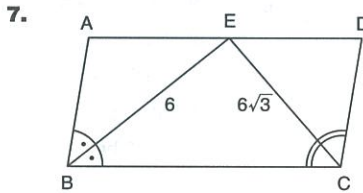
ABCD paralelkenar
 ABCD parallelogram
 $|DC| = 4 \text{ br}$
 $|AE| = |CF| = 2 \text{ br}$
 $\Rightarrow |BC| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5



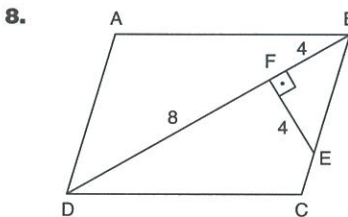
ABCD paralelkenar
 ABCD parallelogram
 $A(KLE) = 4 \text{ br}^2$
 $A(KBFL) = 8 \text{ br}^2$
 $A(LFCT) = 16 \text{ br}^2$
 $[AB] \parallel [EF]$
 $[AD] \parallel [KT]$
 $\Rightarrow A(ELTD) = S = ?$

- A) 2 B) 4 C) 8 D) 12 E) 16



ABCD paralelkenar
 ABCD parallelogram
 $[BE], [CE]$ açıortay
 $[BE], [CE]$ açıortay
 $|ED| = 6 \text{ br}$
 $|EC| = 6\sqrt{3} \text{ br}$
 $\Rightarrow Q(ABCD) = ?$

- A) 28 B) 30 C) 32 D) 36 E) 48

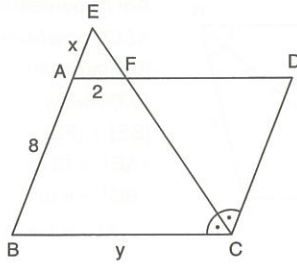


ABCD paralelkenar
 ABCD parallelogram
 $[EF] \perp [BD]$
 $|FD| = 8 \text{ br}$
 $|EF| = |FB| = 4 \text{ br}$
 $|BE| = 2|EC|$
 $\Rightarrow A(ABCD) = ?$

- A) 72 B) 48 C) 42 D) 36 E) 24



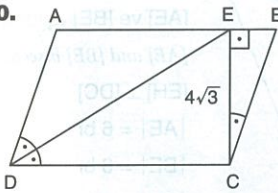
9.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{ECB}) = m(\widehat{ECD})$
 $|AF| = 2$
 $|AB| = 8$
 $|AE| = x$
 $|BC| = y$
 $\Rightarrow x + y = ?$

- A) 10 B) 12 C) 14 D) 16 E) 18

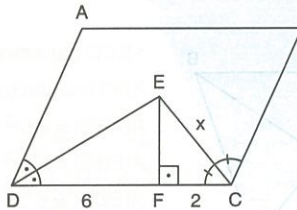
10.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[CE] \perp [AB]$
 $m(\widehat{ADE}) = m(\widehat{EDC}) = m(\widehat{ECB})$
 $|EC| = 4\sqrt{3}$
 $\Rightarrow |AE| = x = ?$

- A) 4 B) $4\sqrt{3}$ C) 6 D) 8 E) $8\sqrt{3}$

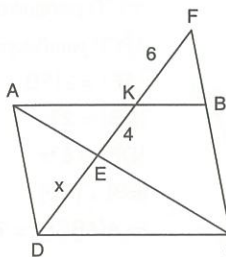
11.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[DE], [EC]$ açıortay
 $[DE], [EC]$ bisector
 $|DF| = 6$
 $|FC| = 2$
 $\Rightarrow |EC| = x = ?$

- A) 2 B) 4 C) $4\sqrt{3}$ D) 8 E) $8\sqrt{3}$

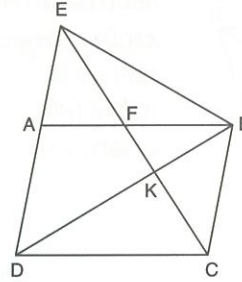
12.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $|KF| = 6$
 $|EK| = 4$
 $\Rightarrow |DE| = x = ?$

- A) 4 B) $2\sqrt{3}$ C) $4\sqrt{2}$ D) $2\sqrt{10}$ E) 10

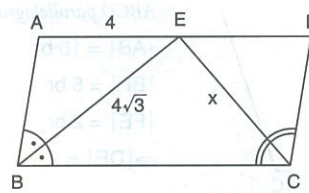
13.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $A(EBC) = 8 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 8 B) 12 C) 16 D) 20 E) 24

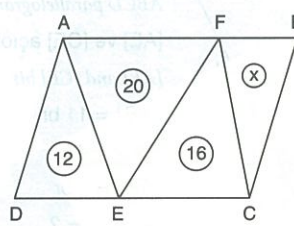
14.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[BE], [CE]$ açıortay
 $[BE], [CE]$ bisector
 $|AE| = 4$
 $|BE| = 4\sqrt{3}$
 $\Rightarrow |EC| = x = ?$

- A) 2 B) 4 C) $4\sqrt{3}$ D) 8 E) $8\sqrt{3}$

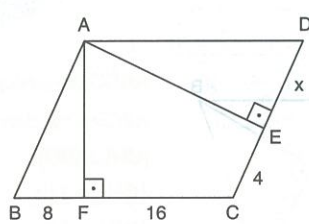
15.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $A(AEF) = 20 \text{ br}^2$
 $A(EFC) = 16 \text{ br}^2$
 $A(DAE) = 12 \text{ br}^2$
 $\Rightarrow A(FBC) = ?$

- A) 2 B) 4 C) 6 D) 8 E) 10

16.

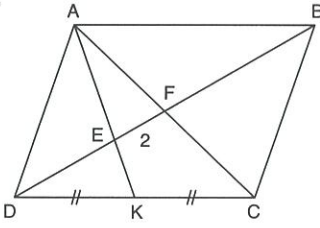


ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AF] \perp [BC]$
 $[AE] \perp [DC]$
 $|EC| = 4$
 $|BF| = 8$
 $|FC| = 16$
 $\Rightarrow |DE| = x = ?$

- A) 6 B) 8 C) 10 D) 12 E) 16



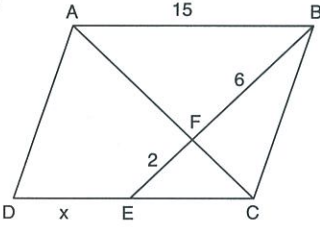
1.



ABCD paralelkenar
 ABCD parallelogram
 $|EF| = 2 \text{ br}$
 $|DK| = |KC|$
 $\Rightarrow |BD| = ?$

- A) 6 B) 8 C) 10 D) 12 E) 16

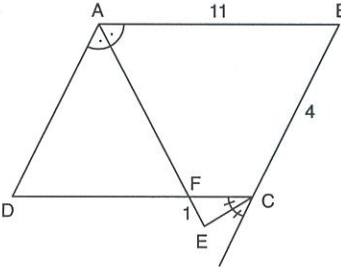
2.



ABCD paralelkenar
 ABCD parallelogram
 $|AB| = 15 \text{ br}$
 $|BF| = 6 \text{ br}$
 $|FE| = 2 \text{ br}$
 $\Rightarrow |DE| = x = ?$

- A) 11 B) 10 C) 8 D) 6 E) 5

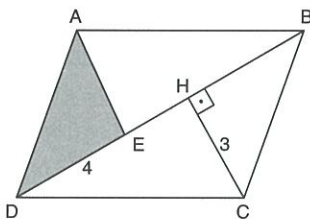
3.



ABCD paralelkenar
 ABCD parallelogram
 $[AE]$ ve $[CE]$ açıortay
 $[AE]$ and $[CE]$ bisector
 $|AB| = 11 \text{ br}$
 $|BC| = 4 \text{ br}$
 $|FE| = 1 \text{ br}$
 $\Rightarrow |EC| = ?$

- A) 3 B) $\sqrt{15}$ C) 4 D) $2\sqrt{5}$ E) $4\sqrt{3}$

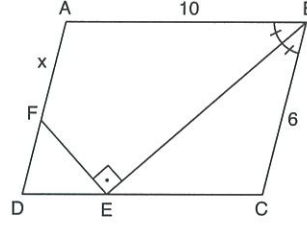
4.



ABCD paralelkenar
 ABCD parallelogram
 $[CH] \perp [BD]$
 $|CH| = 3 \text{ br}$
 $|DE| = 4 \text{ br}$
 $\Rightarrow A(ADE) = ?$

- A) 6 B) $6\sqrt{3}$ C) 12 D) $12\sqrt{3}$ E) 24

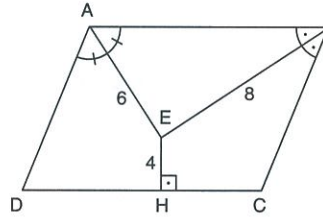
5.



ABCD paralelkenar
 ABCD parallelogram
 $[BE]$ açıortay
 $[BE]$ bisector
 $[BE] \perp [FE]$
 $|AB| = 10 \text{ br}$
 $|BC| = 6 \text{ br}$
 $\Rightarrow |AF| = x = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

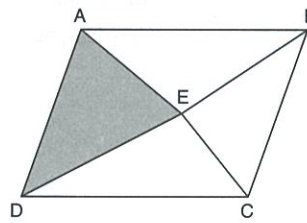
6.



ABCD paralelkenar
 ABCD parallelogram
 $[AE]$ ve $[BE]$ açıortay
 $[AE]$ and $[BE]$ bisector
 $[EH] \perp [DC]$
 $|AE| = 6 \text{ br}$
 $|BE| = 8 \text{ br}$
 $|EH| = 4 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 24 B) 44 C) 48 D) 88 E) 96

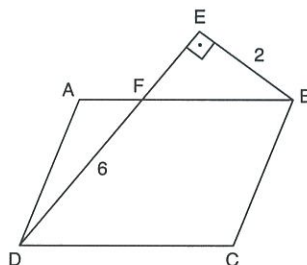
7.



ABCD paralelkenar
 ABCD parallelogram
 $A(ABE) = 2 \text{ br}^2$
 $A(EBC) = 3 \text{ br}^2$
 $A(ECD) = 6 \text{ br}^2$
 $\Rightarrow A(ADE) = ?$

- A) 11 B) 6 C) 5 D) 4 E) 3

8.

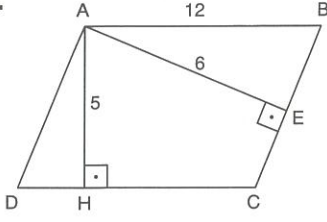


ABCD paralelkenar
 ABCD parallelogram
 $|AF| = 2|FB|$
 $|EB| = 2 \text{ br}$
 $|DF| = 6 \text{ br}$
 $[EB] \perp [ED]$
 $\Rightarrow A(ABCD) = ?$

- A) 144 B) 72 C) 36 D) 12 E) 6



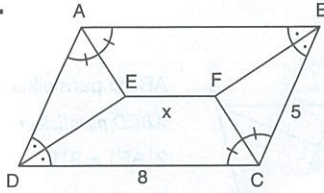
9.



ABCD paralelkenar
 ABCD parallelogram
 $[AE] \perp [BC]$
 $[AH] \perp [DC]$
 $|AB| = 12 \text{ br}$
 $|AE| = 6 \text{ br}$
 $|AH| = 5 \text{ br}$
 $\Rightarrow |AD| = x = ?$

- A) $\frac{72}{5}$ B) 13 C) 10 D) 8 E) $5\sqrt{2}$

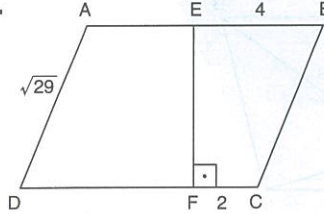
10.



ABCD paralelkenar
 ABCD parallelogram
 $[AE], [BF], [DE]$ ve $[FC]$ açıortaylar
 $[AE], [BF], [DE]$ and $[FC]$ bisectors
 $|DC| = 8 \text{ br}$
 $|BC| = 5 \text{ br}$
 $\Rightarrow |EF| = x = ?$

- A) 5 B) 4 C) 3 D) 2 E) 1

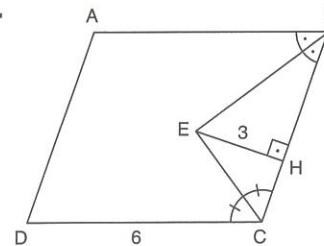
11.



ABCD paralelkenar
 ABCD parallelogram
 $[EF] \perp [DC]$
 $|AD| = \sqrt{29} \text{ br}$
 $|EB| = 4 \text{ br}$
 $|FC| = 2 \text{ br}$
 $\Rightarrow |EF| = x = ?$

- A) $\sqrt{13}$ B) 5 C) $\sqrt{30}$ D) $\sqrt{33}$ E) 6

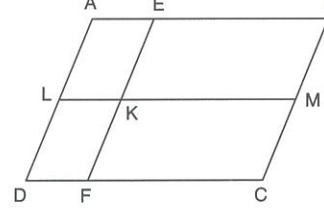
12.



ABCD paralelkenar
 ABCD parallelogram
 $[BE]$ ve $[CE]$ açıortay
 $[BE]$ and $[CE]$ bisector
 $[EH] \perp [BC]$
 $|EH| = 3 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 45 B) 36 C) 27 D) 18 E) 9

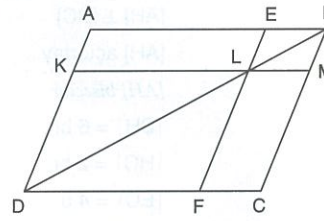
13.



ABCD paralelkenar
 ABCD parallelogram
 $[AB] \parallel [LM]$
 $[AD] \parallel [EF]$
 $A(AEKL) = 6 \text{ br}^2$
 $A(EBMK) = 15 \text{ br}^2$
 $A(LKFD) = 8 \text{ br}^2$
 $\Rightarrow A(KMCF) = ?$

- A) 18 B) 20 C) 24 D) 25 E) 30

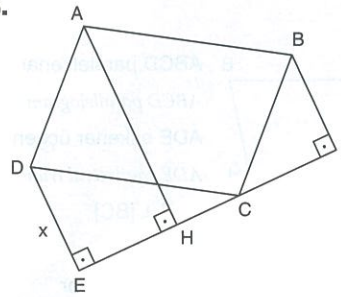
14.



ABCD paralelkenar
 ABCD parallelogram
 $[EF] \parallel [BC]$
 $[KM] \parallel [AB]$
 $A(BML) = 4 \text{ br}^2$
 $A(LFD) = 9 \text{ br}^2$
 $\Rightarrow A(AELK) = ?$

- A) 24 B) 18 C) 15 D) 12 E) 6

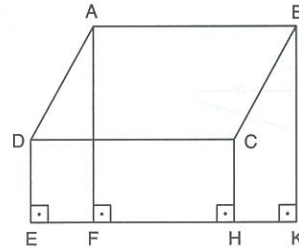
15.



ABCD paralelkenar
 ABCD parallelogram
 $[BF] \perp [EF]$
 $[AH] \perp [EF]$
 $[DE] \perp [EF]$
 $|BF| = 2 \text{ br}$
 $|AH| = 5 \text{ br}$
 $\Rightarrow |DE| = x = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

16.



ABCD paralelkenar
 ABCD parallelogram
 $[DE] \perp [EK]$
 $[AF] \perp [EK]$
 $[CH] \perp [EK]$
 $[BK] \perp [EK]$
 $|CH| = 2 \text{ br}$
 $|AF| = 9 \text{ br}$
 $|DE| = 3 \text{ br}$
 $\Rightarrow |BK| = x = ?$

- A) 16 B) 10 C) 8 D) 4 E) 2



1. ABCD paralelkenar
 ABCD parallelogram
 $|DE| = |EF|$
 $m(\angle BEF) = 15^\circ$
 $m(\angle FDC) = 20^\circ$
 $\Rightarrow m(\angle AED) = \alpha = ?$
- A) 45 B) 55 C) 60 D) 70 E) 75

2. ABCD paralelkenar
 ABCD parallelogram
 $[AH] \perp [BC]$
 $[AH]$ açıortay
 $[AH]$ bisector
 $|BH| = 6$ br
 $|HC| = 2$ br
 $|EC| = 4$ br
 $\Rightarrow |AE| = x = ?$
- A) 2 B) 4 C) 6 D) 8 E) 10

3. ABCD paralelkenar
 ABCD parallelogram
 ADE eşkenar üçgen
 ADE equilateral triangle
 $[EH] \perp [BC]$
 $|BC| = 8$ br
 $|EH| = 2\sqrt{3}$ br
 $\Rightarrow A(ABCD) = ?$
- A) $24\sqrt{2}$ B) $24\sqrt{3}$ C) 48 D) $48\sqrt{2}$ E) $48\sqrt{3}$

4. ABCD paralelkenar
 ABCD parallelogram
 $[AC] \perp [DE]$
 $|AE| = |EB|$
 $|DF| = 24$ br
 $|BF| = 26$ br
 $\Rightarrow |AC| = ?$
- A) 26 B) 28 C) 30 D) 32 E) 36

PUZA YAYINLARI

5. ABCD paralelkenar
 ABCD parallelogram
 $m(\angle FAE) = 72^\circ$
 $m(\angle BCD) = 108^\circ$
 $|AF| = 8$ br
 $|AE| = 4$ br
 $|BF| = |DE|$
- $A(\triangle ADE) = S_1$ ve $A(\triangle ABF) = S_2$
 $\Rightarrow \frac{S_1}{S_2} = ?$
- A) $\frac{1}{2}$ B) 1 C) $\frac{4}{3}$ D) $\frac{3}{2}$ E) 2

6. ABCD paralelkenar
 ABCD parallelogram
 $2|AE| = 3|ED|$
 $A(\triangle ECD) = 24$ br²
 $A(\triangle BLC) = 20$ br²
 $\Rightarrow A(\triangle ELC) = ?$
- A) 4 B) 10 C) 16 D) 40 E) 60

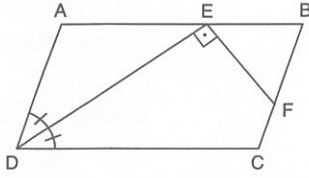
PUZA YAYINLARI

7. ABCD paralelkenar
 ABCD parallelogram
 $[CH] \perp [AD]$
 $|AH| = |HD|$
 $|DE| = |EC|$
 $|BF| = 26$ br
 $|FH| = 5$ br
 $\Rightarrow A(ABCD) = ?$
- A) 60 B) 120 C) 180 D) 240 E) 360

8. ABCD paralelkenar
 ABCD parallelogram
 $[EL] \perp [EK]$
 $[EF] \perp [DC]$
 $|KE| = 4$ br
 $|EL| = 3$ br
 $|AK| = |KD|$
 $|BL| = |LC|$
 $\Rightarrow |EF| = x = ?$
- A) 3,6 B) 4 C) 4,8 D) 6 E) 10



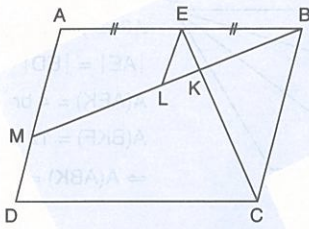
9.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[EF] \perp [ED]$
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $2|BF| = 3|FC|$
 $|EF| = 12$ br
 $|DE| = 15$ br
 $\Rightarrow A(ABCD) = ?$

- A) 60 B) 90 C) 120 D) 180 E) 240

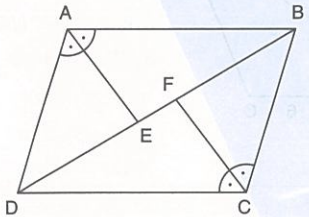
10.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[EL] \parallel [AD]$
 $|AE| = |EB|$
 $|EL| = 3$ br
 $|MD| = 3$ br
 $\Rightarrow \frac{|IKL|}{|BMI|} = ?$

- A) $\frac{1}{8}$ B) $\frac{1}{5}$ C) $\frac{2}{5}$ D) $\frac{3}{5}$ E) $\frac{2}{3}$

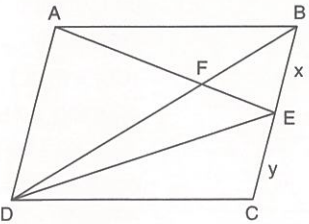
11.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AE]$ ve $[FC]$ açıortay
 $[AE]$ and $[FC]$ bisector
 $|EF| = 1$ br
 $|DC| = 10$ br
 $|BC| = 8$ br
 $\Rightarrow |BD| = ?$

- A) 18 B) 16 C) 12 D) 9 E) 8

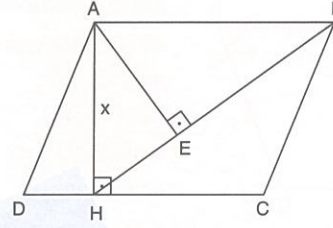
12.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $A(\triangle AFD) = 16 \text{ br}^2$
 $A(\triangle DEC) = 12 \text{ br}^2$
 $|BE| = x$
 $|EC| = y$
 $\Rightarrow \frac{x}{y} = ?$

- A) $\frac{2}{3}$ B) $\frac{3}{5}$ C) 1 D) $\frac{5}{3}$ E) 2

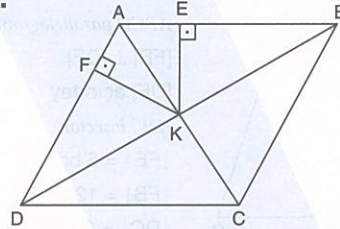
13.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AE] \perp [BH]$
 $[AH] \perp [DC]$
 $|AE| = 6$ br
 $|EB| = 4$ br
 $\Rightarrow |AH| = x = ?$

- A) $6\sqrt{3}$ B) $3\sqrt{13}$ C) 12 D) $12\sqrt{3}$ E) 15

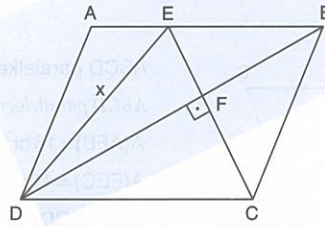
14.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[KE] \perp [AB]$
 $[FK] \perp [AD]$
 $m(\widehat{BCD}) = 135^\circ$
 $|FK| = 2$ br
 $|EK| = 4$ br
 $\Rightarrow A(ABCD) = ?$

- A) 8 B) 16 C) $16\sqrt{2}$ D) 32 E) $32\sqrt{2}$

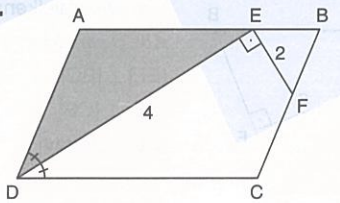
15.



ABCD paralelkenar
 $ABCD$ paralelkenar
 $[BD] \perp [EC]$
 $|EB| = 2|AE|$
 $|AD| = 15$ br
 $|DF| = 18$ br
 $\Rightarrow |DE| = x = ?$

- A) 36 B) $18\sqrt{5}$ C) 25 D) $9\sqrt{5}$ E) $6\sqrt{10}$

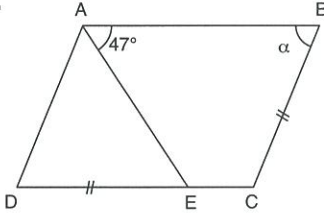
16.

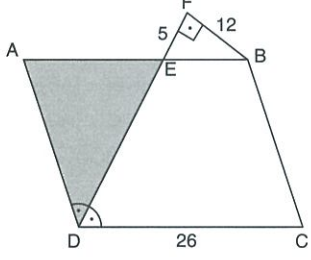


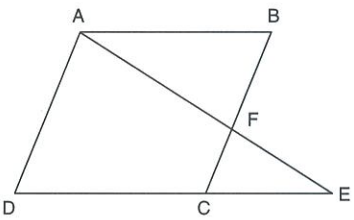
ABCD paralelkenar
 $ABCD$ paralelkenar
 $[DE]$ açıortay
 $[DE]$ bisector
 $|EF| = 2$ br
 $|DE| = 4$ br
 $|BF| = 2|FC|$
 $\Rightarrow A(\triangle ADE) = ?$

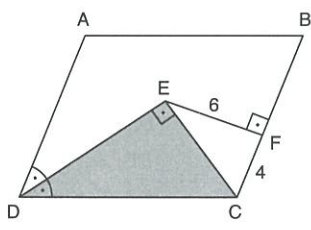
- A) 3 B) 5 C) 6 D) 10 E) 12



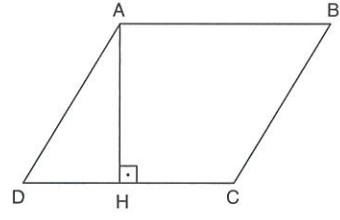
1.  ABCD paralelkenar
 $ABCD$ paralelkenar
 $m(\widehat{BAE}) = 47^\circ$
 $|BC| = |DE|$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$
- A) 43 B) 47 C) 84 D) 86 E) 104

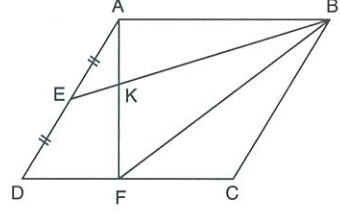
2.  ABCD paralelkenar
 $ABCD$ paralelkenar
 $[FB] \perp [DE]$
 $[DE]$ açıortay
 $[DE]$ bisector
 $|FE| = 5$ br
 $|FB| = 12$ br
 $|DC| = 26$ br
 $\Rightarrow A(AED) = ?$
- A) 120 B) 90 C) 60 D) 45 E) 30

3.  ABCD paralelkenar
 $ABCD$ paralelkenar
 $A(AFB) = 16$ br²
 $A(FEC) = 4$ br²
 $\Rightarrow A(ABCD) = ?$
- A) 24 B) 36 C) 48 D) 72 E) 96

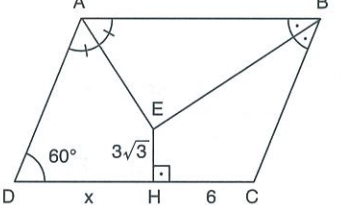
4.  ABCD paralelkenar
 $ABCD$ paralelkenar
 $[EF] \perp [BC]$
 $[DE] \perp [CE]$
 $[DE]$ açıortay
 $[DE]$ bisector
 $|FC| = 4$ br
 $|EF| = 6$ br
 $\Rightarrow A(EDC) = ?$
- A) 39 B) 24 C) 18 D) 13 E) 12

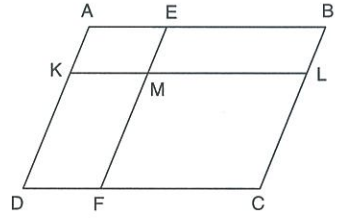
PUZA YAYINLARI

5.  ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AH] \perp [DC]$
 $m(\widehat{ABC}) = 2m(\widehat{DAH})$
 $|DH| = 3$ br
 $|HC| = 5$ br
 $\Rightarrow \angle(ABCD) = ?$
- A) 15 B) 24 C) 28 D) 32 E) 48

6.  ABCD paralelkenar
 $ABCD$ paralelkenar
 $|AE| = |ED|$
 $A(AEK) = 4$ br
 $A(BKF) = 12$ br²
 $\Rightarrow A(ABK) = ?$
- A) 4 B) 6 C) 8 D) 10 E) 12

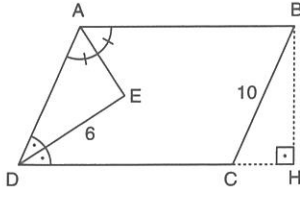
PUZA YAYINLARI

7.  ABCD paralelkenar
 $ABCD$ paralelkenar
 $[AE]$ ve $[BE]$ açıortay
 $[AE]$ and $[BE]$ bisector
 $[EH] \perp [DC]$
 $m(\widehat{ADC}) = 60^\circ$
 $|EH| = 3\sqrt{3}$ br
 $|HC| = 6$ br
 $\Rightarrow |DH| = x = ?$
- A) 15 B) 12 C) 9 D) 6 E) 3

8.  ABCD paralelkenar
 $ABCD$ paralelkenar
 $[KL] \parallel [DC]$
 $[EF] \parallel [AD]$
 $|CL| = 3|BL|$
 $A(AEMK) = 7$ br²
 $A(MLCF) = 42$ br²
 $A(EBLM) = S_1$
 $A(KMFD) = S_2$
 $\Rightarrow S_1 + S_2 = ?$
- A) 49 B) 42 C) 40 D) 35 E) 32



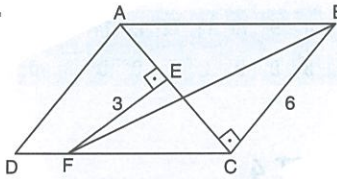
9.



ABCD paralelkenar
 ABCD parallelogram
 [AE] ve [DE] açıortay
 [AE] and [DE] bisector
 $|BC| = 10$ br
 $|DE| = 6$ br
 $[BH] \perp [DC]$
 $\Rightarrow |BH| = ?$

- A) 2,4 B) 4,8 C) 6 D) 8 E) 9,6

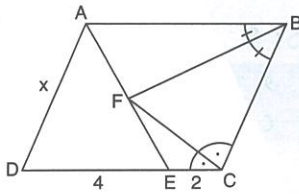
10.



ABCD paralelkenar
 ABCD parallelogram
 $[EF] \perp [AC]$
 $[AC] \perp [BC]$
 $[BF]$ açıortay
 $[BF]$ bisector
 $|EF| = 3$ br
 $|BC| = 6$ br
 $\Rightarrow |AE| = ?$

- A) $\frac{3\sqrt{3}}{2}$ B) 3 C) $3\sqrt{3}$ D) 6 E) 9

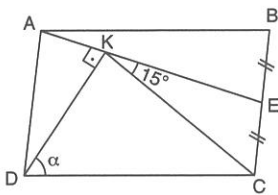
11.



ABCD paralelkenar
 ABCD parallelogram
 $[BF]$ ve $[CF]$ açıortay
 $[BF]$ ve $[CF]$ bisector
 $|CE| = 2$ br
 $|DE| = 4$ br
 $\Rightarrow |AD| = x = ?$

- A) 12 B) 8 C) 6 D) 5 E) 4

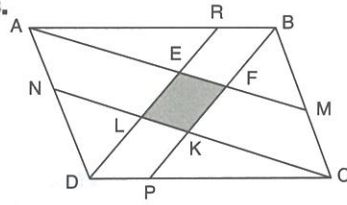
12.



ABCD paralelkenar
 ABCD parallelogram
 $|BE| = |EC|$
 $[DK] \perp [AE]$
 $m(\widehat{CKE}) = 15^\circ$
 $\Rightarrow m(\widehat{KDC}) = \alpha = ?$

- A) 75 B) 60 C) 45 D) 30 E) 15

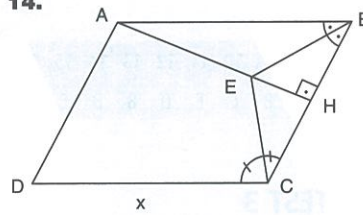
13.



ABCD paralelkenar
 ABCD parallelogram
 $|ND| = 2|NA|$
 $|PC| = 2|PD|$
 $\Rightarrow \frac{A(ABCD)}{A(EFKL)} = ?$

- A) 4 B) 6 C) 8 D) 12 E) 13

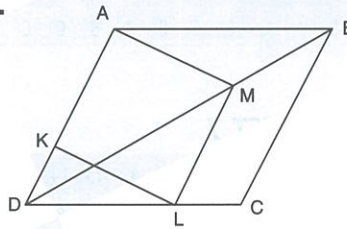
14.



ABCD paralelkenar
 ABCD parallelogram
 $[AH] \perp [BC]$
 $[BE]$ ve $[CE]$ açıortay
 $[BE]$ and $[CE]$ bisector
 $|BH| = 6$ br
 $|HC| = \frac{3}{2}$ br
 $\Rightarrow |DC| = x = ?$

- A) 15 B) 12 C) 10 D) 8 E) 6

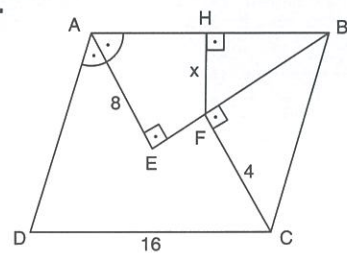
15.



ABCD paralelkenar
 ABCD parallelogram
 KLMA kare
 KLMA square
 $|BC| = 9$ br
 $|KD| = 4$ br
 $\Rightarrow A(ABCD) = ?$

- A) 54 B) 64 C) 72 D) 81 E) 90

16.



ABCD paralelkenar
 ABCD parallelogram
 $[FH] \perp [AB]$
 $[CF] \perp [EB]$
 $[AE] \perp [EB]$
 $|AE| = 8$ br
 $|CF| = 4$ br
 $|DC| = 16$ br
 $\Rightarrow |HF| = x = ?$

- A) $2\sqrt{3}$ B) 4 C) $4\sqrt{3}$ D) 6 E) $6\sqrt{3}$



PARALELKENAR PARALLELOGRAM

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	E	B	D	D	A	C	D	B	C	E	D	B	B	E	A

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	E	E	C	A	A	B	B	D	D	C	C	D	D	B	D

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	C	B	D	B	A	A	C	B	D	C	C	D	C	A

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	D	C	B	B	B	D	E	B	C	C	E	A	E	A

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	B	E	E	D	A	C	C	C	B	A	B	C	C	E

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	E	B	E	A	C	B	C	B	A	B	A	C	B	B	B

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	E	C	A	C	D	A	B	D	B	D	C	B	D	D

TEST 8

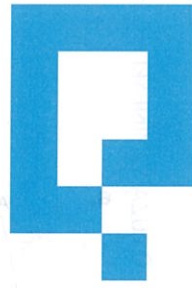
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	E	A	A	D	C	C	C	C	B	B	B	D	A	C

TEST 9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	E	C	A	D	E	C	E	A	D	C	B	E	E	A

TEST 10

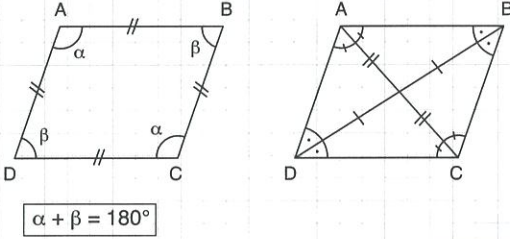
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	C	A	C	A	B	D	E	C	B	A	E	C	D	A



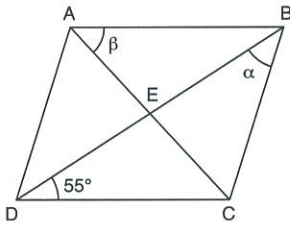
EŞKENAR DÖRTGEN

RHOMBUS

ÖZELLİK|Property 1



1.

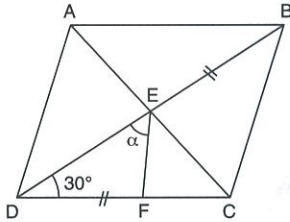
ABCD eşkenar
dörtgen

ABCD rhombus

 $\Rightarrow \alpha = ?$ $\Rightarrow \beta = ?$

55, 35

2.

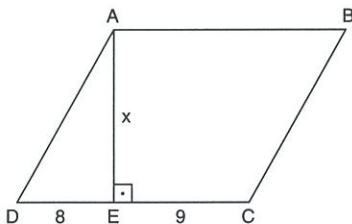
ABCD eşkenar
dörtgen

ABCD rhombus

 $\Rightarrow \alpha = ?$

75

3.

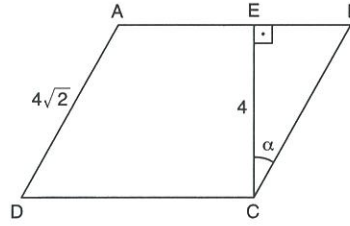
ABCD eşkenar
dörtgen

ABCD rhombus

 $\Rightarrow x = ?$

15

4.

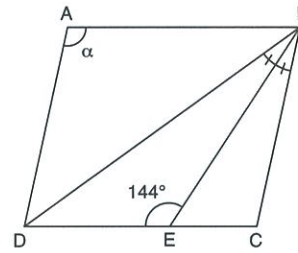
ABCD eşkenar
dörtgen

ABCD rhombus

 $\Rightarrow \alpha = ?$

45

5.

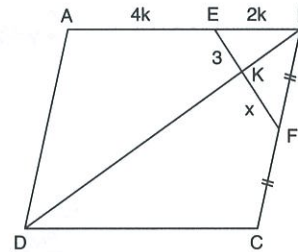
ABCD eşkenar
dörtgen

ABCD rhombus

 $\Rightarrow \alpha = ?$

132

6.

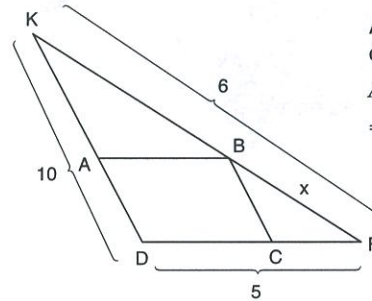
ABCD eşkenar
dörtgen

ABCD rhombus

 $\Rightarrow x = ?$

4,5

7.

ABCD eşkenar
dörtgen

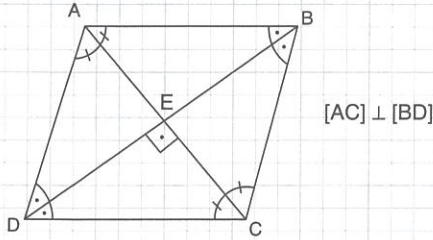
ABCD rhombus

 $\Rightarrow x = ?$

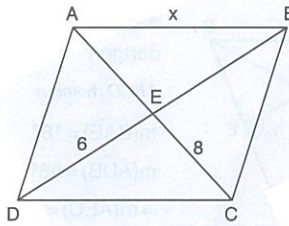
2



ÖZELLİK|Property 2



1.



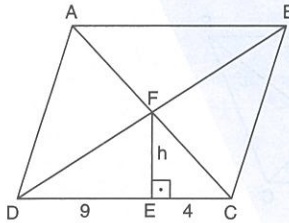
ABCD eşkenar
dörtgen

ABCD rhombus

$\Rightarrow x = ?$

10

2.



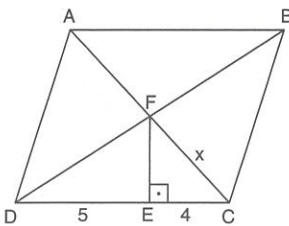
ABCD eşkenar
dörtgen

ABCD rhombus

$\Rightarrow h = ?$

6

3.



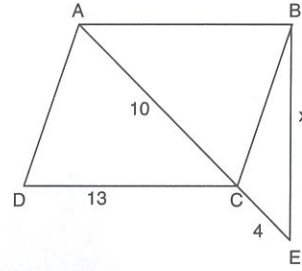
ABCD eşkenar
dörtgen

ABCD rhombus

$\Rightarrow x = ?$

6

4.



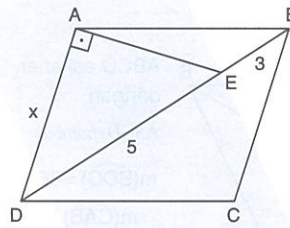
ABCD eşkenar
dörtgen

ABCD rhombus

$\Rightarrow x = ?$

15

5.



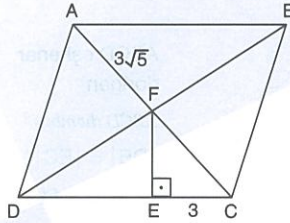
ABCD eşkenar
dörtgen

ABCD rhombus

$\Rightarrow x = ?$

 $2\sqrt{5}$

6.



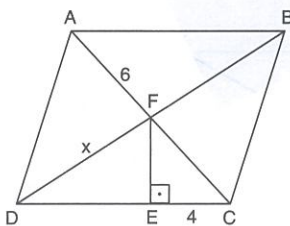
ABCD eşkenar
dörtgen

ABCD rhombus

$\Rightarrow A(ABCD) = ?$

180

7.



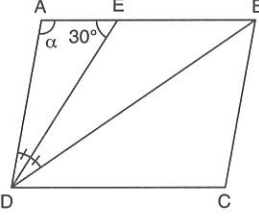
ABCD eşkenar
dörtgen

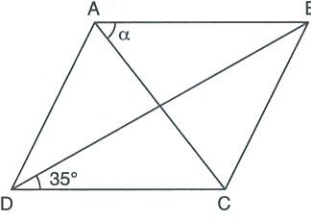
ABCD rhombus

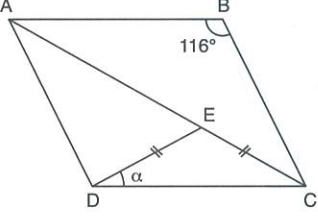
$\Rightarrow x = ?$

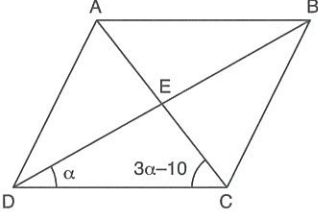
 $3\sqrt{5}$



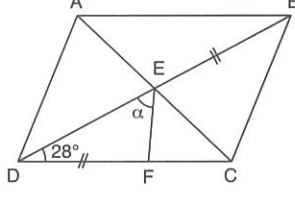
1.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $m(\widehat{AED}) = 30^\circ$
 $m(\widehat{ADE}) = m(\widehat{EDB})$
 $\Rightarrow m(\widehat{BAD}) = \alpha = ?$
- A) 110 B) 120 C) 130 D) 140 E) 145

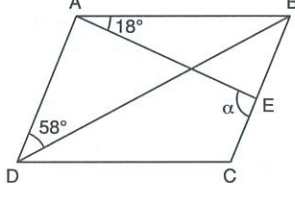
2.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $m(\widehat{BDC}) = 35^\circ$
 $\Rightarrow m(\widehat{CAB}) = \alpha = ?$
- A) 35 B) 50 C) 55 D) 65 E) 70

3.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|DE| = |EC|$
 $m(\widehat{ABC}) = 116^\circ$
 $\Rightarrow m(\widehat{EDC}) = \alpha = ?$
- A) 16 B) 24 C) 32 D) 40 E) 48

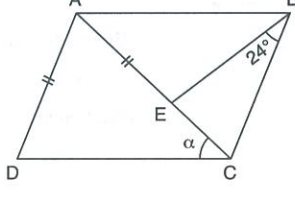
4.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $m(\widehat{ACD}) = 3\alpha - 10^\circ$
 $\Rightarrow m(\widehat{BDC}) = \alpha = ?$
- A) 15 B) 25 C) 30 D) 32 E) 35

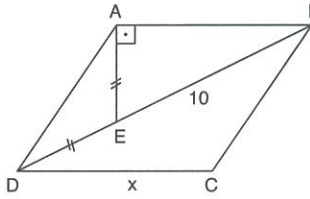
PUZA YAYINLARI

5.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|BE| = |DF|$
 $m(\widehat{BDC}) = 28^\circ$
 $\Rightarrow m(\widehat{DEF}) = \alpha = ?$
- A) 24 B) 76 C) 86 D) 96 E) 124

6.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $m(\widehat{BAE}) = 18^\circ$
 $m(\widehat{ADB}) = 58^\circ$
 $\Rightarrow m(\widehat{AEC}) = \alpha = ?$
- A) 66 B) 76 C) 88 D) 116 E) 134

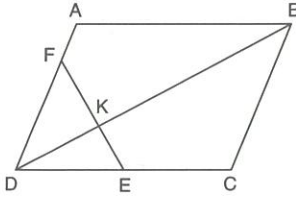
PUZA YAYINLARI

7.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $m(\widehat{EBC}) = 24^\circ$
 $|AE| = |AD|$
 $\Rightarrow m(\widehat{ACD}) = \alpha = ?$
- A) 20 B) 30 C) 44 D) 48 E) 68

8.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $[AE] \perp [AB]$
 $|AE| = |DE|$
 $|EB| = 10$ br
 $\Rightarrow |DC| = x = ?$
- A) 5 B) $5\sqrt{3}$ C) 10 D) $10\sqrt{3}$ E) 20



9.



ABCD eşkenar
dörtgen

ABCD rhombus

$$3|AF| = |DF|$$

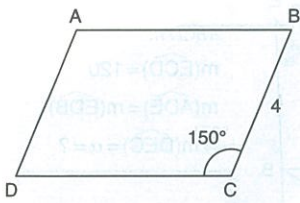
$$2|AF| = |EC|$$

$$|FK| = 6 \text{ br}$$

$$\Rightarrow |KE| = ?$$

- A) 2 B) 3 C) 4 D) 6 E) 8

10.



ABCD eşkenar
dörtgen

ABCD rhombus

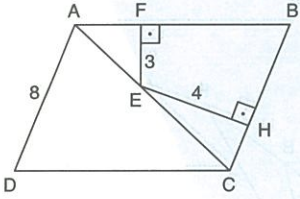
$$m(\widehat{BCD}) = 150^\circ$$

$$|BC| = 4 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

- A) 4 B) $4\sqrt{3}$ C) 8 D) $8\sqrt{3}$ E) 16

11.



ABCD eşkenar
dörtgen

ABCD rhombus

$$|AD| = 8 \text{ br}$$

$$|EF| = 3 \text{ br}$$

$$|EH| = 4 \text{ br}$$

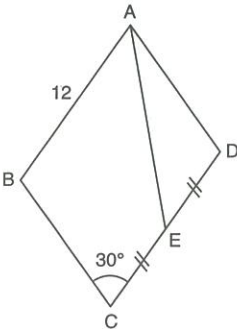
$$[AB] \perp [EF]$$

$$[BC] \perp [EH]$$

$$\Rightarrow A(ABCD) = ?$$

- A) 28 B) 35 C) 42 D) 49 E) 56

12.



ABCD eşkenar
dörtgen

ABCD rhombus

$$|AB| = 12 \text{ br}$$

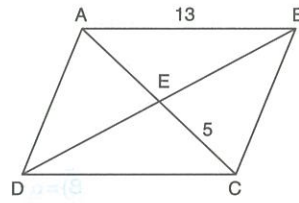
$$|DE| = |EC|$$

$$m(\widehat{BCD}) = 30^\circ$$

$$\Rightarrow A(AED) = ?$$

- A) 114 B) 72 C) 54 D) 36 E) 18

13.



ABCD eşkenar
dörtgen

ABCD rhombus

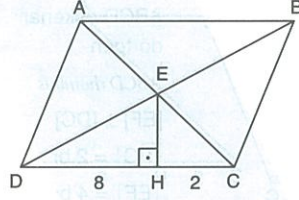
$$|AB| = 13 \text{ br}$$

$$|CE| = 5 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

- A) 120 B) 112 C) 100 D) 90 E) 60

14.



ABCD eşkenar
dörtgen

ABCD rhombus

$$[EH] \perp [DC]$$

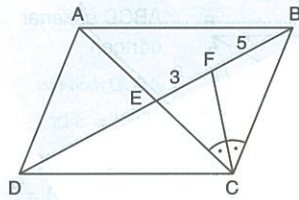
$$|DH| = 8 \text{ br}$$

$$|HC| = 2 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

- A) 160 B) 140 C) 100 D) 80 E) 70

15.



ABCD eşkenar
dörtgen

ABCD rhombus

$$m(\widehat{ACF}) = m(\widehat{FCB})$$

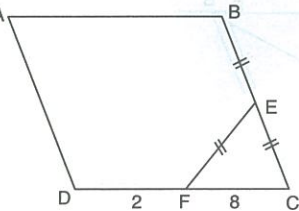
$$|EF| = 3 \text{ br}$$

$$|FB| = 5 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

- A) 24 B) $24\sqrt{2}$ C) 48 D) $48\sqrt{2}$ E) 96

16.



ABCD eşkenar
dörtgen

ABCD rhombus

$$|EB| = |EC| = |EF|$$

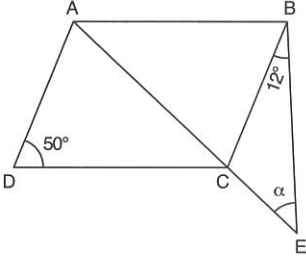
$$|FC| = 8 \text{ br}$$

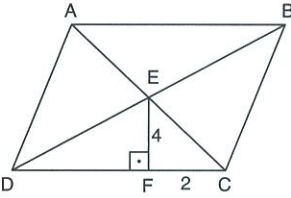
$$|DF| = 2 \text{ br}$$

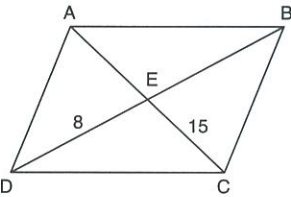
$$\Rightarrow A(ABCD) = ?$$

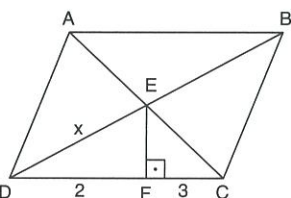
- A) 20 B) 30 C) 45 D) 60 E) 80



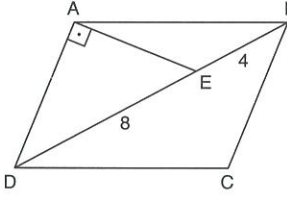
1.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $m(\widehat{CBE}) = 12^\circ$
 $m(\widehat{ADC}) = 50^\circ$
 $\Rightarrow m(\widehat{AEB}) = \alpha = ?$
- A) 38 B) 53 C) 62 D) 88 E) 148

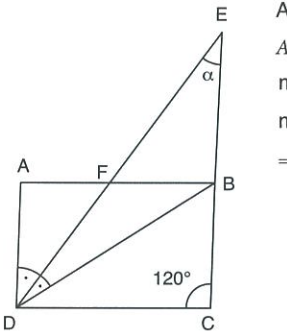
2.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $[EF] \perp [DC]$
 $|FC| = 2$ br
 $|EF| = 4$ br
 $\Rightarrow \angle(ABCD) = ?$
- A) 8 B) 10 C) 32 D) 40 E) 48

3.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|DE| = 8$ br
 $|EC| = 15$ br
 $\Rightarrow \angle(ABCD) = ?$
- A) 34 B) 68 C) 72 D) 78 E) 96

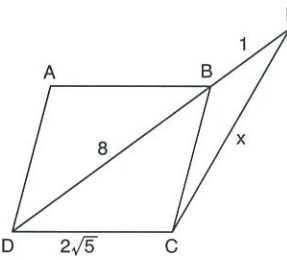
4.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $[EF] \perp [DC]$
 $|DF| = 2$ br
 $|FC| = 3$ br
 $\Rightarrow |DE| = x = ?$
- A) 2 B) $\sqrt{6}$ C) $\sqrt{10}$ D) $\sqrt{13}$ E) 4

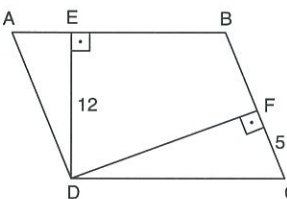
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5.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $[EA] \perp [AD]$
 $|DE| = 8$ br
 $|EB| = 4$ br
 $\Rightarrow |AE| = x = ?$
- A) $2\sqrt{3}$ B) 4 C) 6 D) $4\sqrt{6}$ E) 10

6.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $m(\widehat{ECD}) = 120^\circ$
 $m(\widehat{ADE}) = m(\widehat{EDB})$
 $\Rightarrow m(\widehat{DEC}) = \alpha = ?$
- A) 15 B) 20 C) 25 D) 30 E) 40

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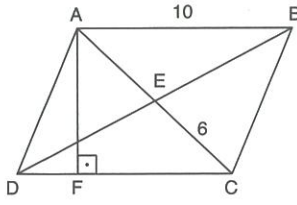
7.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|DB| = 8$ br
 $|BE| = 1$ br
 $|DC| = 2\sqrt{5}$ br
 $\Rightarrow |CE| = x = ?$
- A) $2\sqrt{5}$ B) $\sqrt{23}$ C) 5 D) $\sqrt{29}$ E) 6

8.  ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $[DE] \perp [AB]$
 $[DF] \perp [BC]$
 $|DE| = 12$ br
 $|FC| = 5$ br
 $\Rightarrow |EB| = x = ?$
- A) 15 B) 13 C) 10 D) 8 E) 5

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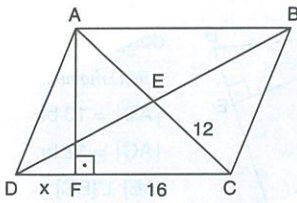
9.



ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|AB| = 10$ br
 $|EC| = 6$ br
 $[AF] \perp [DC]$
 $\Rightarrow |AF| = ?$

- A) 2,4 B) 4,8 C) 7,2 D) 9,6 E) 10,8

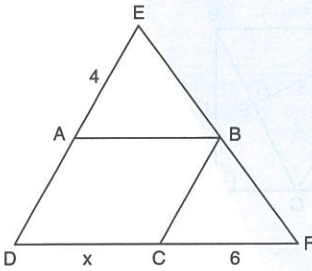
10.



ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $[AF] \perp [DC]$
 $|EC| = 12$ br
 $|FC| = 16$ br
 $\Rightarrow |DF| = x = ?$

- A) 6 B) 5 C) 4 D) 3 E) 2

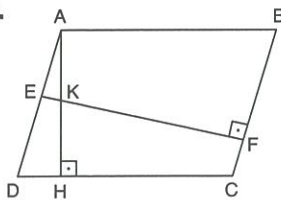
11.



ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|EA| = 4$ br
 $|CF| = 6$ br
 $\Rightarrow |DC| = x = ?$

- A) 2 B) 3 C) $2\sqrt{3}$ D) 4 E) $2\sqrt{6}$

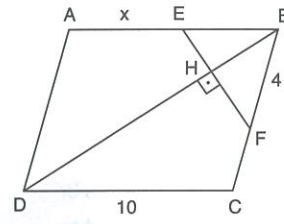
12.



ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $m(\widehat{ABC}) = 60^\circ$
 $[EF] \perp [BC]$
 $[AH] \perp [DC]$
 $|HK| = 4$ br
 $|KF| = 6$ br
 $\Rightarrow |AK| = ?$

- A) $\frac{1}{\sqrt{3}}$ B) 1 C) $\sqrt{3}$ D) $2\sqrt{3}$ E) 4

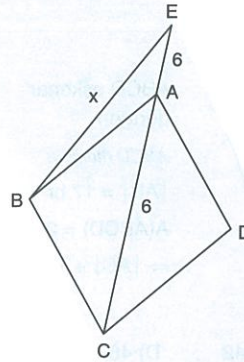
13.



ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $[EF] \perp [DB]$
 $|BF| = 4$ br
 $|DC| = 10$ br
 $\Rightarrow |AE| = x = ?$

- A) 2 B) 4 C) 6 D) 7 E) 8

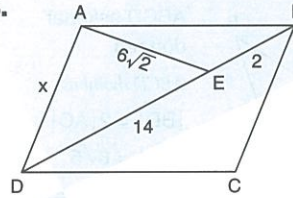
14.



ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|AC| = 6$ br
 $|AE| = 6$ br
 $A(ABCD) = 24$ br²
 $\Rightarrow |BE| = x = ?$

- A) 5 B) $\sqrt{97}$ C) $\sqrt{107}$ D) $4\sqrt{10}$ E) 20

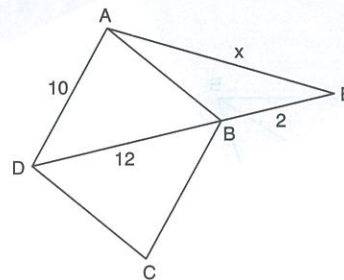
15.



ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|AE| = 6\sqrt{2}$ br
 $|DE| = 14$ br
 $|EB| = 2$ br
 $\Rightarrow |AD| = x = ?$

- A) 15 B) 12 C) 10 D) 8 E) 6

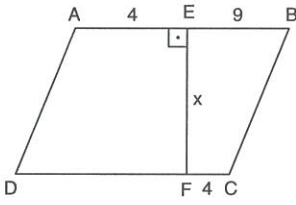
16.

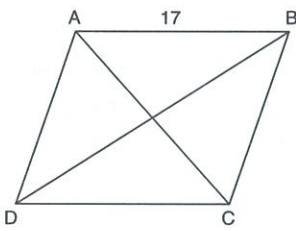


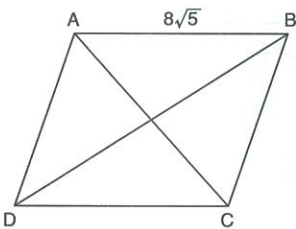
ABCD eşkenar dörtgen
 $ABCD$ rhombus
 $|AD| = 10$ br
 $|DB| = 12$ br
 $|BE| = 2$ br
 $\Rightarrow |AE| = x = ?$

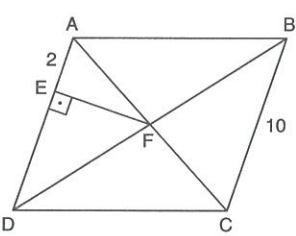
- A) 10 B) $8\sqrt{2}$ C) 8 D) $6\sqrt{2}$ E) 6



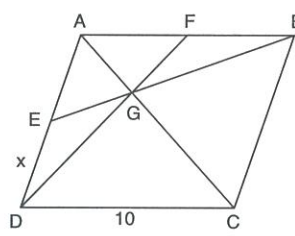
1.  ABCD eşkenar dörtgen
ABCD rhombus
 $[FE] \perp [AB]$
 $|AE| = 4$ br
 $|EB| = 9$ br
 $|FC| = 4$ br
 $\Rightarrow |EF| = x = ?$
- A) 7 B) 9 C) 12 D) 13 E) 15

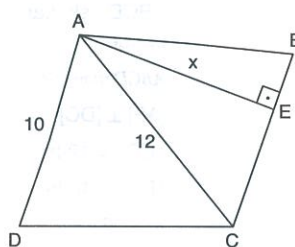
2.  ABCD eşkenar dörtgen
ABCD rhombus
 $|AB| = 17$ br
 $A(ABCD) = 240$ br²
 $\Rightarrow |AC| + |BD| = x = ?$
- A) 23 B) 34 C) 42 D) 46 E) 52

3.  ABCD eşkenar dörtgen
ABCD rhombus
 $|BD| = 2|AC|$
 $|AB| = 8\sqrt{5}$
 $\Rightarrow A(ABCD) = ?$
- A) 32 B) 64 C) 128 D) 256 E) 512

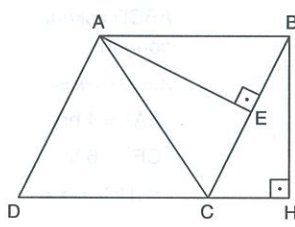
4.  ABCD eşkenar dörtgen
ABCD rhombus
 $[EF] \perp [AD]$
 $|EA| = 2$ br
 $|BC| = 10$ br
 $\Rightarrow A(ABCD) = ?$
- A) 20 B) 40 C) 60 D) 80 E) 100

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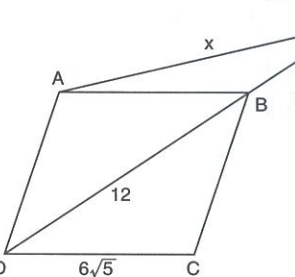
5.  ABCD eşkenar dörtgen
ABCD rhombus
 $2|AF| = 3|FB|$
 $|DC| = 10$ br
 $\Rightarrow |ED| = x = ?$
- A) 2 B) 3 C) 4 D) 6 E) 8

6.  ABCD eşkenar dörtgen
ABCD rhombus
 $|AD| = 10$ br
 $|AC| = 12$ br
 $[AE] \perp [BC]$
 $\Rightarrow |AE| = x = ?$
- A) 1,2 B) 2,4 C) 4,8 D) 9,6 E) 10,4

PUZA YAYINLARI

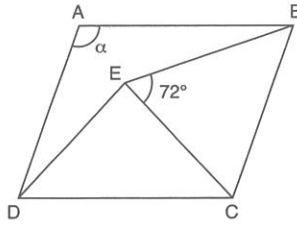
7.  ABCD eşkenar dörtgen
ABCD rhombus
 $[AE] \perp [BC]$
 $[BH] \perp [DH]$
 $|BE| = 9$ br
 $|AD| = 15$ br
 $\Rightarrow |BH| = h = ?$
- A) 25 B) 20 C) 15 D) 12 E) 9

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8.  ABCD eşkenar dörtgen
ABCD rhombus
 $|DB| = 12$ br
 $|DC| = 6\sqrt{5}$ br
 $|BE| = 6$ br
 $\Rightarrow |AE| = x = ?$
- A) 6 B) $6\sqrt{2}$ C) 9 D) 12 E) $12\sqrt{2}$



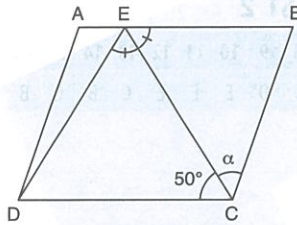
9.



ABCD eşkenar dörtgen
ABCD rhombus
 EDC eşkenar üçgen
ADE equilateral triangle
 $m(\widehat{BEC}) = 72^\circ$
 $\Rightarrow m(\widehat{BAD}) = \alpha = ?$

- A) 54 B) 72 C) 96 D) 108 E) 144

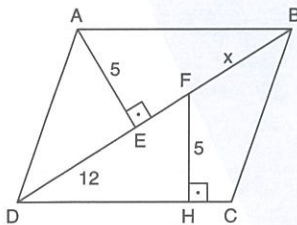
10.



ABCD eşkenar dörtgen
ABCD rhombus
 $m(\widehat{ECD}) = 50^\circ$
 $m(\widehat{DEC}) = m(\widehat{CEB})$
 $\Rightarrow m(\widehat{ECB}) = \alpha = ?$

- A) 20 B) 30 C) 40 D) 50 E) 70

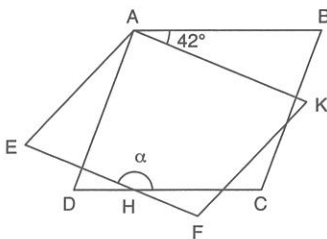
11.



ABCD eşkenar dörtgen
ABCD rhombus
 $[AE] \perp [DB]$
 $[FH] \perp [DC]$
 $|AE| = 5$ br
 $|DE| = 12$ br
 $|FH| = 5$ br
 $\Rightarrow |FB| = x = ?$

- A) 8 B) 9 C) 10 D) 11 E) 12

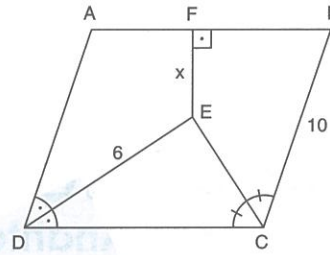
12.



ABCD ve EAKF eşkenar dörtgen
ABCD and EAKF rhombus
 $m(\widehat{BAK}) = 42^\circ$
 $m(\widehat{EFK}) = 120^\circ$
 $\Rightarrow m(\widehat{EHC}) = \alpha = ?$

- A) 112 B) 124 C) 128 D) 132 E) 138

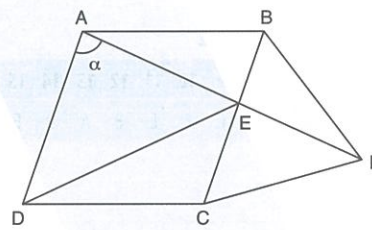
13.



ABCD eşkenar dörtgen
ABCD rhombus
 $[EF] \perp [AB]$
 $|BC| = 10$ br
 $|DE| = 6$ br
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $\Rightarrow |EF| = x = ?$

- A) 3,6 B) 4,8 C) 5,2 D) 6,8 E) 7,2

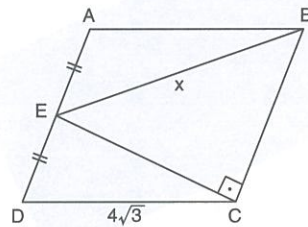
14.



ABCD eşkenar dörtgen
ABCD rhombus
 BCF eşkenar üçgen
BCF equilateral triangle
 $m(\widehat{DCF}) = 140^\circ$
 $\Rightarrow m(\widehat{DAF}) = \alpha = ?$

- A) 70 B) 60 C) 55 D) 50 E) 45

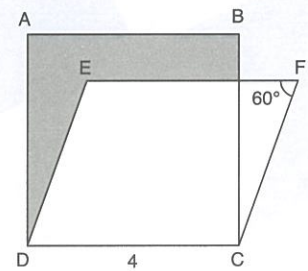
15.



ABCD eşkenar dörtgen
ABCD rhombus
 $|AE| = |ED|$
 $[EC] \perp [BC]$
 $|DC| = 4\sqrt{3}$
 $\Rightarrow |EB| = x = ?$

- A) $2\sqrt{21}$ B) 9 C) $6\sqrt{2}$ D) $4\sqrt{3}$ E) 6

16.



ABCD kare
ABCD square
 EFCD eşkenar dörtgen
EFCD rhombus
 $m(\widehat{EFC}) = 60^\circ$
 $|DC| = 4$ br
 $\Rightarrow$ Taralı Alan = ?
 Shaded Area = ?

- A) $18 - 6\sqrt{3}$ B) $16 - 6\sqrt{3}$ C) $18 - \frac{27\sqrt{3}}{4}$
 D) $9 - 3\sqrt{3}$ E) 9



EŞKENAR DÖRTGEN RHOMBUS

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	C	B	B	E	C	B	C	C	E	E	A	D	E	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	B	C	B	A	D	D	D	E	E	E	C	B	C	B

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	D	D	C	D	D	E	C	B	D	E	B	A	A	B

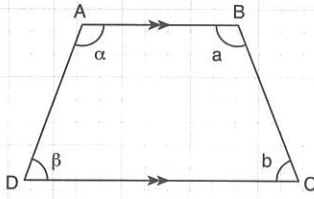


YAMUK

TRAPEZOID



ÖZELLİK|Property 1

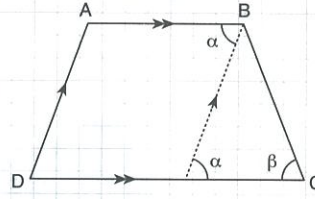


ABCD yamuk
 ABCD trapezoid
 $[AB] \parallel [DC]$
 $\alpha + \beta = 180^\circ$
 $a + b = 180^\circ$

Yamukta verilen açılar; 30° , 45° , 60° , 120° , 135° ve 150° 'lik açılar ise tabana dik indirilerek pisagor ile çözüm yapılır.

If the angles given for the trapezium are the angles such as (30° , 45° , 60° , 120° , 135° , 150°), then they are solved by drawing a perpendicular bisector.

ÖZELLİK|Property 2

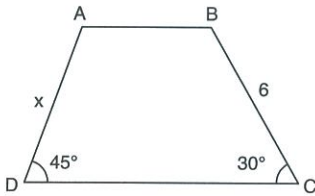


ABCD yamuk
 ABCD trapezoid

Yamukta verilen açılar; 30° , 45° , 60° , 120° , 135° ve 150° 'lik açılardan farklı ise şekildeki gibi kenara paralel çizilerek çözüm yapılır.

If the angles given for the trapezium are different from the angles such as (30° , 45° , 60° , 120° , 135° , 150°), then they are solved by drawing a parallel line as indicated in the figure.

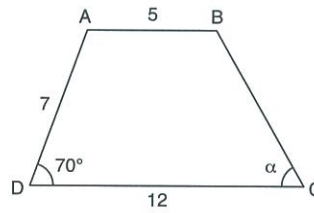
1.



ABCD yamuk
 ABCD trapezoid
 $\Rightarrow x = ?$

$$3\sqrt{2}$$

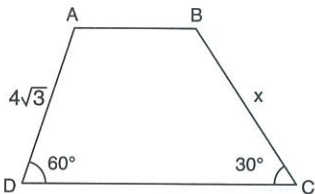
1.



ABCD yamuk
 ABCD trapezoid
 $\Rightarrow \alpha = ?$

$$55$$

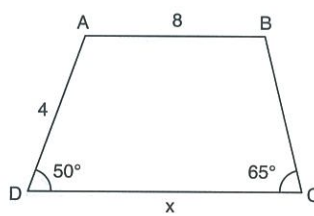
2.



ABCD yamuk
 ABCD trapezoid
 $\Rightarrow x = ?$

$$12$$

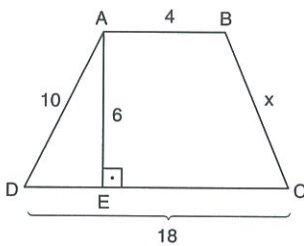
2.



ABCD yamuk
 ABCD trapezoid
 $\Rightarrow x = ?$

$$12$$

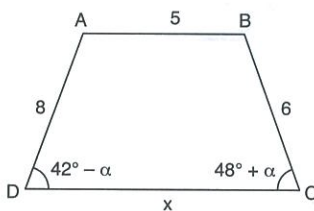
3.



ABCD yamuk
 ABCD trapezoid
 $\Rightarrow x = ?$

$$6\sqrt{2}$$

3.

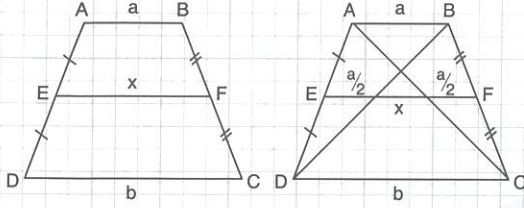


ABCD yamuk
 ABCD trapezoid
 $\Rightarrow x = ?$

$$15$$



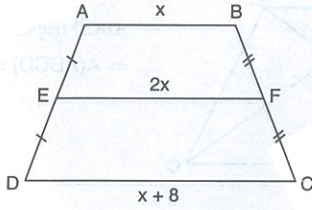
ÖZELLİK|Property 3



$$x = \frac{a+b}{2}$$

$$x = \frac{b-a}{2}$$

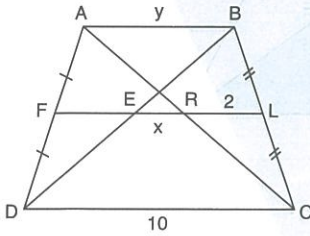
1.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow x = ?$

4

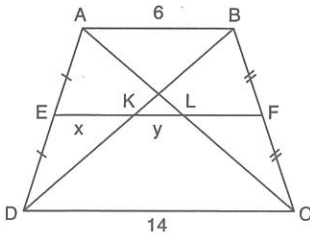
2.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow x = ?$
 $\Rightarrow y = ?$

3, 4

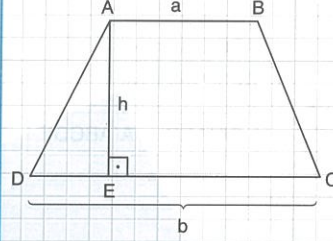
3.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow x = ?$
 $\Rightarrow y = ?$

3, 4

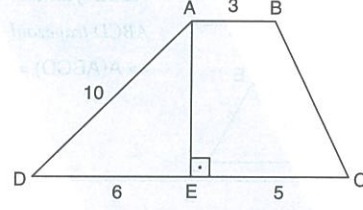
ÖZELLİK|Property 4



ABCD yamuk
ABCD trapezoid

$$A(ABCD) = \frac{a+b}{2} \cdot h$$

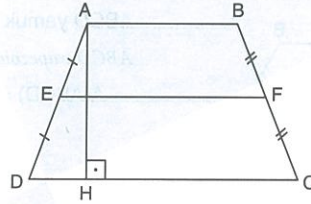
1.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow A(ABCD) = ?$

56

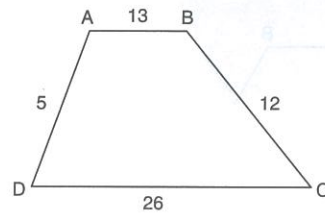
2.



ABCD yamuk
ABCD trapezoid
 $|EF| = 4$ br
 $|AH| = 8$ br
 $\Rightarrow A(ABCD) = ?$

32

3.

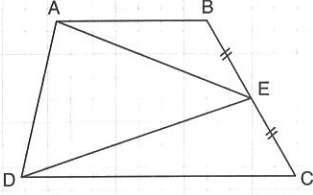


ABCD yamuk
ABCD trapezoid
 $\Rightarrow A(ABCD) = ?$

90



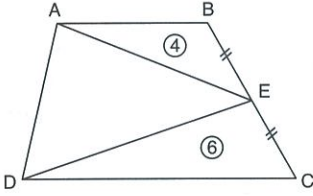
ÖZELLİK|Property 5



ABCD yamuk
ABCD trapezoid

$$2A(\triangle AED) = A(ABCD)$$

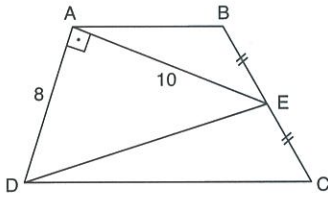
1.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow A(ABCD) = ?$

20

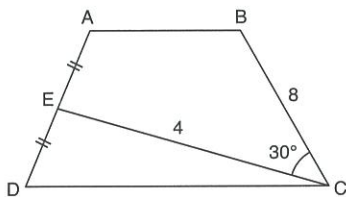
2.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow A(ABCD) = ?$

80

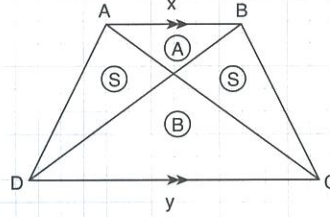
3.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow A(ABCD) = ?$

16

ÖZELLİK|Property 6

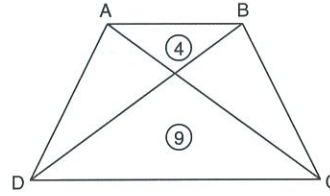


ABCD yamuk
ABCD trapezoid

$$\left(\frac{x}{y}\right)^2 = \frac{A}{B}$$

$$S \cdot S = A \cdot B$$

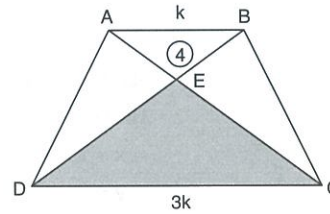
1.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow A(ABCD) = ?$

25

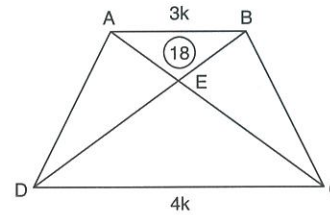
2.



ABCD yamuk
ABCD trapezoid
 $\Rightarrow A(EDC) = ?$

36

3.

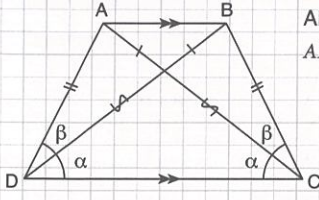


ABCD yamuk
ABCD trapezoid
 $\Rightarrow A(ABCD) = ?$

98

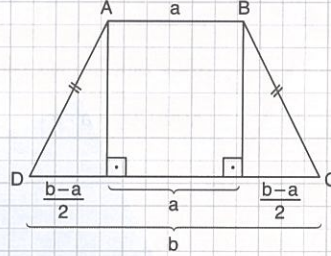


ÖZELLİK|Property 7



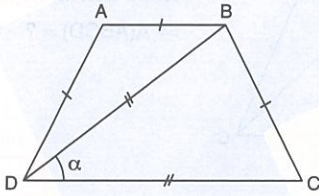
ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $m(\hat{A}) = m(\hat{B})$
 $m(\hat{D}) = m(\hat{C})$
 $m(\hat{A}) + m(\hat{D}) = 180^\circ$
 $m(\hat{B}) + m(\hat{C}) = 180^\circ$
 $|BD| = |AC|$

ÖZELLİK|Property 8



ABCD ikizkenar yamuk
 ABCD isosceles trapezoid

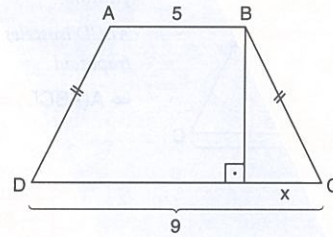
1.



ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $\Rightarrow \alpha = ?$

36

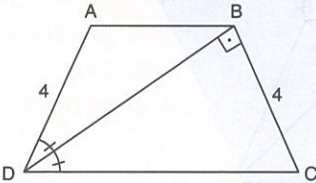
1.



ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $\Rightarrow x = ?$

2

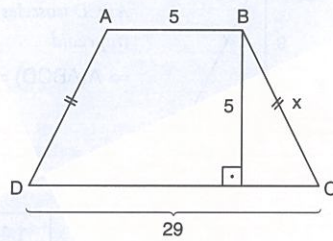
2.



ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $\Rightarrow A(\hat{D}) = ?$

$8\sqrt{3}$

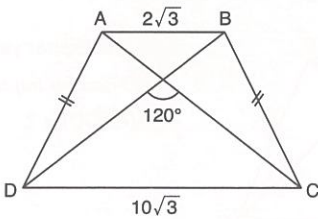
2.



ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $\Rightarrow x = ?$

13

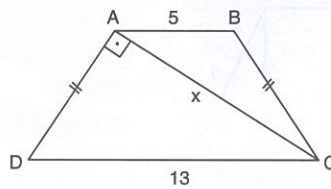
3.



ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $\Rightarrow A(ABCD) = ?$

$36\sqrt{3}$

3.

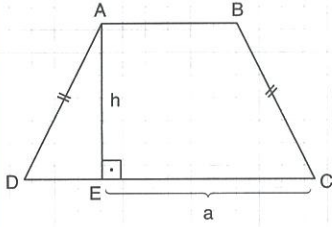


ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $\Rightarrow x = ?$

$3\sqrt{13}$



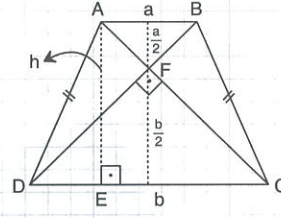
ÖZELLİK|Property 9



ABCD ikizkenar yamuk
ABCD isosceles trapezoid

$$A(ABCD) = a \cdot h$$

ÖZELLİK|Property 10

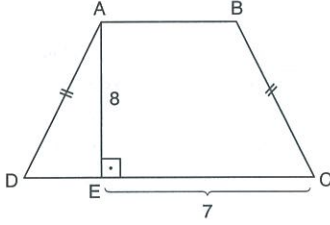


ABCD ikizkenar yamuk
ABCD isosceles trapezoid

$$h = \frac{a+b}{2}$$

$$A(ABCD) = \left(\frac{a+b}{2}\right)^2 = h^2$$

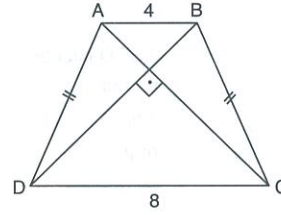
1.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $\Rightarrow A(ABCD) = ?$

56

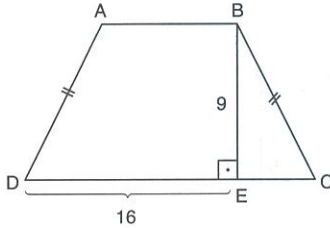
1.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $\Rightarrow A(ABCD) = ?$

36

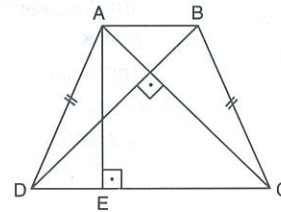
2.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $\Rightarrow A(ABCD) = ?$

144

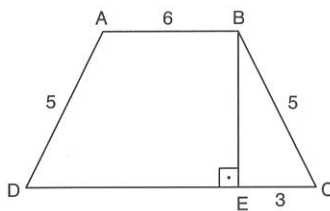
2.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $|AE| = 4$ br
 $\Rightarrow A(ABCD) = ?$

16

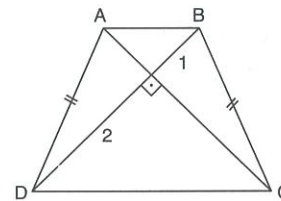
3.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $\Rightarrow A(ABCD) = ?$

36

3.

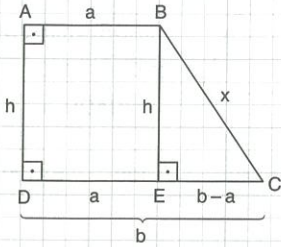


ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $\Rightarrow A(ABCD) = ?$

$$\frac{9}{2}$$



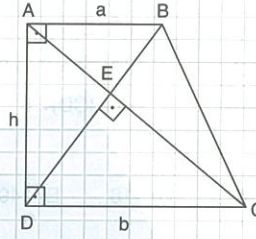
ÖZELLİK|Property 11



ABCD dik yamuk
ABCD right trapezoid

$$h^2 + (b - a)^2 = x^2$$

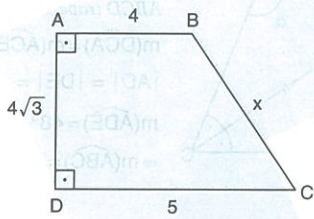
ÖZELLİK|Property 12



ABCD dik yamuk
ABCD right trapezoid

$$h^2 = a \cdot b$$

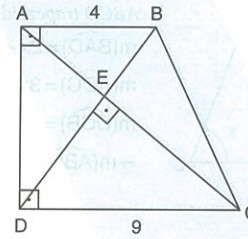
1.



ABCD dik yamuk
ABCD right trapezoid
⇒ x = ?

7

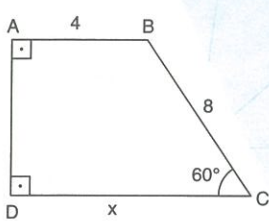
1.



ABCD dik yamuk
ABCD right trapezoid
⇒ A(ABCD) = ?

39

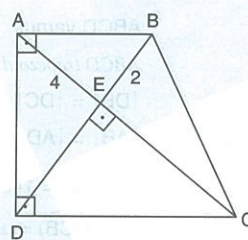
2.



ABCD dik yamuk
ABCD right trapezoid
⇒ x = ?

8

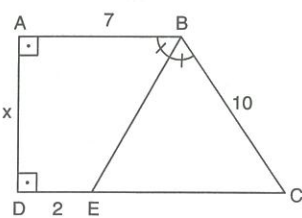
2.



ABCD dik yamuk
ABCD right trapezoid
⇒ A(ABCD) = ?

100

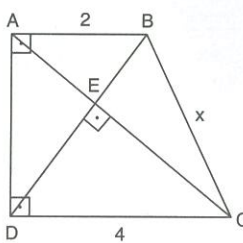
3.



ABCD dik yamuk
ABCD right trapezoid
⇒ x = ?

$5\sqrt{3}$

3.

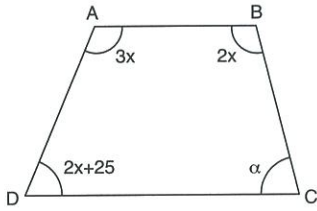


ABCD dik yamuk
ABCD right trapezoid
⇒ x = ?

$2\sqrt{3}$



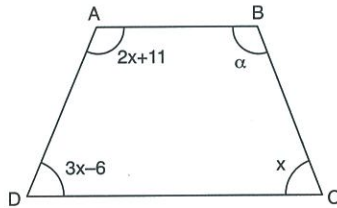
1.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ABC}) = 2x$
 $m(\widehat{BAD}) = 3x$
 $m(\widehat{ADC}) = 2x + 25$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$

- A) 31 B) 62 C) 98 D) 118 E) 149

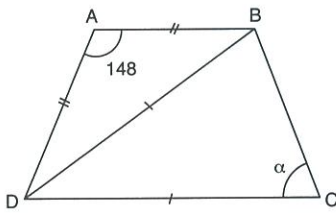
2.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{BAD}) = 2x + 11$
 $m(\widehat{ADC}) = 3x - 6$
 $m(\widehat{DCB}) = x$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 35 B) 70 C) 81 D) 99 E) 145

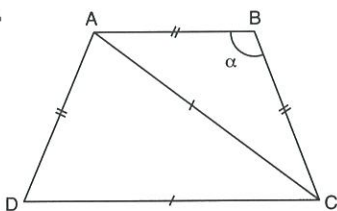
3.



ABCD yamuk
ABCD trapezoid
 $|DB| = |DC|$
 $|AB| = |AD|$
 $m(\widehat{DAB}) = 148^\circ$
 $\Rightarrow m(\widehat{DCB}) = \alpha = ?$

- A) 16 B) 81 C) 82 D) 91 E) 148

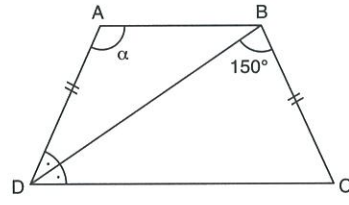
4.



ABCD yamuk
ABCD trapezoid
 $|AB| = |BC| = |AD|$
 $|AC| = |CD|$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 36 B) 54 C) 72 D) 108 E) 144

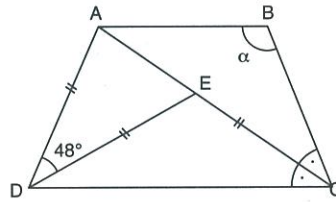
5.



ABCD yamuk
ABCD trapezoid
 $|AD| = |BC|$
 $m(\widehat{ADB}) = m(\widehat{BDC})$
 $m(\widehat{DBC}) = 150^\circ$
 $\Rightarrow m(\widehat{BAD}) = \alpha = ?$

- A) 160 B) 150 C) 140 D) 130 E) 120

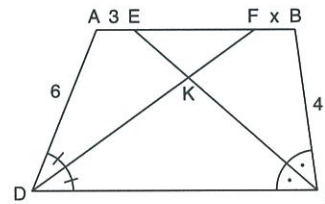
6.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{DCA}) = m(\widehat{ACB})$
 $|AD| = |DE| = |EC|$
 $m(\widehat{ADE}) = 48^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 66 B) 81 C) 92 D) 114 E) 122

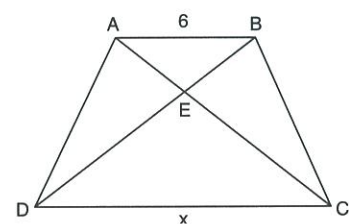
7.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $m(\widehat{ADF}) = m(\widehat{FDC})$
 $|AD| = 6$ br
 $|BC| = 4$ br
 $|AE| = 3$ br
 $\Rightarrow |FB| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

8.

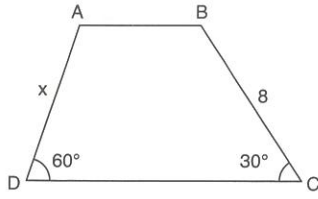


ABCD yamuk
ABCD trapezoid
 $4|EB| = 3|DE|$
 $|AB| = 6$ br
 $\Rightarrow |DC| = x = ?$

- A) 4 B) 6 C) 8 D) 9 E) 12



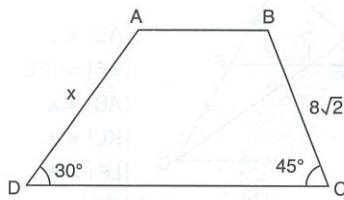
9.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ADC}) = 60^\circ$
 $m(\widehat{BCD}) = 30^\circ$
 $|BC| = 8$ br
 $\Rightarrow |AD| = x = ?$

- A) $\frac{4\sqrt{3}}{3}$ B) $2\sqrt{3}$ C) 4 D) $\frac{8\sqrt{3}}{3}$ E) $8\sqrt{3}$

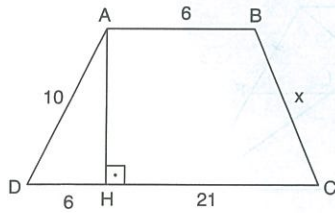
10.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ADC}) = 30^\circ$
 $m(\widehat{BCD}) = 45^\circ$
 $|BC| = 8\sqrt{2}$ br
 $\Rightarrow |AD| = x = ?$

- A) 4 B) $4\sqrt{3}$ C) $8\sqrt{3}$ D) $8\sqrt{6}$ E) 16

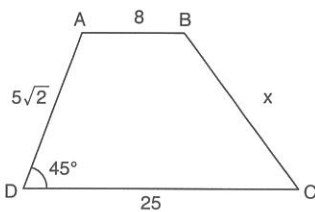
11.



ABCD yamuk
ABCD trapezoid
 $[AH] \perp [DC]$
 $|HC| = 21$ br
 $|AB| = 6$ br
 $|AD| = 10$ br
 $|DH| = 6$ br
 $\Rightarrow |BC| = x = ?$

- A) 17 B) 15 C) 13 D) 10 E) 8

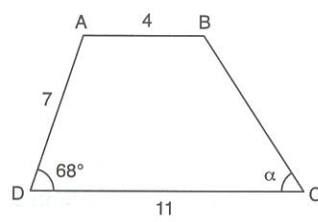
12.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ADC}) = 45^\circ$
 $|AD| = 5\sqrt{2}$ br
 $|AB| = 8$ br
 $|DC| = 25$ br
 $\Rightarrow |BC| = x = ?$

- A) 17 B) 15 C) 13 D) 10 E) 5

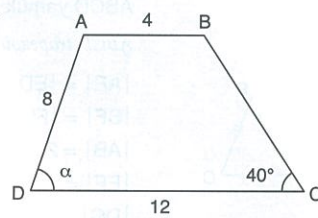
13.



ABCD yamuk
ABCD trapezoid
 $|AB| = 4$ br
 $|AD| = 7$ br
 $|DC| = 11$ br
 $m(\widehat{ADC}) = 68^\circ$
 $\Rightarrow m(\widehat{DCB}) = \alpha = ?$

- A) 34 B) 56 C) 68 D) 72 E) 108

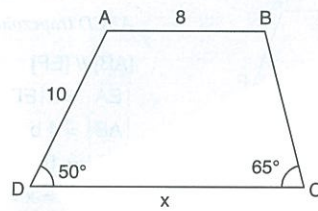
14.



ABCD yamuk
ABCD trapezoid
 $|AB| = 4$ br
 $|AD| = 8$ br
 $|DC| = 12$ br
 $m(\widehat{BCD}) = 40^\circ$
 $\Rightarrow m(\widehat{ADC}) = \alpha = ?$

- A) 40 B) 60 C) 80 D) 100 E) 120

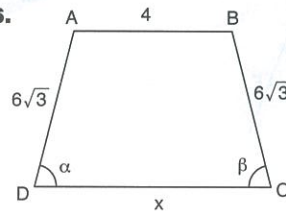
15.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ADC}) = 50^\circ$
 $m(\widehat{BCD}) = 65^\circ$
 $|AB| = 8$ br
 $|AD| = 10$ br
 $\Rightarrow |DC| = x = ?$

- A) 8 B) 10 C) 12 D) 14 E) 18

16.

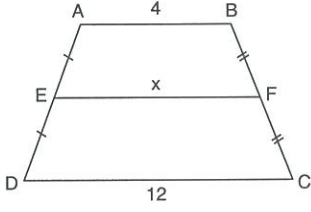


ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $\alpha + \beta = 120^\circ$
 $|AD| = |BC| = 6\sqrt{3}$
 $|AB| = 4$ br
 $\Rightarrow |DC| = x = ?$

- A) $4\sqrt{3}$ B) $6\sqrt{3}$ C) $10\sqrt{3}$
D) $4 + 6\sqrt{3}$ E) 24



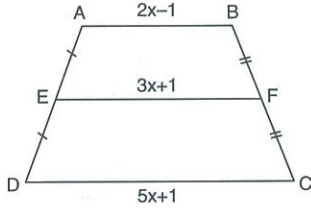
1.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $|BF| = |FC|$
 $|AB| = 4 \text{ br}$
 $|DC| = 12 \text{ br}$
 $\Rightarrow |EF| = x = ?$

- A) 6 B) 7 C) 8 D) 9 E) 10

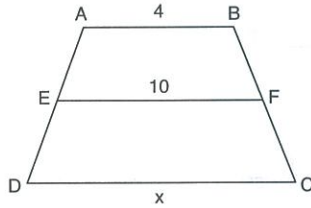
2.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $|BF| = |FC|$
 $|AB| = 2x - 1$
 $|EF| = 3x + 1$
 $|DC| = 5x + 1$
 $\Rightarrow |EF| = ?$

- A) 2 B) 3 C) 6 D) 7 E) 10

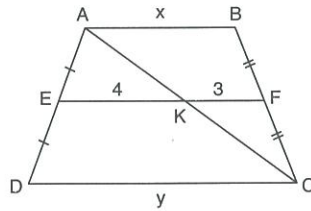
3.



ABCD yamuk
ABCD trapezoid
 $|AB| \parallel |EF|$
 $|EA| = 2|ED|$
 $|AB| = 4 \text{ br}$
 $|EF| = 10 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) 19 B) 17 C) 15 D) 14 E) 13

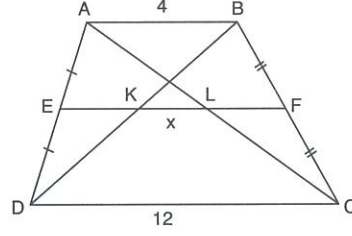
4.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $|BF| = |FC|$
 $|EK| = 4 \text{ br}$
 $|KF| = 3 \text{ br}$
 $|AB| = x$
 $|DC| = y$
 $\Rightarrow y - x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

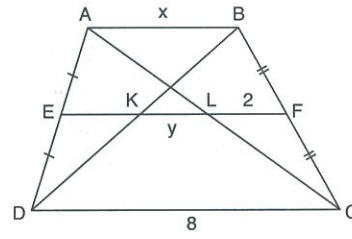
5.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $|BF| = |FC|$
 $|AB| = 4 \text{ br}$
 $|DC| = 12 \text{ br}$
 $\Rightarrow |KL| = x = ?$

- A) 2 B) 3 C) 4 D) 6 E) 8

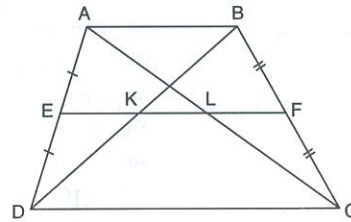
6.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $|BF| = |FC|$
 $|AB| = x$
 $|KL| = y$
 $|LF| = 2 \text{ br}$
 $|DC| = 8 \text{ br}$
 $\Rightarrow x + y = ?$

- A) 4 B) 6 C) 8 D) 10 E) 12

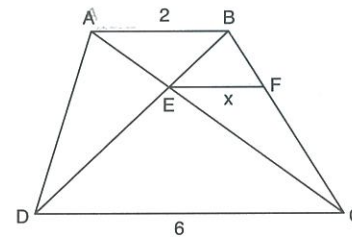
7.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $|BF| = |FC|$
 $|EK| = 2x - 1$
 $|KL| = 3x$
 $|LF| = x + 4$
 $\Rightarrow |AB| + |DC| = ?$

- A) 66 B) 38 C) 32 D) 28 E) 14

8.

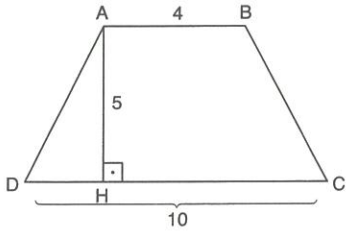


ABCD yamuk
ABCD trapezoid
 $|EF| \parallel |AB|$
 $|AB| = 2 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow |EF| = x = ?$

- A) $\frac{1}{2}$ B) 1 C) $\frac{3}{2}$ D) 2 E) $\frac{5}{2}$



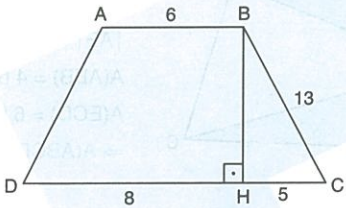
9.



ABCD yamuk
ABCD trapezoid
[AH] $\perp$ [DC]
|AB| = 4 br
|AH| = 5 br
|DC| = 10 br
 $\Rightarrow A(ABCD) = ?$

- A) 60 B) 45 C) 35 D) 20 E) 15

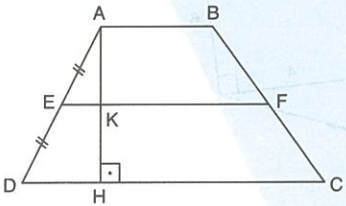
10.



ABCD yamuk
ABCD trapezoid
[BH] $\perp$ [DC]
|AB| = 6 br
|DH| = 8 br
|HC| = 5 br
|BC| = 13 br
 $\Rightarrow A(ABCD) = ?$

- A) 144 B) 114 C) 96 D) 84 E) 72

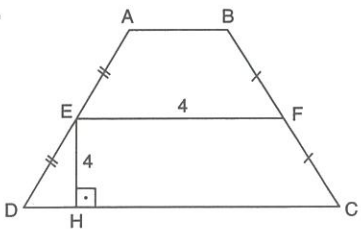
11.



ABCD yamuk
ABCD trapezoid
[AH] $\perp$ [DC]
|AE| = |ED|
[EF] $\parallel$ [DC]
|AK| = 8 br
|EF| = 6 br
 $\Rightarrow A(ABCD) = ?$

- A) 24 B) 36 C) 48 D) 72 E) 96

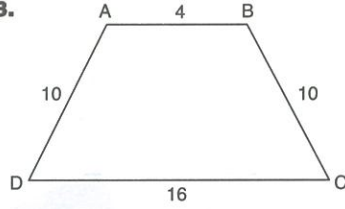
12.



ABCD yamuk
ABCD trapezoid
|AE| = |ED|
|BF| = |FC|
[EH] $\perp$ [DC]
|EF| = |EH| = 4 br
 $\Rightarrow A(ABCD) = ?$

- A) 8 B) 16 C) 32 D) 64 E) 128

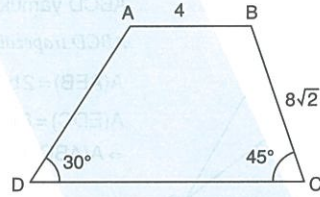
13.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
|AB| = 4 br
|AD| = |BC| = 10 br
|DC| = 16 br
 $\Rightarrow A(ABCD) = ?$

- A) 144 B) 124 C) 118 D) 100 E) 80

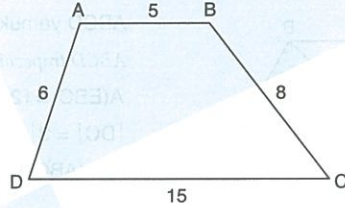
14.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ADC}) = 30^\circ$
 $m(\widehat{BCD}) = 45^\circ$
|AB| = 4 br
|BC| = $8\sqrt{2}$ br
 $\Rightarrow A(ABCD) = ?$

- A) $32\sqrt{3}$ B) 64 C) 96
D) $64 + 32\sqrt{3}$ E) $128 + 64\sqrt{3}$

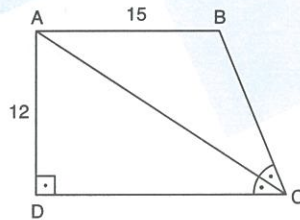
15.



ABCD yamuk
ABCD trapezoid
|AB| = 5 br
|AD| = 6 br
|BC| = 8 br
|DC| = 15 br
 $\Rightarrow A(ABCD) = ?$

- A) 96 B) 72 C) 48 D) 36 E) 24

16.

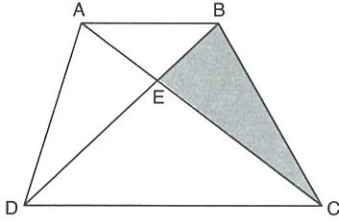


ABCD dik yamuk
ABCD right trapezoid
[AD] $\perp$ [DC]
[AC] açıortay
[AC] bisector
|AD| = 12 br
|AB| = 15 br
 $\Rightarrow A(ABCD) = ?$

- A) 90 B) 144 C) 180 D) 234 E) 288



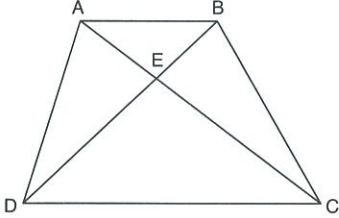
1.



ABCD yamuk
ABCD trapezoid
 $A(AED) = 4 \text{ br}^2$
 $\Rightarrow A(EBC) = ?$

- A) 2 B) 4 C) 6 D) 8 E) 16

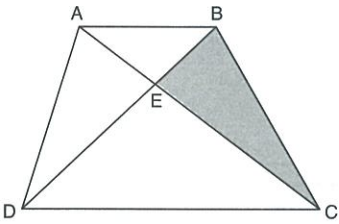
2.



ABCD yamuk
ABCD trapezoid
 $A(AEB) = 2 \text{ br}^2$
 $A(EDC) = 8 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 4 B) 12 C) 14 D) 18 E) 32

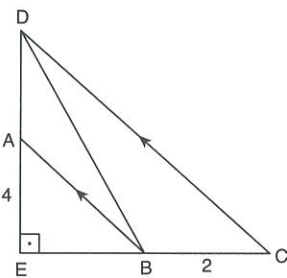
3.



ABCD yamuk
ABCD trapezoid
 $A(EBC) = 12 \text{ br}^2$
 $|DC| = 3|AB|$
 $\Rightarrow A(ABCD) = ?$

- A) 40 B) 52 C) 64 D) 78 E) 96

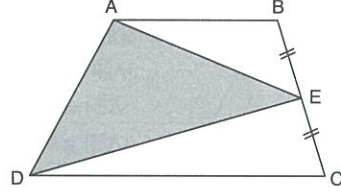
4.



ABCD yamuk
ABCD trapezoid
 $[DE] \perp [EC]$
 $|AE| = 4 \text{ br}$
 $|BC| = 2 \text{ br}$
 $\Rightarrow A(ABD) = ?$

- A) 4 B) 6 C) 8 D) 12 E) 16

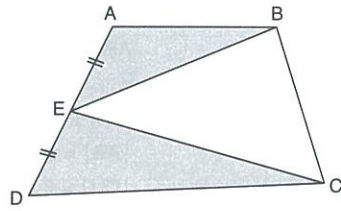
5.



ABCD yamuk
ABCD trapezoid
 $|BE| = |EC|$
 $A(ADE) = 20 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 20 B) 30 C) 40 D) 60 E) 80

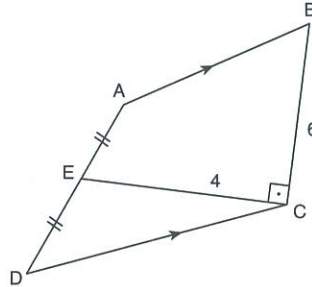
6.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $A(AEB) = 4 \text{ br}^2$
 $A(EDC) = 6 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 10 B) 15 C) 20 D) 30 E) 40

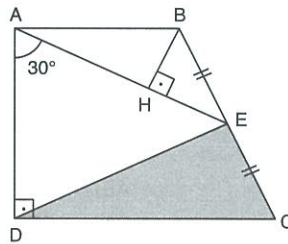
7.



ABCD yamuk
ABCD trapezoid
 $[EC] \perp [BC]$
 $|AE| = |ED|$
 $|EC| = 4 \text{ br}$
 $|BC| = 6 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 12 B) 24 C) 32 D) 48 E) 56

8.

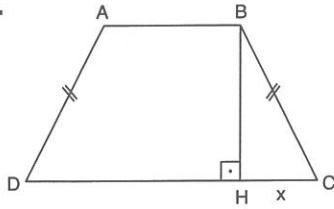


ABCD dik yamuk
ABCD right trapezoid
 $|BE| = |EC|$
 $[AD] \perp [DC]$
 $[BH] \perp [AE]$
 $m(\widehat{DAE}) = 30^\circ$
 $|AD| = 8 \text{ br}$
 $|BH| = 3 \text{ br}$
 $|AE| = 4 \text{ br}$
 $\Rightarrow A(EDC) = ?$

- A) 2 B) 6 C) 8 D) 10 E) 12



9.



ABCD ikizkenar yamuk

ABCD isosceles trapezoid

$$|AD| = |BC|$$

$$[BH] \perp [DC]$$

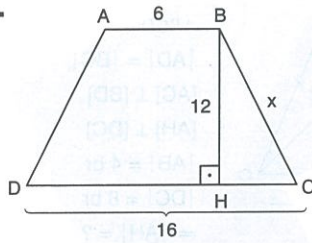
$$|AB| = 4 \text{ br}$$

$$|DC| = 10 \text{ br}$$

$$\Rightarrow |HC| = x = ?$$

- A) 8 B) 6 C) 5 D) 4 E) 3

10.



ABCD ikizkenar yamuk

ABCD isosceles trapezoid

$$|AD| = |BC|$$

$$[BH] \perp [DC]$$

$$|AB| = 6 \text{ br}$$

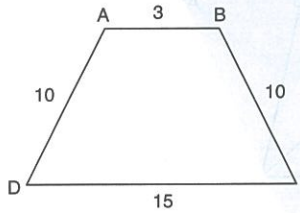
$$|BH| = 12 \text{ br}$$

$$|DC| = 16 \text{ br}$$

$$\Rightarrow |BC| = x = ?$$

- A) 20 B) 15 C) $12\sqrt{2}$ D) 13 E) 12

11.



ABCD ikizkenar yamuk

ABCD isosceles trapezoid

$$|AD| = |BC| = 10 \text{ br}$$

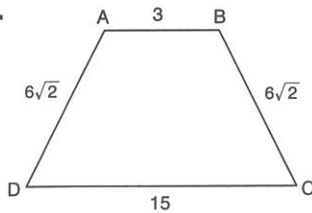
$$|AB| = 3 \text{ br}$$

$$|DC| = 15 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

- A) 48 B) 64 C) 72 D) 78 E) 96

12.



ABCD ikizkenar yamuk

ABCD isosceles trapezoid

$$|AD| = |BC| = 6\sqrt{2} \text{ br}$$

$$|AB| = 3 \text{ br}$$

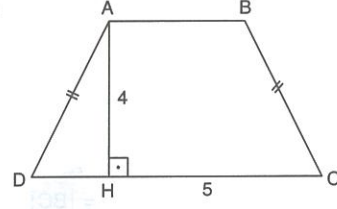
$$|DC| = 15 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

- A) 48 B) 54 C) 64

- D) $54\sqrt{2}$ E) $108\sqrt{2}$

13.



ABCD ikizkenar yamuk

ABCD isosceles trapezoid

$$|AD| = |BC|$$

$$[AH] \perp [DC]$$

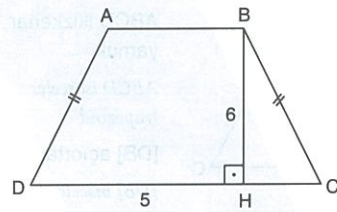
$$|AH| = 4 \text{ br}$$

$$|HC| = 5 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

- A) 40 B) 30 C) 20 D) 15 E) 10

14.



ABCD ikizkenar yamuk

ABCD isosceles trapezoid

$$|AD| = |BC|$$

$$[BH] \perp [DC]$$

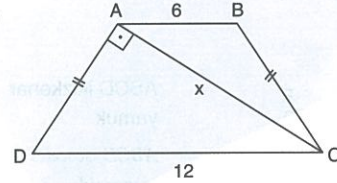
$$|BH| = 6 \text{ br}$$

$$|DH| = 5 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

- A) 60 B) 45 C) 40 D) 30 E) 15

15.



ABCD ikizkenar yamuk

ABCD isosceles trapezoid

$$|AD| = |BC|$$

$$[AC] \perp [AD]$$

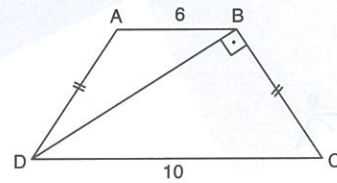
$$|AB| = 6 \text{ br}$$

$$|DC| = 12 \text{ br}$$

$$\Rightarrow |AC| = x = ?$$

- A) 3 B) $3\sqrt{3}$ C) 6 D) $6\sqrt{3}$ E) 9

16.



ABCD ikizkenar yamuk

ABCD isosceles trapezoid

$$|AD| = |BC|$$

$$[BD] \perp [BC]$$

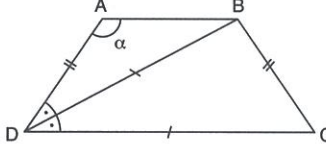
$$|AB| = 6 \text{ br}$$

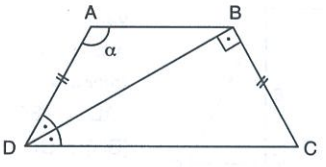
$$|DC| = 10 \text{ br}$$

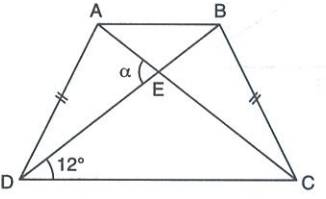
$$\Rightarrow A(ABCD) = ?$$

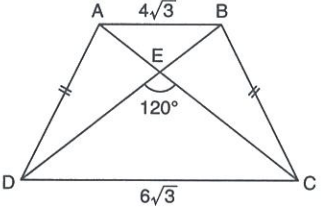
- A) 8 B) 16 C) 32 D) 64 E) 76



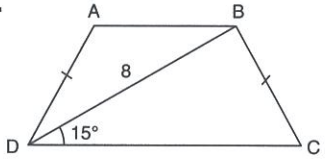
1.  ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 [DB] açkırtay
 [DB] bisector
 $|AD| = |BC|$
 $|BD| = |DC|$
 $\Rightarrow m(\widehat{BAD}) = \alpha = ?$
- A) 36 B) 54 C) 72 D) 108 E) 144

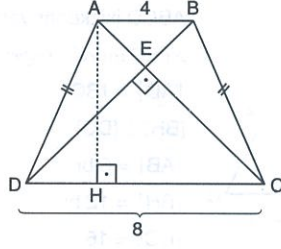
2.  ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 [DB] açkırtay
 [DB] bisector
 $|AD| = |BC|$
 $[BD] \perp [BC]$
 $\Rightarrow m(\widehat{BAD}) = \alpha = ?$
- A) 150 B) 135 C) 120 D) 105 E) 90

3.  ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $|AD| = |BC|$
 $m(\widehat{BDC}) = 12^\circ$
 $\Rightarrow m(\widehat{AED}) = \alpha = ?$
- A) 12 B) 18 C) 24 D) 36 E) 48

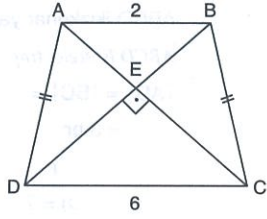
4.  ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $|AD| = |BC|$
 $m(\widehat{DEC}) = 120^\circ$
 $|AB| = 4\sqrt{3}$ br
 $|DC| = 6\sqrt{3}$ br
 $\Rightarrow |AC| = ?$
- A) 10 B) 12 C) 15 D) 18 E) 20

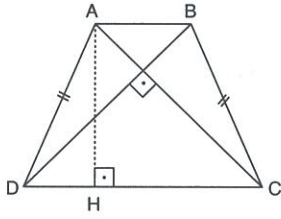
PUZA YAYINLARI

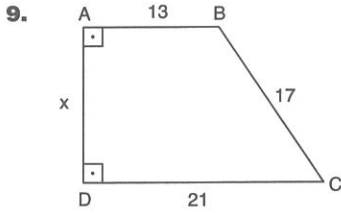
5.  ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $m(\widehat{BDC}) = 15^\circ$
 $|BD| = 8$ br
 $\Rightarrow A(ABCD) = ?$
- A) 16 B) $16\sqrt{3}$ C) 32 D) $32\sqrt{3}$ E) 64

6.  ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $|AD| = |BC|$
 $[AC] \perp [BD]$
 $[AH] \perp [DC]$
 $|AB| = 4$ br
 $|DC| = 8$ br
 $\Rightarrow |AH| = ?$
- A) 4 B) 6 C) 8 D) 12 E) 16

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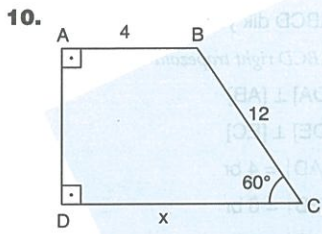
7.  ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $|AD| = |BC|$
 $[AC] \perp [BD]$
 $|AB| = 2$ br
 $|DC| = 6$ br
 $\Rightarrow A(ABCD) = ?$
- A) 4 B) 6 C) 8 D) 12 E) 16

8.  ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $|AD| = |BC|$
 $[AC] \perp [BD]$
 $[AH] \perp [DC]$
 $|AH| = 5$ br
 $\Rightarrow A(ABCD) = ?$
- A) 5 B) $5\sqrt{3}$ C) 10 D) $10\sqrt{3}$ E) 25



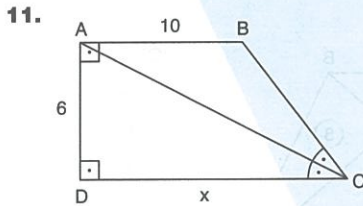
ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $|AB| = 13$ br
 $|BC| = 17$ br
 $|DC| = 21$ br
 $\Rightarrow |AD| = x = ?$

- A) 8 B) $6\sqrt{2}$ C) $6\sqrt{3}$ D) 12 E) 15



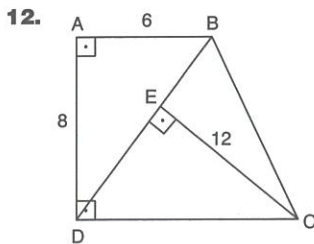
ABCD dik yamuk
ABCD right trapezoid
 $m(\widehat{BCD}) = 60^\circ$
 $[AD] \perp [DC]$
 $|AB| = 4$ br
 $|BC| = 12$ br
 $\Rightarrow |DC| = x = ?$

- A) 4 B) 6 C) $6\sqrt{3}$
 D) 10 E) $4 + 6\sqrt{3}$



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $|AB| = 10$ br
 $|AD| = 6$ br
 $m(\widehat{DCA}) = m(\widehat{ACB})$
 $\Rightarrow |DC| = x = ?$

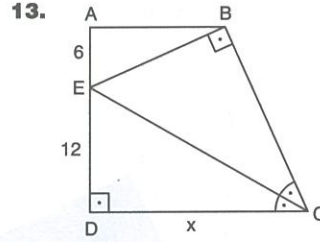
- A) 18 B) 16 C) 14 D) 12 E) 10



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[CE] \perp [BD]$
 $|AB| = 6$ br
 $|AD| = 8$ br
 $|CE| = 12$ br
 $\Rightarrow A(ABCD) = ?$

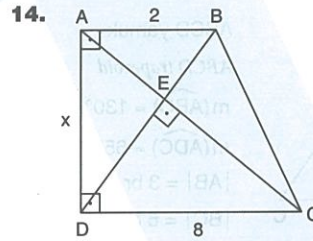
- A) 80 B) 84 C) 104 D) 120 E) 168

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ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[EB] \perp [BC]$
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $|AE| = 6$ br
 $|ED| = 12$ br
 $\Rightarrow |DC| = x = ?$

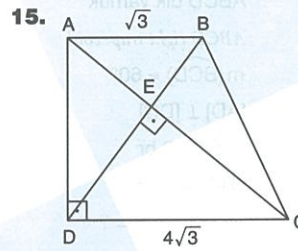
- A) 4 B) 6 C) $6\sqrt{3}$ D) 12 E) $12\sqrt{3}$



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[BD] \perp [AC]$
 $|AB| = 2$ br
 $|DC| = 8$ br
 $\Rightarrow |AD| = x = ?$

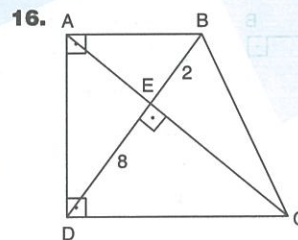
- A) 4 B) 5 C) 6 D) 8 E) 16

PUZA YAYINLARI



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[BD] \perp [AC]$
 $|AB| = \sqrt{3}$ br
 $|DC| = 4\sqrt{3}$ br
 $\Rightarrow A(ABCD) = ?$

- A) $2\sqrt{3}$ B) $5\sqrt{3}$ C) $\frac{15}{2}$ D) $\frac{15\sqrt{3}}{2}$ E) 15



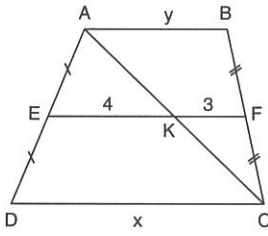
ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[BD] \perp [AC]$
 $|BE| = 2$ br
 $|DE| = 8$ br
 $\Rightarrow A(ABCD) = ?$

- A) 120 B) 100 C) 90 D) 80 E) 40

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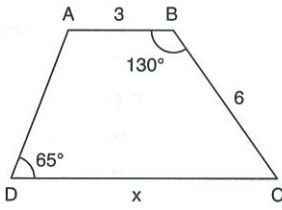
1.



ABCD yamuk
ABCD trapezoid
 $|BF| = |FC|$
 $|AE| = |ED|$
 $|EK| = 4$ br
 $|KF| = 3$ br
 $|AB| = y$
 $|DC| = x$
 $\Rightarrow x - y = ?$

A) 1 B) 2 C) 3 D) 4 E) 5

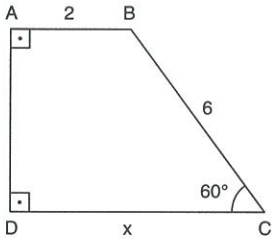
2.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ABC}) = 130^\circ$
 $m(\widehat{ADC}) = 65^\circ$
 $|AB| = 3$ br
 $|BC| = 6$ br
 $\Rightarrow |DC| = x = ?$

A) 5 B) 6 C) 7 D) 9 E) 12

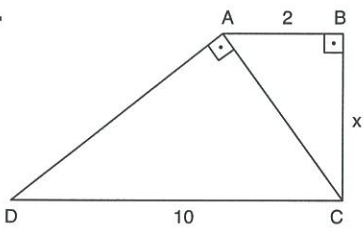
3.



ABCD dik yamuk
ABCD right trapezoid
 $m(\widehat{BCD}) = 60^\circ$
 $[AD] \perp [DC]$
 $|AB| = 2$ br
 $|BC| = 6$ br
 $\Rightarrow |DC| = x = ?$

A) 3 B) 4 C) 5 D) 6 E) 8

4.

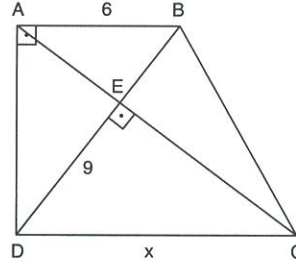


ABCD dik yamuk
ABCD right trapezoid
 $|DC| = 10$ br
 $|AB| = 2$ br
 $[DA] \perp [AC]$
 $[AB] \perp [BC]$
 $\Rightarrow |BC| = x = ?$

A) 2 B) 4 C) $4\sqrt{3}$ D) $4\sqrt{5}$ E) 8

PUZA YAYINLARI

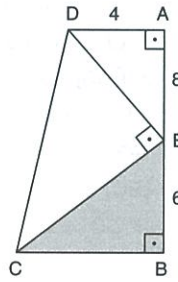
5.



ABCD dik yamuk
ABCD right trapezoid
 $[DA] \perp [AB]$
 $[CE] \perp [BD]$
 $|AB| = 6$ br
 $|ED| = 9$ br
 $\Rightarrow x = ?$

A) 10 B) 12 C) 15 D) 18 E) 20

6.

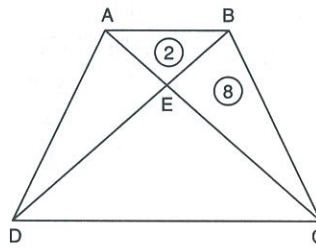


ABCD dik yamuk
ABCD right trapezoid
 $[DA] \perp [AB]$
 $[DE] \perp [EC]$
 $|AD| = 4$ br
 $|EB| = 6$ br
 $|AE| = 8$ br
 $\Rightarrow A(EBC) = ?$

A) 9 B) 12 C) 24 D) 32 E) 36

PUZA YAYINLARI

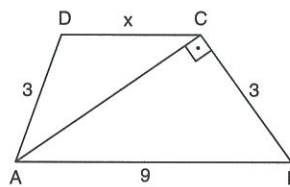
7.



ABCD yamuk
ABCD trapezoid
 $A(AEB) = 2$ br²
 $A(EBC) = 8$ br²
 $\Rightarrow A(ABCD) = ?$

A) 40 B) 42 C) 48 D) 50 E) 60

8.



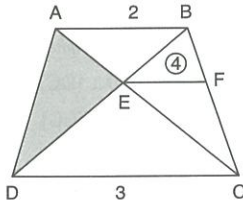
ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $[AC] \perp [BD]$
 $|AD| = |BC| = 3$ br
 $|AB| = 9$ br
 $\Rightarrow |CD| = x = ?$

A) 5 B) 6 C) 7 D) 8 E) 9

PUZA YAYINLARI



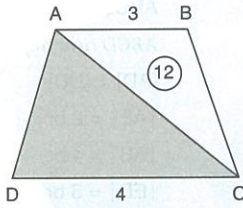
9.



ABCD yamuk
ABCD trapezoid
[EF] // [AB]
|AB| = 2 br
|DC| = 3 br
 $A(\text{BEF}) = 4 \text{ br}^2$
 $\Rightarrow A(\text{AED}) = ?$

- A) 6 B) 8 C) 10 D) 12 E) 16

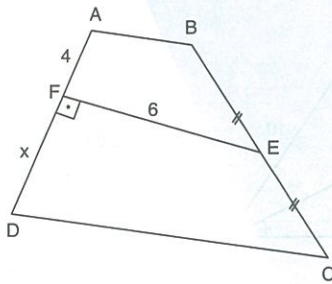
10.



ABCD yamuk
ABCD trapezoid
|AB| = 3 br
|DC| = 4 br
 $A(\text{ABC}) = 12 \text{ br}^2$
 $\Rightarrow A(\text{ADC}) = ?$

- A) 20 B) 16 C) 14 D) 12 E) 8

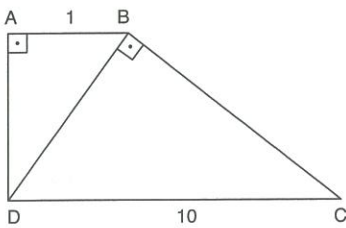
11.



ABCD yamuk
ABCD trapezoid
|BE| = |EC|
[EF] ⊥ [FD]
 $A(\text{ABCD}) = 54 \text{ br}^2$
 $\Rightarrow |FD| = x = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

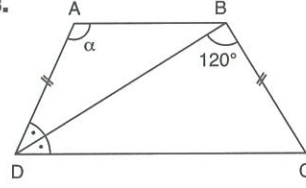
12.



ABCD dik yamuk
ABCD right trapezoid
[DA] ⊥ [AB]
[DB] ⊥ [BC]
|AB| = 1 br
|DC| = 10 br
 $\Rightarrow A(\text{ABCD}) = ?$

- A) $\frac{11}{2}$ B) $\frac{33}{2}$ C) 20 D) 33 E) 66

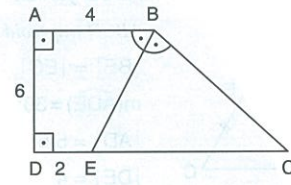
13.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
|AD| = |BC|
[BD] açıortay
[BD] açıortay
 $m(\widehat{DBC}) = 120^\circ$
 $\Rightarrow m(\widehat{DAB}) = \alpha = ?$

- A) 140 B) 130 C) 120 D) 110 E) 100

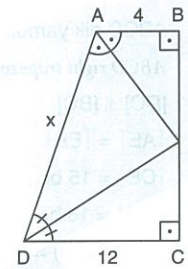
14.



ABCD dik yamuk
ABCD right trapezoid
 $m(\widehat{ABE}) = m(\widehat{ECB})$
|AB| = 4 br
|ED| = 2 br
|AD| = 6 br
 $\Rightarrow A(\text{ABCD}) = ?$

- A) 28 B) 30 C) 32 D) 40 E) 48

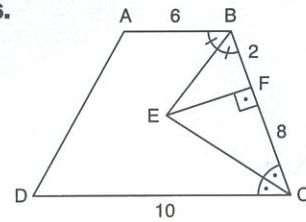
15.



ABCD dik yamuk
ABCD right trapezoid
[DE], [AE] açıortay
[DE], [AE] bisector
|AB| = 4 br
|DC| = 12 br
 $\Rightarrow |AD| = x = ?$

- A) 4 B) 6 C) 8 D) 12 E) 16

16.

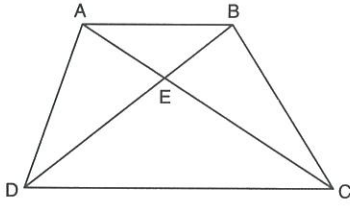


ABCD yamuk
ABCD trapezoid
[BE], [EC] açıortay
[BE], [EC] bisector
[EF] ⊥ [BC]
|DC| = 10 br
|AB| = 6 br
|BF| = 2 br
|FC| = 8 br
 $\Rightarrow A(\text{ABCD}) = ?$

- A) 40 B) 42 C) 48 D) 56 E) 64



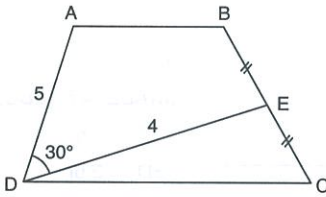
1.



ABCD yamuk
ABCD trapezoid
 $A(AEB) = 4 \text{ br}^2$
 $A(ADE) = 10 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 25 B) 28 C) 32 D) 45 E) 49

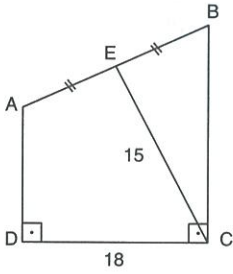
2.



ABCD yamuk
ABCD trapezoid
 $|BE| = |EC|$
 $m(\widehat{ADE}) = 30^\circ$
 $|AD| = 5 \text{ br}$
 $|DE| = 4 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 5 B) $5\sqrt{3}$ C) 10 D) $10\sqrt{3}$ E) 20

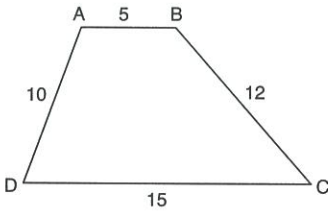
3.



ABCD dik yamuk
ABCD right trapezoid
 $[DC] \perp [BC]$
 $|AE| = |EB|$
 $|CE| = 15 \text{ br}$
 $|DC| = 18 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 96 B) 108 C) 135 D) 152 E) 216

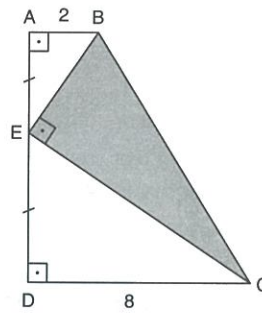
4.



ABCD yamuk
ABCD trapezoid
 $|AB| = 5 \text{ br}$
 $|BC| = 12 \text{ br}$
 $|AD| = 10 \text{ br}$
 $|DC| = 15 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 80 B) 84 C) 88 D) 92 E) 96

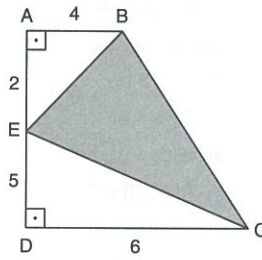
5.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[BE] \perp [EC]$
 $|AB| = 2 \text{ br}$
 $|DC| = 8 \text{ br}$
 $|AE| = |ED|$
 $\Rightarrow A(EBC) = ?$

- A) 10 B) 20 C) 30 D) 40 E) 50

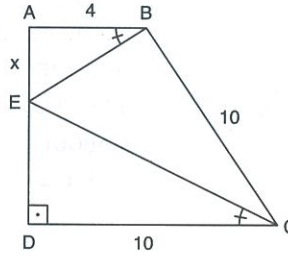
6.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $|AE| = 2 \text{ br}$
 $|AB| = 4 \text{ br}$
 $|ED| = 5 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow A(EBC) = ?$

- A) 35 B) 25 C) 19 D) 16 E) 6

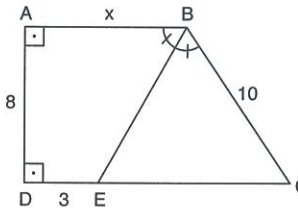
7.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $m(\widehat{ABE}) = m(\widehat{ECD})$
 $|AB| = 4 \text{ br}$
 $|DC| = |BC| = 10 \text{ br}$
 $\Rightarrow |AE| = x = ?$

- A) 2 B) $\frac{16}{7}$ C) $\frac{7}{2}$ D) 4 E) $\frac{21}{4}$

8.

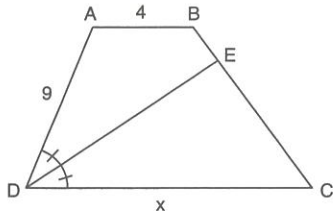


ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $m(\widehat{ABE}) = m(\widehat{EBC})$
 $|AD| = 8 \text{ br}$
 $|DE| = 3 \text{ br}$
 $|BC| = 10 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) 7 B) 6 C) 5 D) 4 E) 3



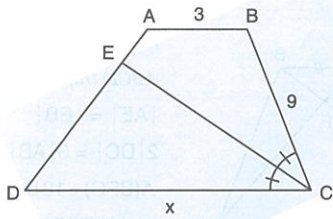
9.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $|EC| = 2|EB|$
 $|AB| = 4 \text{ br}$
 $|AD| = 9 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) 12 B) 10 C) 8 D) 7 E) 6

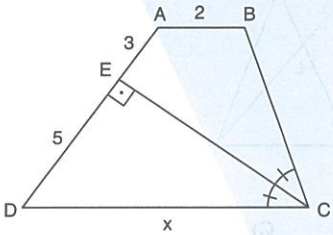
10.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{BCE}) = m(\widehat{ECD})$
 $2|ED| = 3|AE|$
 $|AB| = 3 \text{ br}$
 $|BC| = 9 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) $\frac{7}{2}$ B) 6 C) $\frac{15}{2}$ D) 9 E) $\frac{27}{2}$

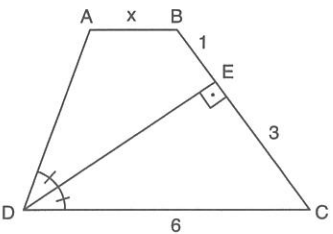
11.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ECD}) = m(\widehat{ECB})$
 $[EC] \perp [AD]$
 $|AB| = 2 \text{ br}$
 $|AE| = 3 \text{ br}$
 $|ED| = 5 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) 10 B) 9 C) 8 D) 7 E) 6

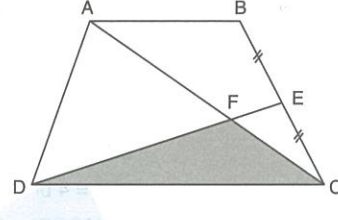
12.



ACBD yamuk
ABCD trapezoid
 $[DE] \perp [BC]$
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $|BE| = 1 \text{ br}$
 $|EC| = 3 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) $\frac{5}{6}$ B) 2 C) $\frac{11}{3}$ D) 4 E) $\frac{26}{3}$

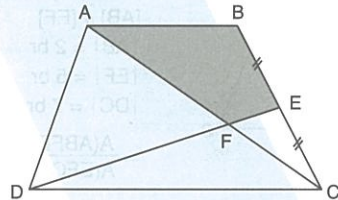
13.



ABCD yamuk
ABCD trapezoid
 $|BE| = |EC|$
 $5|AB| = 4|DC|$
 $A(EFC) = 6 \text{ br}^2$
 $\Rightarrow A(DFC) = ?$

- A) $\frac{15}{2}$ B) 9 C) 12 D) 15 E) 18

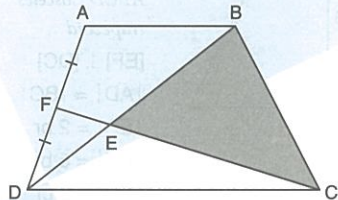
14.



ABCD yamuk
ABCD trapezoid
 $|BE| = |EC|$
 $|DC| = 2|AB|$
 $A(EFC) = 10 \text{ br}^2$
 $\Rightarrow A(ABEF) = ?$

- A) 75 B) 65 C) 50 D) 40 E) 30

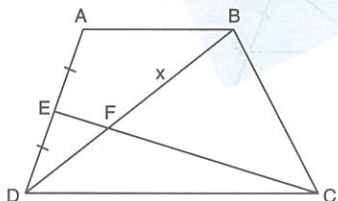
15.



ABCD yamuk
ABCD trapezoid
 $|AF| = |FD|$
 $|EC| = 3|FE|$
 $A(FED) = 4 \text{ br}^2$
 $\Rightarrow A(BEC) = ?$

- A) 24 B) 22 C) 20 D) 12 E) 8

16.

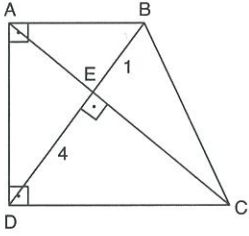


ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $3|AB| = 2|DC|$
 $|DF| = 9 \text{ br}$
 $\Rightarrow |FB| = x = ?$

- A) 18 B) 15 C) 12 D) $\frac{17}{3}$ E) $\frac{13}{2}$



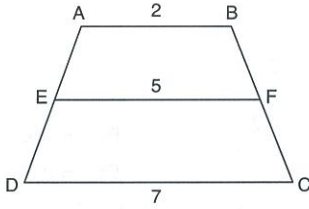
1.



ABCD yamuk
ABCD trapezoid
 $[AD] \perp [DC]$
 $[AC] \perp [DB]$
 $|BE| = 1 \text{ br}$
 $|DE| = 4 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 10 B) 16 C) 20 D) 25 E) 30

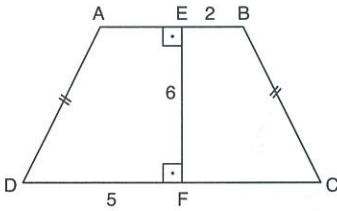
2.



ABCD yamuk
ABCD trapezoid
 $[AB] \parallel [EF]$
 $|AB| = 2 \text{ br}$
 $|EF| = 5 \text{ br}$
 $|DC| = 7 \text{ br}$
 $\Rightarrow \frac{A(ABFE)}{A(EFCD)} = ?$

- A) $\frac{7}{8}$ B) $\frac{7}{12}$ C) $\frac{3}{2}$ D) $\frac{5}{3}$ E) $\frac{7}{2}$

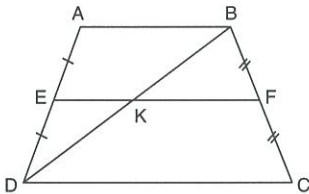
3.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $[EF] \perp [DC]$
 $|AD| = |BC|$
 $|EB| = 2 \text{ br}$
 $|DF| = 5 \text{ br}$
 $|EF| = 6 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 30 B) 36 C) 42 D) 48 E) 54

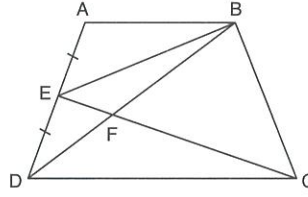
4.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $|BF| = |FC|$
 $A(ABKE) = 9 \text{ br}^2$
 $A(KFCD) = 15 \text{ br}^2$
 $A(BFK) = S_1$
 $A(EKD) = S_2$
 $\Rightarrow S_1 + S_2 = ?$

- A) 3 B) 5 C) 8 D) 14 E) 16

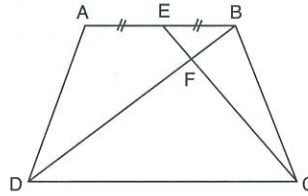
5.



ABCD yamuk
ABCD trapezoid
 $|AE| = |ED|$
 $A(DEF) = 4 \text{ br}^2$
 $A(BFC) = 24 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 96 B) 78 C) 60 D) 58 E) 52

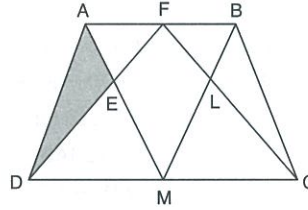
6.



ABCD yamuk
ABCD trapezoid
 $|AE| = |EB|$
 $2|DC| = 3|AB|$
 $A(BFC) = 18 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 144 B) 120 C) 114 D) 98 E) 84

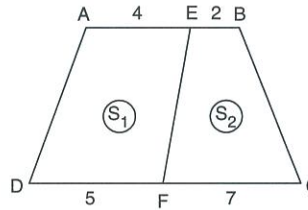
7.



ABCD yamuk
ABCD trapezoid
 $A(EFLM) = 20 \text{ br}^2$
 $A(BLC) = 8 \text{ br}^2$
 $\Rightarrow A(ADE) = ?$

- A) 28 B) 24 C) 16 D) 12 E) 8

8.

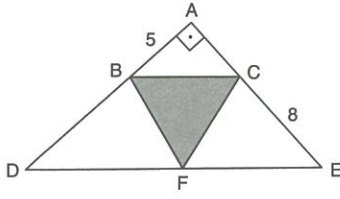


ABCD yamuk
ABCD trapezoid
 $|AE| = 4 \text{ br}$
 $|EB| = 2 \text{ br}$
 $|DF| = 5 \text{ br}$
 $|FC| = 7 \text{ br}$
 $A(AEFD) = S_1$
 $A(EBCF) = S_2$
 $\Rightarrow \frac{S_1}{S_2} = ?$

- A) 2 B) 1 C) $\frac{4}{5}$ D) $\frac{2}{5}$ E) $\frac{1}{7}$



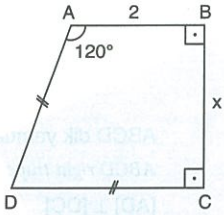
9.



BCED yamuk
BCED trapezoid
[DA] $\perp$ [EA]
|AB| = 5 br
|CE| = 8 br
 $\Rightarrow A(BCF) = ?$

- A) 80 B) 60 C) 40 D) 20 E) 10

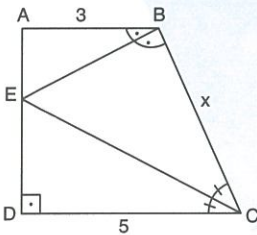
10.



ABCD dik yamuk
ABCD right trapezoid
|AD| = |DC|
 $m(\widehat{DAB}) = 120^\circ$
|AB| = 2 br
 $\Rightarrow |BC| = x = ?$

- A) 2 B) $2\sqrt{3}$ C) 4 D) $4\sqrt{3}$ E) 8

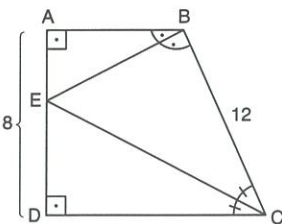
11.



ABCD dik yamuk
ABCD right trapezoid
[AD] $\perp$ [DC]
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $m(\widehat{ABE}) = m(\widehat{ECB})$
|AB| = 3 br
|DC| = 5 br
 $\Rightarrow |BC| = x = ?$

- A) 10 B) 8 C) 6 D) 5 E) 3

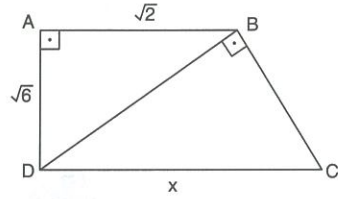
12.



ABCD dik yamuk
ABCD right trapezoid
[AD] $\perp$ [DC]
 $m(\widehat{ABE}) = m(\widehat{ECB})$
 $m(\widehat{BCE}) = m(\widehat{ECD})$
|AD| = 8 br
|BC| = 12 br
 $\Rightarrow A(ABCD) = ?$

- A) 96 B) 84 C) 72 D) 56 E) 48

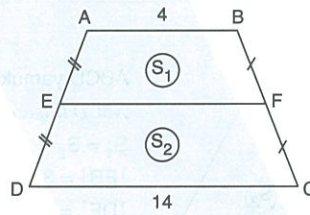
13.



ABCD dik yamuk
ABCD right trapezoid
[AD] $\perp$ [AB]
[DB] $\perp$ [BC]
|AB| = $\sqrt{2}$ br
|AD| = $\sqrt{6}$ br
 $\Rightarrow |DC| = x = ?$

- A) $2\sqrt{3}$ B) $4\sqrt{2}$ C) $\sqrt{2} + 3$
D) $2\sqrt{2} + 4$ E) $4\sqrt{2} + 3$

14.

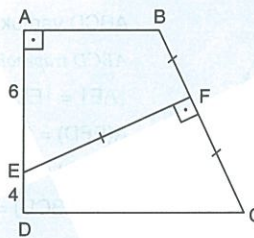


ABCD yamuk
ABCD trapezoid
|AE| = |ED|
|BF| = |FC|
|AB| = 4 br
|DC| = 14 br

$$A(ABFE) = S_1 \quad A(EFCD) = S_2 \quad \Rightarrow \frac{S_2}{S_1} = ?$$

- A) $\frac{2}{7}$ B) $\frac{13}{23}$ C) 1 D) $\frac{23}{13}$ E) 2

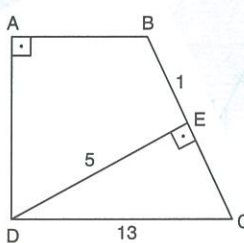
15.



ABCD dik yamuk
ABCD right trapezoid
[AD] $\perp$ [AB]
[EF] $\perp$ [BC]
|BF| = |FC| = |EF|
|AE| = 6 br
|ED| = 4 br
 $\Rightarrow A(ABCD) = ?$

- A) 100 B) 80 C) 75 D) 50 E) 25

16.

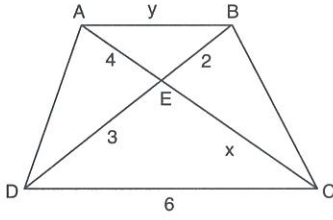


ABCD dik yamuk
ABCD right trapezoid
[AD] $\perp$ [AB]
[DE] $\perp$ [BC]
|BE| = 1 br
|DC| = 13 br
|DE| = 5 br
 $\Rightarrow A(ABCD) = ?$

- A) 144 B) 72 C) 35 D) 28 E) 26



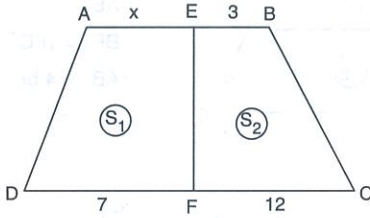
1.



ABCD yamuk
 ABCD trapezoid
 $|AE| = 4$ br
 $|BE| = 2$ br
 $|DE| = 3$ br
 $|DC| = 6$ br
 $|CE| = x$
 $|AB| = y$
 $\Rightarrow x + y = ?$

- A) 6 B) 8 C) 9 D) 10 E) 12

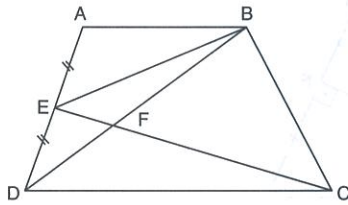
2.



ABCD yamuk
 ABCD trapezoid
 $S_1 = S_2$
 $|EB| = 3$ br
 $|DF| = 7$ br
 $|FC| = 12$ br
 $\Rightarrow |AE| = x = ?$

- A) 10 B) 8 C) 7 D) 6 E) 5

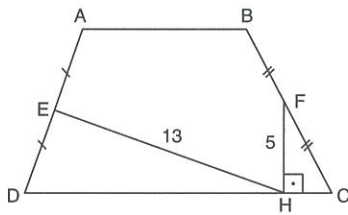
3.



ABCD yamuk
 ABCD trapezoid
 $|AE| = |ED|$
 $A(EFD) = 2 \text{ br}^2$
 $A(BFC) = 12 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 48 B) 44 C) 42 D) 36 E) 30

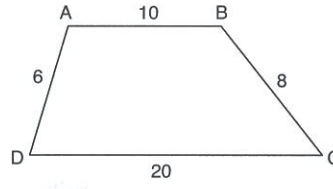
4.



ABCD yamuk
 ABCD trapezoid
 $[FH] \perp [DC]$
 $|AE| = |ED|$
 $|BF| = |FC|$
 $|FH| = 5$ br
 $|EH| = 13$ br
 $\Rightarrow A(ABCD) = ?$

- A) 130 B) 120 C) 100 D) 65 E) 60

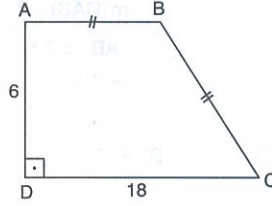
5.



ABCD yamuk
 ABCD trapezoid
 $|AB| = 10$ br
 $|BC| = 8$ br
 $|DC| = 20$ br
 $|AD| = 6$ br
 $\Rightarrow A(ABCD) = ?$

- A) 24 B) 48 C) 64 D) 72 E) 108

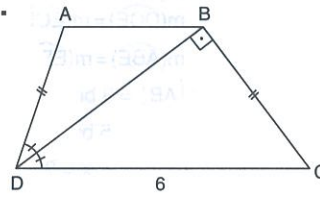
6.



ABCD dik yamuk
 ABCD right trapezoid
 $[AD] \perp [DC]$
 $|AB| = |BC|$
 $|AD| = 6$ br
 $|DC| = 18$ br
 $\Rightarrow A(ABCD) = ?$

- A) 144 B) 128 C) 112 D) 100 E) 84

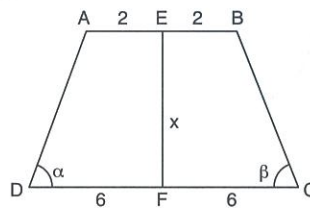
7.



ABCD ikizkenar yamuk
 ABCD isosceles trapezoid
 $[DB] \perp [BC]$
 $|AD| = |BC|$
 $|DC| = 6$ br
 $\Rightarrow A(ABCD) = ?$

- A) 6 B) $\frac{9\sqrt{3}}{2}$ C) $6\sqrt{3}$ D) $9\sqrt{3}$ E) $\frac{27\sqrt{3}}{4}$

8.

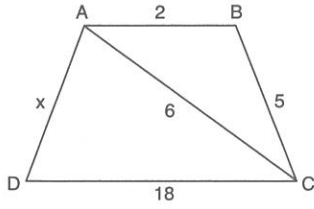


ABCD yamuk
 ABCD trapezoid
 $\alpha + \beta = 90^\circ$
 $|AE| = |EB| = 2$ br
 $|DF| = |FC| = 6$ br
 $\Rightarrow |EF| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5



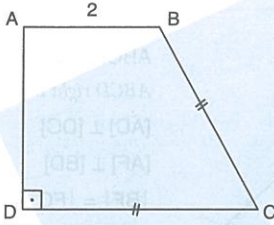
9.



ABCD yamuk
ABCD trapezoid
 $|AB| = 2$ br
 $|BC| = 5$ br
 $|AC| = 6$ br
 $|DC| = 18$ br
 $\Rightarrow |AD| = x = ?$

- A) 5 B) 10 C) 15 D) 20 E) 24

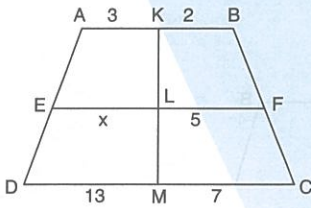
10.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $|DC| = |BC|$
 $|AB| = 2$ br
 $\angle(ABCD) = 28$ br
 $\Rightarrow A(ABCD) = ?$

- A) 30 B) 36 C) 40 D) 48 E) 60

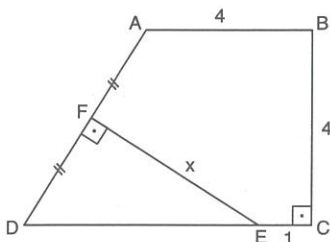
11.



ABCD yamuk
ABCD trapezoid
 $[EF] \parallel [DC]$
 $|AK| = 3$ br
 $|KB| = 2$ br
 $|DM| = 13$ br
 $|MC| = 7$ br
 $|LF| = 5$ br
 $\Rightarrow |EL| = x = ?$

- A) 11 B) 10 C) 9 D) 7 E) 6

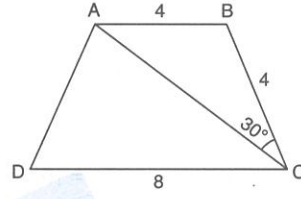
12.



ABCD dik yamuk
ABCD right trapezoid
 $[BC] \perp [DC]$
 $[EF] \perp [AD]$
 $|AF| = |FD|$
 $|AB| = |BC| = 4$ br
 $|EC| = 1$ br
 $\Rightarrow |FE| = x = ?$

- A) $\sqrt{5}$ B) $2\sqrt{5}$ C) 5 D) $5\sqrt{2}$ E) 10

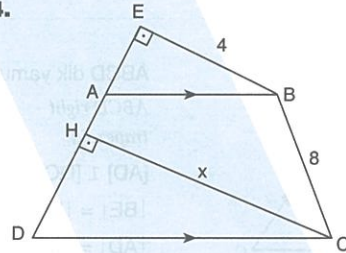
13.



ABCD yamuk
ABCD trapezoid
 $m(\widehat{ACB}) = 30^\circ$
 $|AB| = |BC| = 4$ br
 $|DC| = 8$ br
 $\Rightarrow A(ABCD) = ?$

- A) 12 B) $8\sqrt{3}$ C) $12\sqrt{3}$ D) 24 E) $24\sqrt{3}$

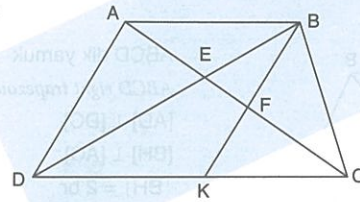
14.



ABCD yamuk
ABCD trapezoid
 $[EB] \perp [DE]$
 $[CH] \perp [DE]$
 $|EB| = 4$ br
 $|AD| = |BC| = 8$ br
 $A(ABCD) = 40$ br²
 $\Rightarrow |CH| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 6

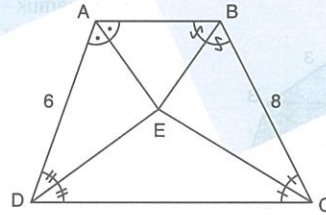
15.



ABCD yamuk
ABCD trapezoid
ABKD paralelkenar
ABKD parallelogram
 $|DE| = 3|EB|$
 $A(EBF) = S_1$
 $A(DEFK) = S_2$
 $\Rightarrow \frac{S_2}{S_1} = ?$

- A) 11 B) $\frac{17}{3}$ C) 4 D) $\frac{7}{2}$ E) 3

16.

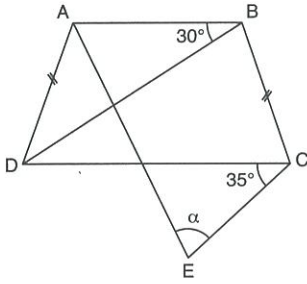


ABCD yamuk
ABCD trapezoid
 $[AE], [BE], [CE], [DE]$ açortay
 $[AE], [BE], [CE], [DE]$ bisector
 $|AD| = 6$ br
 $|BC| = 8$ br
 $\Rightarrow \angle(ABCD) = ?$

- A) 20 B) 26 C) 28 D) 30 E) 32



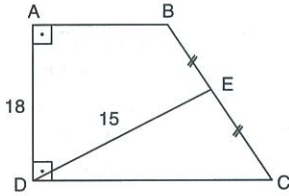
1.



ABCD ikizkenar
yamuk
ABCD isosceles
trapezoid
 $|AD| = |BC|$
 $|AE| = |BD|$
 $m(\widehat{ABD}) = 30^\circ$
 $m(\widehat{DCE}) = 35^\circ$
 $\Rightarrow m(\widehat{AEC}) = \alpha = ?$

- A) 15 B) 30 C) 35 D) 65 E) 70

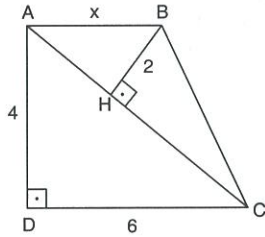
2.



ABCD dik yamuk
ABCD right
trapezoid
 $[AD] \perp [DC]$
 $|BE| = |EC|$
 $|AD| = 18 \text{ br}$
 $|DE| = 15 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 120 B) 135 C) 196 D) 216 E) 270

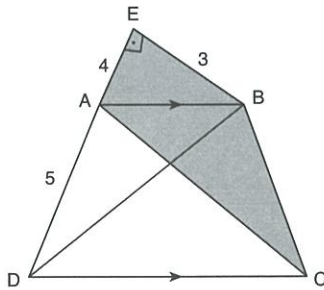
3.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[BH] \perp [AC]$
 $|BH| = 2 \text{ br}$
 $|AD| = 4 \text{ br}$
 $|DC| = 6 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) $\sqrt{13}$ B) $\frac{10}{3}$ C) 4 D) $\frac{20}{3}$ E) $2\sqrt{13}$

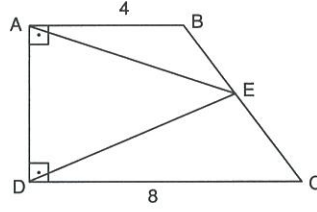
4.



ABCD yamuk
ABCD trapezoid
 $[BE] \perp [ED]$
 $|BE| = 3 \text{ br}$
 $|AE| = 4 \text{ br}$
 $|AD| = 5 \text{ br}$
 $\Rightarrow A(AEBC) = ?$

- A) $\frac{27}{2}$ B) 16 C) 18 D) 24 E) 27

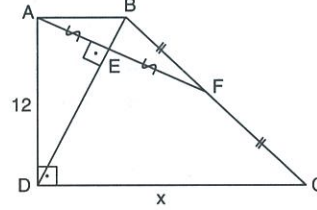
5.



ABCD dik yamuk
ABCD right trapezoid
AED eşkenar üçgen
AED equilateral triangle
 $[AD] \perp [DC]$
 $|AB| = 4 \text{ br}$
 $|DC| = 8 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 12 B) $12\sqrt{3}$ C) 24 D) $24\sqrt{3}$ E) 36

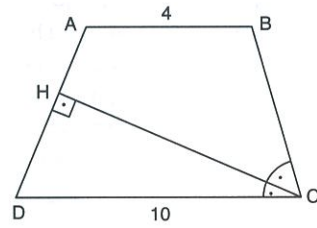
6.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[AF] \perp [BD]$
 $|BF| = |FC|$
 $|AE| = |EF|$
 $|AD| = 12 \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) $4\sqrt{3}$ B) $6\sqrt{3}$ C) 10 D) $8\sqrt{3}$ E) 12

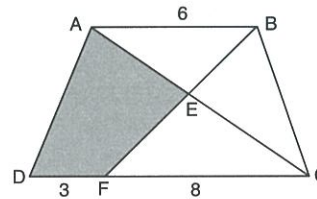
7.



ABCD yamuk
ABCD trapezoid
 $|AD| = |BC|$
 $m(\widehat{DCH}) = m(\widehat{HCB})$
 $|AB| = 4 \text{ br}$
 $|DC| = 10 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) $24\sqrt{3}$ B) $21\sqrt{3}$ C) $18\sqrt{3}$ D) 18 E) $9\sqrt{3}$

8.

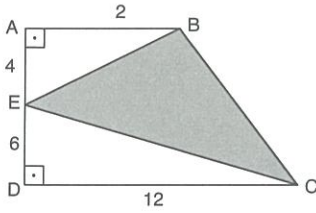


ABCD yamuk
ABCD trapezoid
 $|AB| = 6 \text{ br}$
 $|DF| = 3 \text{ br}$
 $|FC| = 8 \text{ br}$
 $A(BEC) = 12 \text{ br}^2$
 $\Rightarrow A(AEFD) = ?$

- A) $\frac{21}{2}$ B) 12 C) $\frac{45}{2}$ D) 36 E) 54



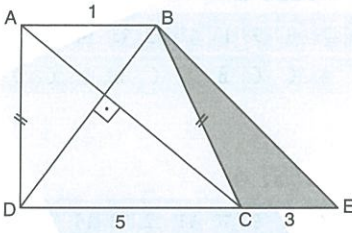
9.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $|AB| = 2 \text{ br}$
 $|AE| = 4 \text{ br}$
 $|ED| = 6 \text{ br}$
 $|DC| = 12 \text{ br}$
 $\Rightarrow A(EBC) = ?$

- A) 50 B) 40 C) 36 D) 30 E) 25

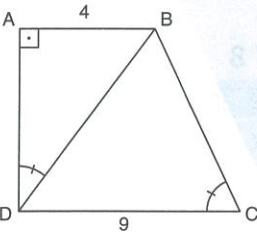
10.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $|AD| = |BC|$
 $[BD] \perp [AC]$
 $|AB| = 1 \text{ br}$
 $|CE| = 3 \text{ br}$
 $|DC| = 5 \text{ br}$
 $\Rightarrow A(BCE) = ?$

- A) 18 B) 15 C) 12 D) 9 E) $\frac{9}{2}$

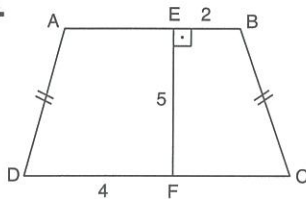
11.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [AB]$
 $m(\widehat{ADB}) = m(\widehat{BCD})$
 $|AB| = 4 \text{ br}$
 $|DC| = 9 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) $36\sqrt{3}$ B) 36 C) 24 D) $13\sqrt{5}$ E) 13

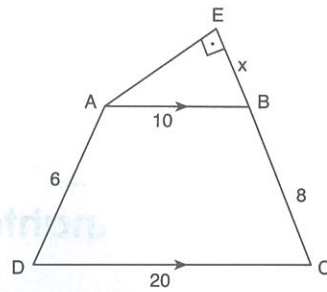
12.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $|AD| = |BC|$
 $|EB| = 2 \text{ br}$
 $|EF| = 5 \text{ br}$
 $|DF| = 4 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 24 B) 25 C) 30 D) 36 E) 40

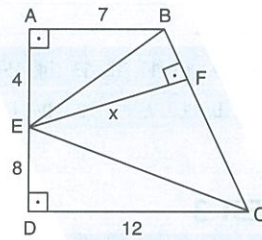
13.



ABCD yamuk
ABCD trapezoid
 $[CE] \perp [AE]$
 $|AB| = 10 \text{ br}$
 $|BC| = 8 \text{ br}$
 $|AD| = 6 \text{ br}$
 $|DC| = 20 \text{ br}$
 $\Rightarrow |EB| = x = ?$

- A) 3,6 B) 4,8 C) 6 D) 8 E) 9,6

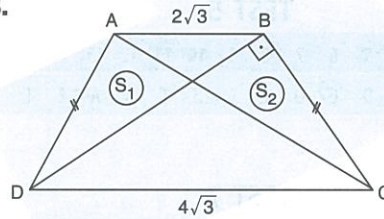
14.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $[EF] \perp [BC]$
 $|AB| = 7 \text{ br}$
 $|AE| = 4 \text{ br}$
 $|ED| = 8 \text{ br}$
 $|DC| = 12 \text{ br}$
 $\Rightarrow |EF| = x = ?$

- A) 10 B) 8 C) 6 D) 5 E) 4

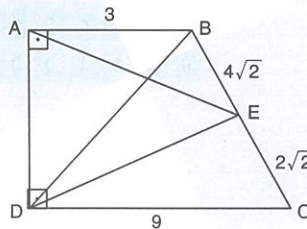
15.



ABCD ikizkenar yamuk
ABCD isosceles trapezoid
 $[BD] \perp [BC]$
 $|AD| = |BC|$
 $|AB| = 2\sqrt{3} \text{ br}$
 $|DC| = 4\sqrt{3} \text{ br}$
 $\Rightarrow S_1 + S_2 = ?$

- A) $4\sqrt{3}$ B) 6 C) $6\sqrt{3}$ D) 8 E) $8\sqrt{3}$

16.



ABCD dik yamuk
ABCD right trapezoid
 $[AD] \perp [DC]$
 $|AB| = 3 \text{ br}$
 $|BE| = 4\sqrt{2} \text{ br}$
 $|EC| = 2\sqrt{2} \text{ br}$
 $|DC| = 9 \text{ br}$
 $|AE| = x$
 $|DE| = y$
 $\Rightarrow \frac{x^2}{y^2} = ?$

- A) 2 B) $\frac{7}{4}$ C) $\frac{65}{53}$ D) $\frac{5}{16}$ E) $\frac{2}{51}$



YAMUK TRAPEZOID

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	E	C	D	A	D	A	C	D	E	A	C	B	D	E	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	E	B	C	B	A	C	C	B	E	C	E	D	C	D

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	C	A	C	C	B	A	E	D	C	B	C	D	D	C

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	C	A	A	B	E	E	E	D	A	B	E	A	E	B

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	D	C	B	D	E	D	C	C	B	C	B	A	E	E	E

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	C	E	E	B	D	B	A	B	D	A	B	D	D	C	B

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	A	C	C	C	B	D	B	D	B	B	E	B	D	D	C

TEST 8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	E	B	D	E	E	D	C	B	C	B	C	E	A	C

TEST 9

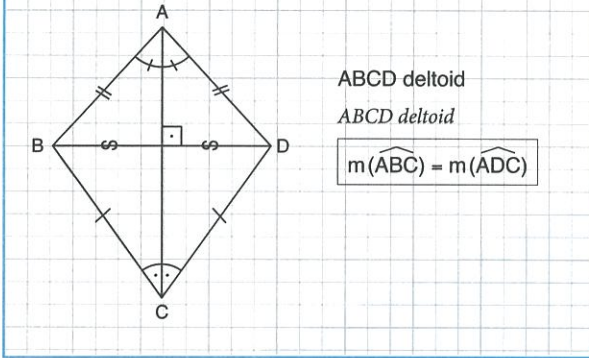
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	D	A	A	D	D	B	C	D	E	D	C	D	B	A	C



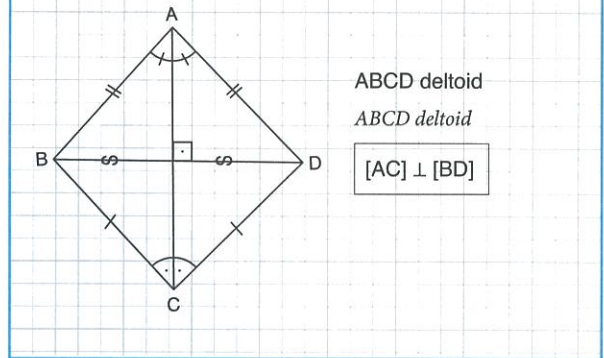
DELTOiD
DELTOID



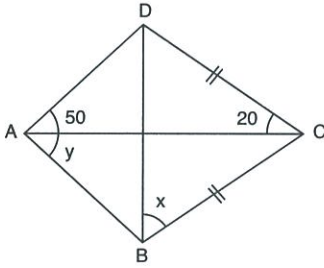
ÖZELLİK|Property 1



ÖZELLİK|Property 2

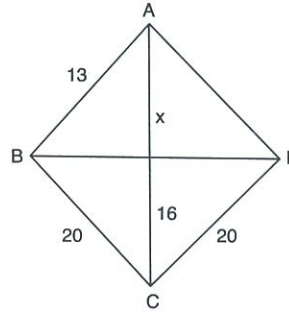


1.



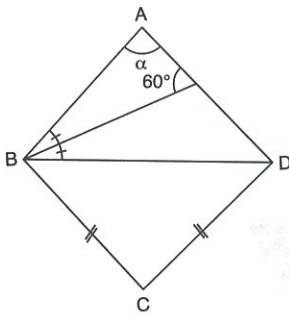
20

1.



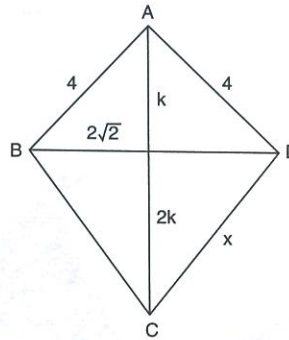
5

2.

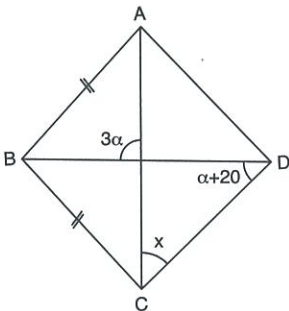


100

2.

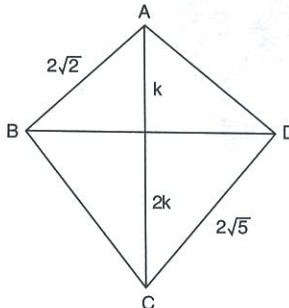
 $2\sqrt{10}$

3.



40

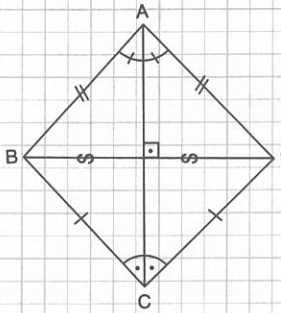
3.



4



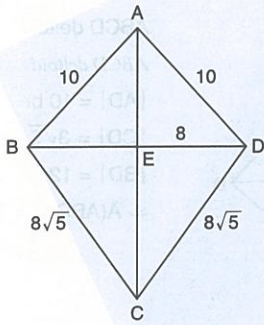
ÖZELLİK|Property 3



ABCD deltoid
ABCD deltoid

$$A(ABCD) = \frac{1}{2} |AC| \cdot |BD|$$

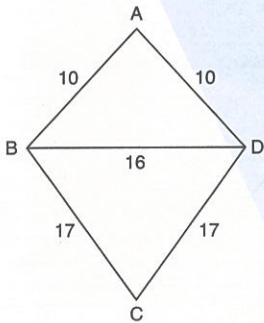
1.



ABCD deltoid
ABCD deltoid
 $\Rightarrow A(ABCD) = ?$

176

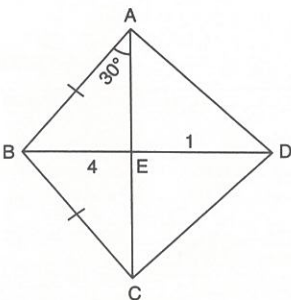
2.



ABCD deltoid
ABCD deltoid
 $\Rightarrow A(ABCD) = ?$

168

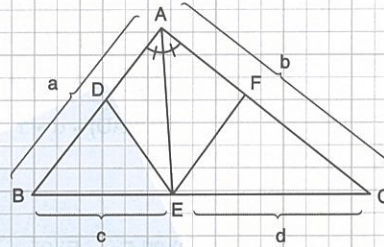
3.



ABCD deltoid
ABCD deltoid
 $\Rightarrow A(ABCD) = ?$

$20\sqrt{3}$

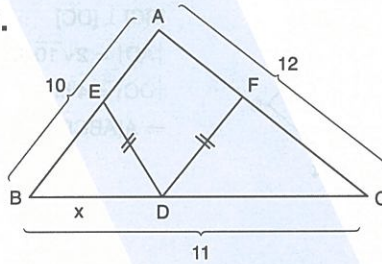
ÖZELLİK|Property 4



ADEF deltoid
ADEF deltoid

$$\frac{a}{c} = \frac{b}{d}$$

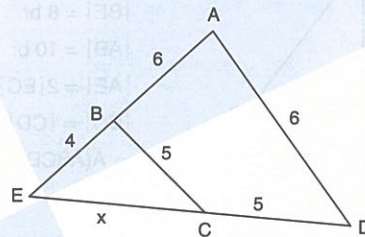
1.



AEDF deltoid
ABCD deltoid
 $\Rightarrow x = ?$

5

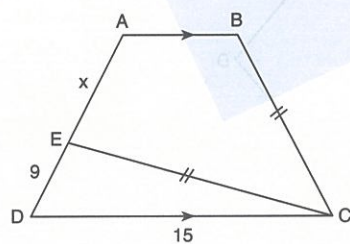
2.



ABCD deltoid
ABCD deltoid
 $\Rightarrow x = ?$

$\frac{25}{3}$

3.

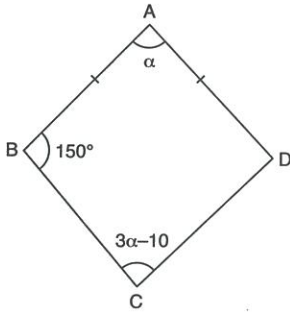


ABCE deltoid
ABCE deltoid
[AB] // [DC]
 $\Rightarrow x = ?$

6



1.



A) 15 B) 17,5 C) 20

ABCD deltoid

ABCD deltoid

$$|AB| = |AD|$$

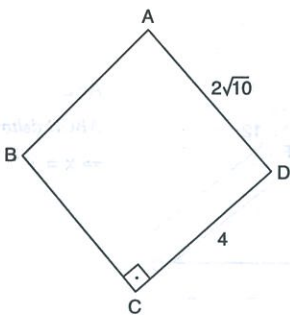
$$m(\widehat{ABC}) = 150^\circ$$

$$m(\widehat{BCD}) = 3\alpha - 10^\circ$$

$$\Rightarrow m(\widehat{BAD}) = \alpha = ?$$

D) 22,5 E) 25

2.



A) 32 B) 24 C) 8

ABCD deltoid

ABCD deltoid

$$[BC] \perp [DC]$$

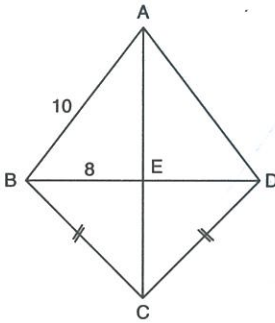
$$|AD| = 2\sqrt{10} \text{ br}$$

$$|DC| = 4 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

D) 6 E) 4

3.



A) 72 B) 54 C) 48

ABCD deltoid

ABCD deltoid

$$|BE| = 8 \text{ br}$$

$$|AB| = 10 \text{ br}$$

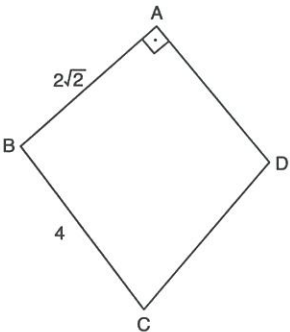
$$|AE| = 2|EC|$$

$$|BC| = |CD|$$

$$\Rightarrow A(ABCD) = ?$$

D) 36 E) 18

4.

A) $4\sqrt{3}$ B) $2\sqrt{3} + 4$ C) $4\sqrt{3} + 4$ D) $8\sqrt{3}$ E) $8\sqrt{3} + 4$

ABCD deltoid

ABCD deltoid

$$[AB] \perp [AD]$$

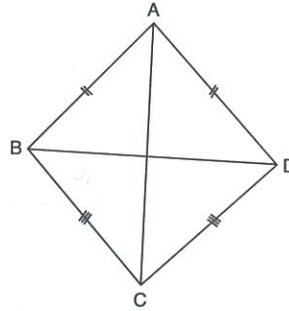
$$|AB| = |AD|$$

$$|AB| = 2\sqrt{2} \text{ br}$$

$$|BC| = 4 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

5.

A) 15 B) $15\sqrt{3}$ C) 30 D) $30\sqrt{3}$ E) 60

ABCD deltoid

ABCD deltoid

$$|BA| = |AD|$$

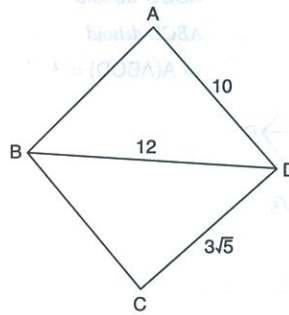
$$|BC| = |CD|$$

$$|AC| = 10 \text{ br}$$

$$|BD| = 6 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

6.



A) 21 B) 33 C) 42 D) 44 E) 66

ABCD deltoid

ABCD deltoid

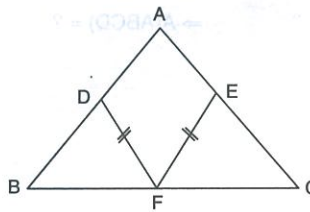
$$|AD| = 10 \text{ br}$$

$$|CD| = 3\sqrt{5} \text{ br}$$

$$|BD| = 12 \text{ br}$$

$$\Rightarrow A(ABCD) = ?$$

7.



A) 3 B) 4 C) 6 D) 8 E) 9

ADFE deltoid

ADFE deltoid

$$|BF| = 4 \text{ br}$$

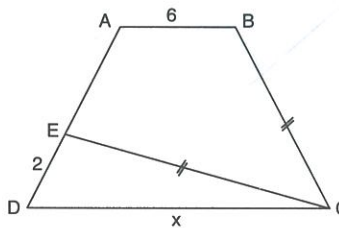
$$|FC| = 3 \text{ br}$$

$$|AB| = 8 \text{ br}$$

$$|DF| = |FE|$$

$$\Rightarrow |AC| = ?$$

8.



A) 6 B) 8 C) 10 D) 12 E) 16

ABCE deltoid

ABCE deltoid

$$[AB] \parallel [DC]$$

$$|EC| = |BC|$$

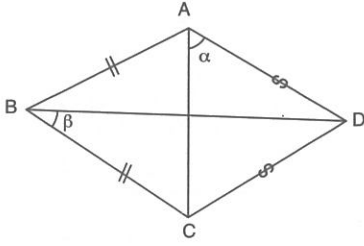
$$|AB| = 6 \text{ br}$$

$$|DE| = 2 \text{ br}$$

$$\Rightarrow |DC| = x = ?$$



9.



ABCD deltoid

ABCD deltoid

$$m(\widehat{BAC}) = 48^\circ$$

$$m(\widehat{BDC}) = 24^\circ$$

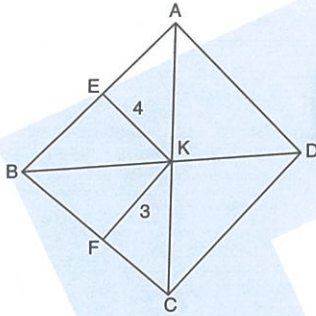
$$m(\widehat{CAD}) = \alpha$$

$$m(\widehat{DBC}) = \beta$$

$$\Rightarrow \alpha + \beta = ?$$

- A) 18 B) 72 C) 96 D) 98 E) 108

10.



ABCD deltoid

ABCD deltoid

$$|AE| = |EB|$$

$$|BF| = |FC|$$

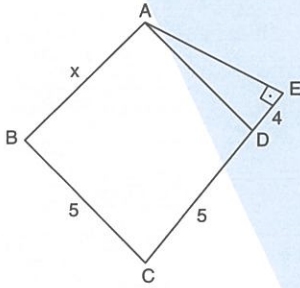
$$|KE| = 4 \text{ br}$$

$$|KF| = 3 \text{ br}$$

$$\Rightarrow \angle ABC = ?$$

- A) 14 B) 21 C) 28 D) 35 E) 42

11.



$$[AE] \perp [CE]$$

ABCD deltoid

ABCD deltoid

$$|DE| = 4 \text{ br}$$

$$|CD| = 5 \text{ br}$$

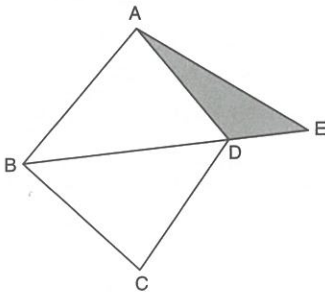
$$|BC| = 5 \text{ br}$$

$$2m(\widehat{DAE}) = m(\widehat{BAD})$$

$$\Rightarrow |AB| = x = ?$$

- A) 15 B) 13 C) 12 D) $4\sqrt{10}$ E) $2\sqrt{37}$

12.



ABCD deltoid

ABCD deltoid

$$|AB| = |AD| = 16 \text{ br}$$

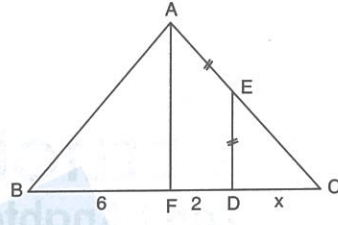
$$m(\widehat{BAD}) = 120^\circ$$

$$m(\widehat{DAE}) = 15^\circ$$

$$\Rightarrow A(\triangle ADE) = ?$$

- A) 64 B) $48\sqrt{3}$ C) $48\sqrt{2}$ D) 48 E) $16\sqrt{3}$

13.



ABDE deltoid

ABDE deltoid

$$|AE| = |ED|$$

$$[AF] \parallel [DE]$$

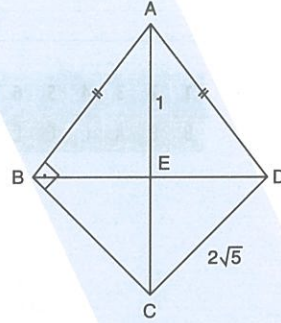
$$|BF| = 6 \text{ br}$$

$$|FD| = 2 \text{ br}$$

$$\Rightarrow |DC| = x = ?$$

- A) 2 B) $\frac{8}{3}$ C) 3 D) $\frac{15}{4}$ E) 5

14.



ABCD deltoid

ABCD deltoid

$$[AB] \perp [BC]$$

$$|AB| = |AD|$$

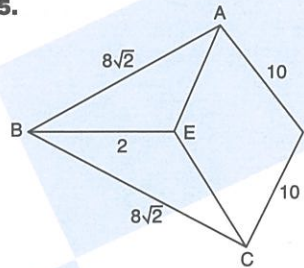
$$|AE| = 1 \text{ br}$$

$$|CD| = 2\sqrt{5} \text{ br}$$

$$\Rightarrow |EC| = x = ?$$

- A) 5 B) 4 C) $2\sqrt{3}$ D) 2 E) $\sqrt{3}$

15.



ABCD deltoid

ABCD deltoid

AECD eşkenar dörtgen

AECD rhombus

$$|AB| = |BC| = 8\sqrt{2} \text{ br}$$

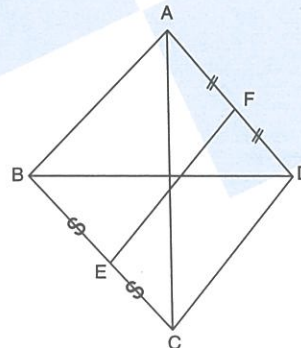
$$|AD| = |DC| = 10 \text{ br}$$

$$|BE| = 2 \text{ br}$$

$$\Rightarrow A(\triangle AEC) = ?$$

- A) 32 B) 48 C) 54 D) 72 E) 96

16.



ABCD deltoid

ABCD deltoid

$$|AF| = |FD|$$

$$|BE| = |EC|$$

$$|AC| = 8 \text{ br}$$

$$|BD| = 16 \text{ br}$$

$$\Rightarrow |EF| = ?$$

- A) 16 B) $8\sqrt{5}$ C) 8 D) $4\sqrt{5}$ E) 4



DELTOİD **DELTOİD**
Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	B	A	C	C	E	C	B	E	C	D	A	B	B	E	D

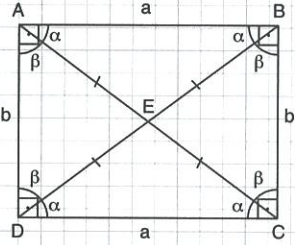


DİKDÖRTGEN

RECTANGLE



ÖZELLİK|Property 1



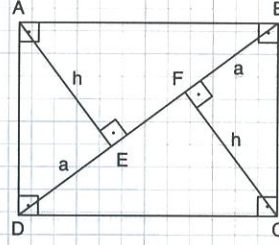
ABCD dikdörtgen

ABCD rectangle

$$\text{Ç}(ABCD) = 2(a + b)$$

$$A(ABCD) = a \cdot b$$

ÖZELLİK|Property 2

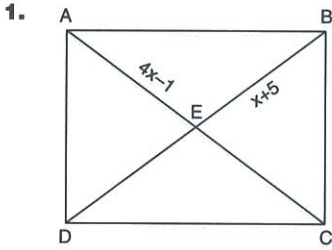


ABCD dikdörtgen

ABCD rectangle

$$|BF| = |DE|$$

$$|FC| = |AE|$$

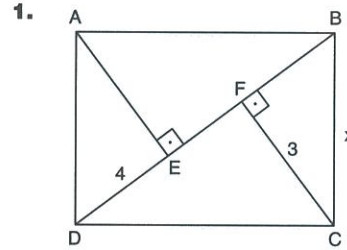


ABCD dikdörtgen

ABCD rectangle

$$\Rightarrow x = ?$$

2

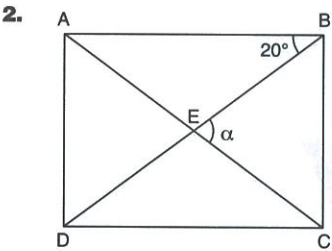


ABCD dikdörtgen

ABCD rectangle

$$\Rightarrow x = ?$$

5

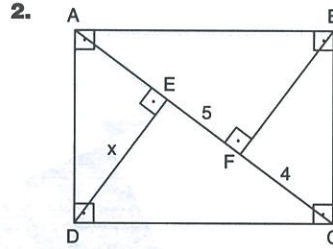


ABCD dikdörtgen

ABCD rectangle

$$\Rightarrow \alpha = ?$$

40

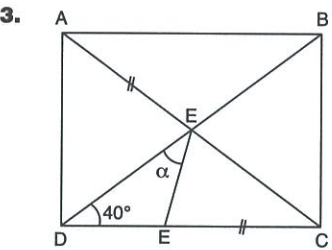


ABCD dikdörtgen

ABCD rectangle

$$\Rightarrow x = ?$$

6

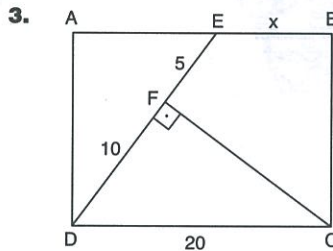


ABCD dikdörtgen

ABCD rectangle

$$\Rightarrow \alpha = ?$$

30



ABCD dikdörtgen

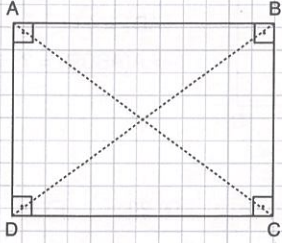
ABCD rectangle

$$\Rightarrow x = ?$$

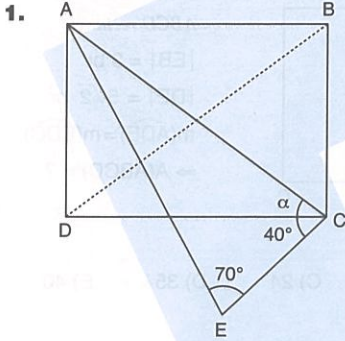
12,5



ÖZELLİK|Property 3



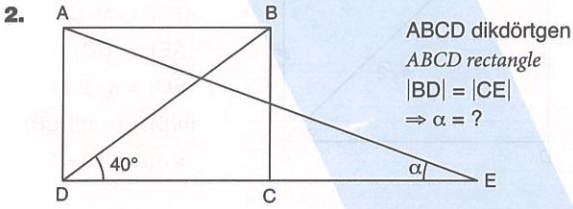
ABCD dikdörtgen
 ABCD rectangle
 $|AC| = |BD|$
 Köşegenler eşit
 Diagonals are equal



$$|AE| = |BD|$$

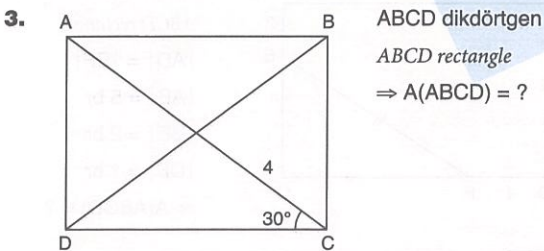
$$\Rightarrow \alpha = ?$$

30



ABCD dikdörtgen
 ABCD rectangle
 $|BD| = |CE|$
 $\Rightarrow \alpha = ?$

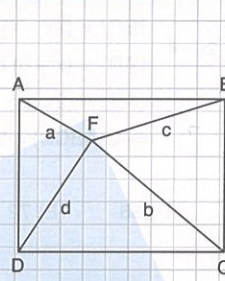
20



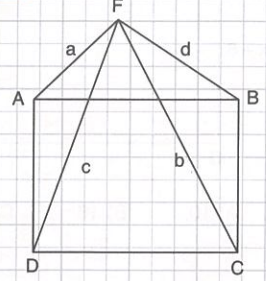
ABCD dikdörtgen
 ABCD rectangle
 $\Rightarrow A(ABCD) = ?$

$$16\sqrt{3}$$

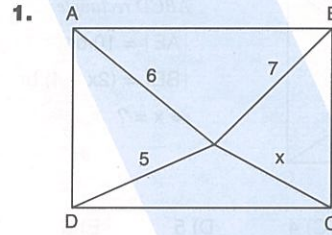
ÖZELLİK|Property 4



ABCD dikdörtgen
 ABCD rectangle

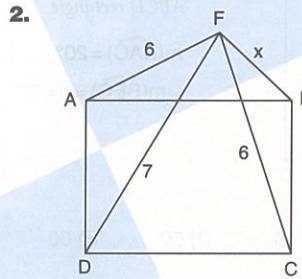


$$a^2 + b^2 = c^2 + d^2$$



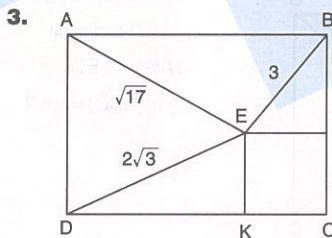
ABCD dikdörtgen
 ABCD rectangle
 $\Rightarrow x = ?$

$$\sqrt{38}$$



ABCD dikdörtgen
 ABCD rectangle
 $\Rightarrow x = ?$

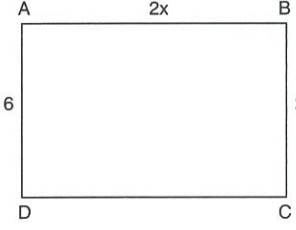
$$\sqrt{23}$$



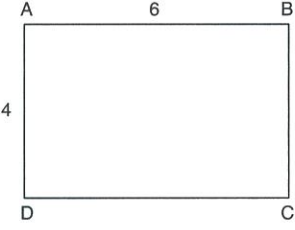
ABCD dikdörtgen
 ABCD rectangle
 EFCK kare
 EFCK square
 $\Rightarrow x = ?$

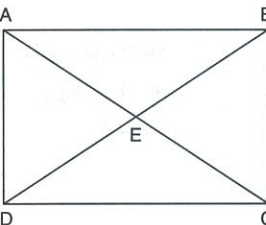
$$\sqrt{2}$$



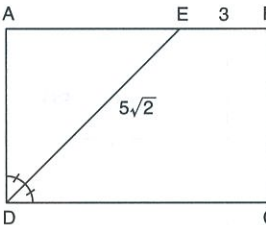
1.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|BC| = (2x - 4)$ br
 $|AD| = (x + 6)$ br
 $|AB| = (2x)$ br
 $\Rightarrow \widehat{C}(ABCD) = ?$
- A) 10 B) 16 C) 20 D) 36 E) 72

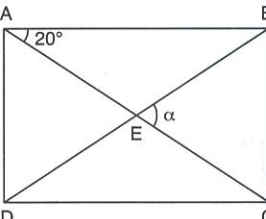
PUZA YAYINLARI

5.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|AB| = 6$ br
 $|AD| = 4$ br
 $\Rightarrow A(ABCD) = ?$
- A) 6 B) 10 C) 12 D) 20 E) 24

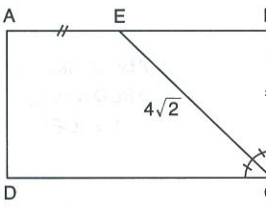
2.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|AE| = 10$ br
 $|BE| = (2x + 4)$ br
 $\Rightarrow x = ?$
- A) 2 B) 3 C) 4 D) 5 E) 6

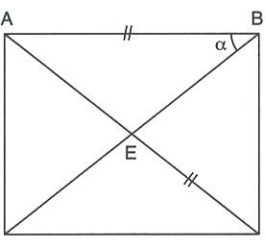
PUZA YAYINLARI

6.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|EB| = 3$ br
 $|DE| = 5\sqrt{2}$ br
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $\Rightarrow A(ABCD) = ?$
- A) 15 B) 20 C) 24 D) 35 E) 40

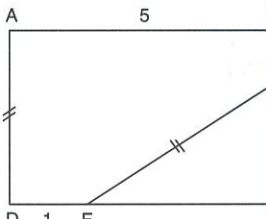
3.  ABCD dikdörtgen
 $ABCD$ rectangle
 $m(\widehat{BAC}) = 20^\circ$
 $\Rightarrow m(\widehat{BEC}) = \alpha = ?$
- A) 20 B) 30 C) 40 D) 50 E) 60

PUZA YAYINLARI

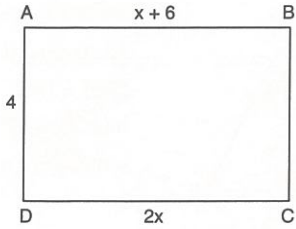
7.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|AE| = |BC|$
 $|EC| = 4\sqrt{2}$ br
 $m(\widehat{DCE}) = m(\widehat{ECB})$
 $\Rightarrow A(ABCD) = ?$
- A) 16 B) 28 C) 32 D) 36 E) 40

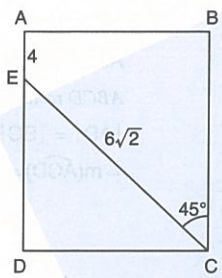
4.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|AB| = |EC|$
 $\Rightarrow m(\widehat{ABD}) = \alpha = ?$
- A) 15 B) 30 C) 45 D) 60 E) 75

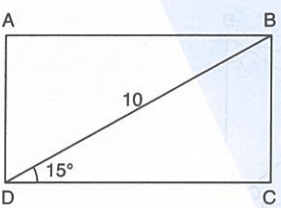
PUZA YAYINLARI

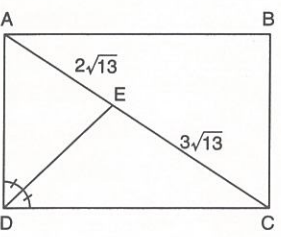
8.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|AD| = |EF|$
 $|AB| = 5$ br
 $|BE| = 2$ br
 $|DF| = 1$ br
 $\Rightarrow A(ABCD) = ?$
- A) 20 B) 25 C) 30 D) 35 E) 40

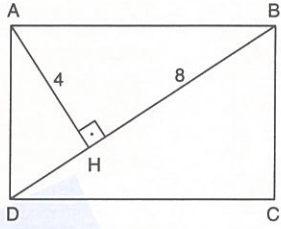


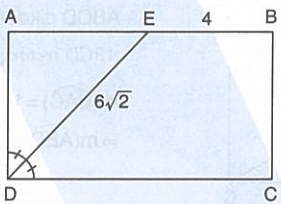
9.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|AB| = (x + 6)$ br
 $|AD| = 4$ br
 $|DC| = (2x)$ br
 $\Rightarrow A(ABCD) = ?$
 A) 36 B) 40 C) 48 D) 50 E) 56

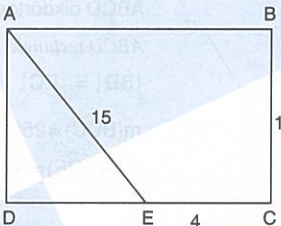
10.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|AE| = 4$ br
 $|EC| = 6\sqrt{2}$ br
 $m(\widehat{ECB}) = 45^\circ$
 $\Rightarrow A(ABCD) = ?$
 A) 60 B) 56 C) 48 D) 44 E) 40

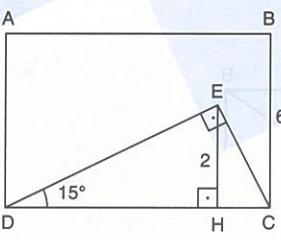
11.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|BD| = 10$ br
 $m(\widehat{BDC}) = 15^\circ$
 $\Rightarrow A(ABCD) = ?$
 A) $\frac{25}{2}$ B) 20 C) 25 D) 30 E) 35

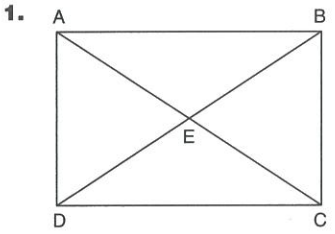
12.  ABCD dikdörtgen
 $ABCD$ rectangle
 $[DE]$ açıortay
 $[DE]$ bisector
 $|AE| = 2\sqrt{13}$ br
 $|EC| = 3\sqrt{13}$ br
 $\Rightarrow A(ABCD) = ?$
 A) 100 B) 120 C) 130 D) 140 E) 150

13.  ABCD dikdörtgen
 $ABCD$ rectangle
 $[AH] \perp [BD]$
 $|AH| = 4$ br
 $|BH| = 8$ br
 $\Rightarrow \angle(ABCD) = ?$
 A) $4\sqrt{5}$ B) $8\sqrt{5}$ C) $10\sqrt{5}$ D) $12\sqrt{5}$ E) $18\sqrt{5}$

14.  ABCD dikdörtgen
 $ABCD$ rectangle
 $m(\widehat{ADE}) = m(\widehat{EDC})$
 $|EB| = 4$ br
 $|DE| = 6\sqrt{2}$ br
 $\Rightarrow \angle(ABCD) = ?$
 A) 24 B) 30 C) 32 D) 36 E) 40

15.  ABCD dikdörtgen
 $ABCD$ rectangle
 $|AE| = 15$ br
 $|EC| = 4$ br
 $|BC| = 12$ br
 $\Rightarrow \angle(ABCD) = ?$
 A) 30 B) 40 C) 50 D) 60 E) 70

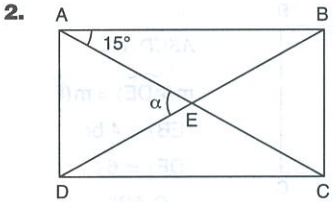
16.  ABCD dikdörtgen
 $ABCD$ rectangle
 $[EH] \perp [DC]$
 $[DE] \perp [EC]$
 $|BC| = 6$ br
 $|EH| = 2$ br
 $m(\widehat{BDC}) = 15^\circ$
 $\Rightarrow \angle(ABCD) = ?$
 A) 16 B) 20 C) 26 D) 28 E) 30



A) 3 B) 6 C) 10

ABCD dikdörtgen
 $ABCD$ rectangle
 $|AE| = (3x - 4)$ br
 $|DE| = (x + 2)$ br
 $\Rightarrow |AC| = ?$

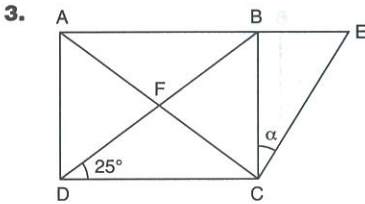
D) 12 E) 15



A) 20 B) 30 C) 40

ABCD dikdörtgen
 $ABCD$ rectangle
 $m(\widehat{BAC}) = 15^\circ$
 $\Rightarrow m(\widehat{AED}) = \alpha = ?$

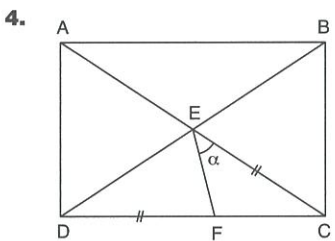
D) 50 E) 60



A) 25 B) 35 C) 45

ABCD dikdörtgen
 $ABCD$ rectangle
 $|BD| = |EC|$
 $m(\widehat{BDC}) = 25^\circ$
 $\Rightarrow m(\widehat{BCE}) = \alpha = ?$

D) 55 E) 65



A) 60 B) 70 C) 75

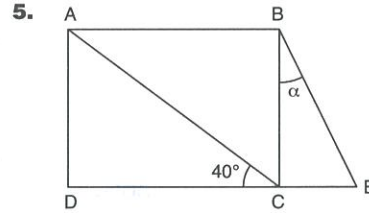
ABCD dikdörtgen
 $ABCD$ rectangle
 $|EC| = |DF|$
 $m(\widehat{DCA}) = 20^\circ$
 $\Rightarrow m(\widehat{FEC}) = \alpha = ?$

D) 80 E) 85

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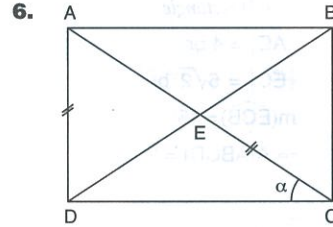
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A) 10 B) 20 C) 30

ABCD dikdörtgen
 $ABCD$ rectangle
 $|BE| = |AC|$
 $m(\widehat{ACD}) = 40^\circ$
 $\Rightarrow m(\widehat{CBE}) = \alpha = ?$

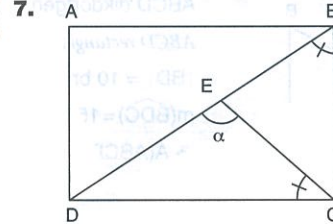
D) 40 E) 50



A) 15 B) 20 C) 30

ABCD dikdörtgen
 $ABCD$ rectangle
 $|AD| = |EC|$
 $\Rightarrow m(\widehat{ACD}) = \alpha = ?$

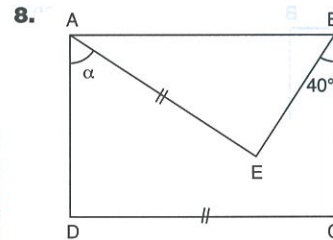
D) 45 E) 75



A) 30 B) 45 C) 60

ABCD dikdörtgen
 $ABCD$ rectangle
 $m(\widehat{DBC}) = m(\widehat{ECD})$
 $\Rightarrow m(\widehat{DEC}) = \alpha = ?$

D) 75 E) 90



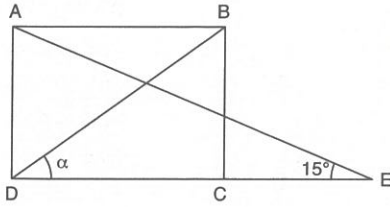
A) 10 B) 20 C) 30

ABCD dikdörtgen
 $ABCD$ rectangle
 $m(\widehat{EBC}) = 40^\circ$
 $|AE| = |DC|$
 $\Rightarrow m(\widehat{DAE}) = \alpha = ?$

D) 40 E) 50



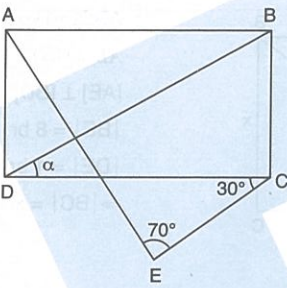
9.



ABCD dikdörtgen
 ABCD rectangle
 $|BD| = |CE|$
 $m(\widehat{AED}) = 15^\circ$
 $\Rightarrow m(\widehat{BDE}) = \alpha = ?$

- A) 20 B) 30 C) 40 D) 50 E) 60

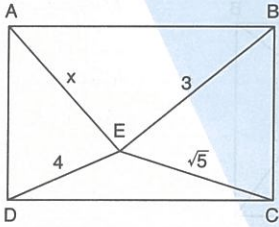
10.



ABCD dikdörtgen
 ABCD rectangle
 $|BD| = |AE|$
 $m(\widehat{DCE}) = 30^\circ$
 $m(\widehat{AEC}) = 70^\circ$
 $\Rightarrow m(\widehat{BDC}) = \alpha = ?$

- A) 50 B) 40 C) 35 D) 30 E) 25

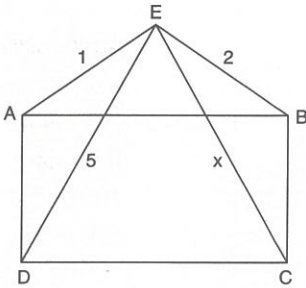
11.



ABCD dikdörtgen
 ABCD rectangle
 $|EC| = \sqrt{5}$ br
 $|BE| = 3$ br
 $|DE| = 4$ br
 $\Rightarrow |AE| = x = ?$

- A) $\sqrt{6}$ B) $2\sqrt{5}$ C) $\sqrt{5}$ D) $2\sqrt{6}$ E) $2\sqrt{3}$

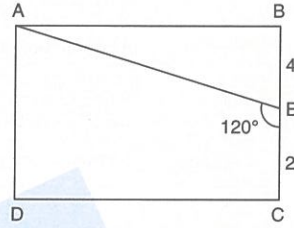
12.



ABCD dikdörtgen
 ABCD rectangle
 $|AE| = 1$ br
 $|BE| = 2$ br
 $|DE| = 5$ br
 $\Rightarrow |CE| = x = ?$

- A) $\sqrt{5}$ B) $\sqrt{7}$ C) $2\sqrt{5}$ D) $2\sqrt{7}$ E) 7

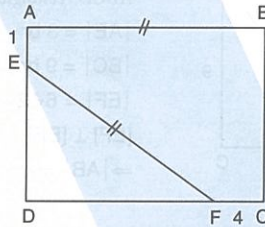
13.



ABCD dikdörtgen
 ABCD rectangle
 $|BE| = 4$ br
 $|EC| = 2$ br
 $m(\widehat{AEC}) = 120^\circ$
 $\Rightarrow \angle(ABCD) = ?$

- A) $8\sqrt{3} + 12$ B) $8\sqrt{3} + 6$ C) $4\sqrt{3} + 12$
 D) $4\sqrt{3} + 6$ E) $24\sqrt{3}$

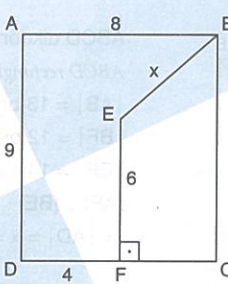
14.



ABCD dikdörtgen
 ABCD rectangle
 $|AE| = 1$ br
 $|FC| = 4$ br
 $|BC| = 9$ br
 $|AB| = |EF|$
 $\Rightarrow \angle(ABCD) = ?$

- A) 10 B) 20 C) 28 D) 30 E) 38

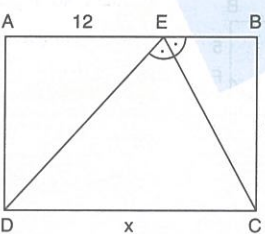
15.



ABCD dikdörtgen
 ABCD rectangle
 $[EF] \perp [DC]$
 $|AB| = 8$ br
 $|AD| = 9$ br
 $|DF| = 4$ br
 $|EF| = 6$ br
 $\Rightarrow |EB| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

16.

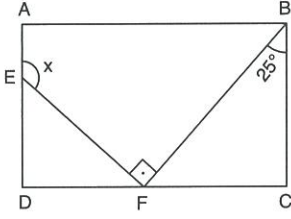


ABCD dikdörtgen
 ABCD rectangle
 $m(\widehat{DEC}) = m(\widehat{CEB})$
 $|AE| = 12$ br
 $|BC| = 5$ br
 $\Rightarrow |DC| = x = ?$

- A) 6 B) 7 C) 10 D) 13 E) 15



1.

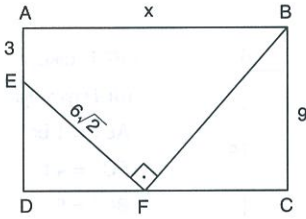


- A) 120 B) 115 C) 110 D) 100 E) 95

ABCD dikdörtgen
 $ABCD$ rectangle
 $[EF] \perp [BF]$
 $m(\widehat{FBC}) = 25^\circ$
 $\Rightarrow m(\widehat{AEF}) = x = ?$

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2.

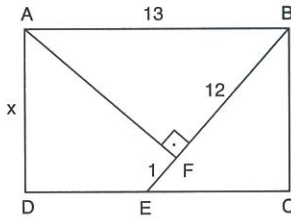


- A) 6 B) 10 C) 15 D) 16 E) 18

ABCD dikdörtgen
 $ABCD$ rectangle
 $|AE| = 3$ br
 $|BC| = 9$ br
 $|EF| = 6\sqrt{2}$ br
 $[EF] \perp [BF]$
 $\Rightarrow |AB| = x = ?$

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3.

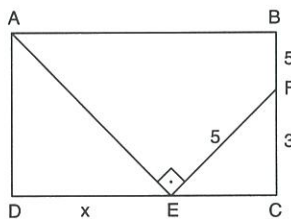


- A) 5 B) 6 C) 7 D) 8 E) 9

ABCD dikdörtgen
 $ABCD$ rectangle
 $|AB| = 13$ br
 $|BF| = 12$ br
 $|EF| = 1$ br
 $[AF] \perp [BE]$
 $\Rightarrow |AD| = x = ?$

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4.

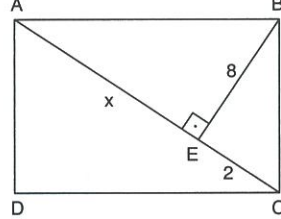


- A) 2 B) 3 C) 4 D) 5 E) 6

ABCD dikdörtgen
 $ABCD$ rectangle
 $[AE] \perp [EF]$
 $|EF| = |BF| = 5$ br
 $|FC| = 3$ br
 $\Rightarrow |DE| = x = ?$

PUZA YAYINLARI

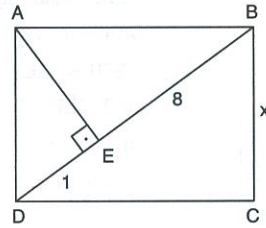
5.



- A) 1 B) 2 C) 16 D) 32 E) 36

ABCD dikdörtgen
 $ABCD$ rectangle
 $|BE| = 8$ br
 $|EC| = 2$ br
 $[BE] \perp [AC]$
 $\Rightarrow |AE| = x = ?$

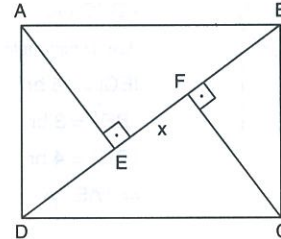
6.



- A) $\sqrt{2}$ B) $2\sqrt{2}$ C) 3 D) 4 E) $4\sqrt{2}$

ABCD dikdörtgen
 $ABCD$ rectangle
 $[AE] \perp [BD]$
 $|BE| = 8$ br
 $|DE| = 1$ br
 $\Rightarrow |BC| = x = ?$

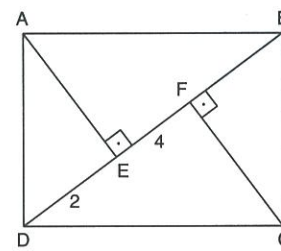
7.



- A) 3 B) 6 C) 8 D) 9 E) 11

ABCD dikdörtgen
 $ABCD$ rectangle
 $[CF] \perp [BD]$
 $[AE] \perp [BD]$
 $|CF| = 6$ br
 $|DF| = 12$ br
 $\Rightarrow |EF| = x = ?$

8.

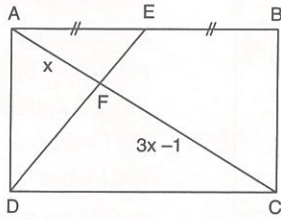


- A) $4\sqrt{3}$ B) $8\sqrt{3}$ C) $16\sqrt{3}$ D) $20\sqrt{3}$ E) $24\sqrt{3}$

ABCD dikdörtgen
 $ABCD$ rectangle
 $[CF] \perp [BD]$
 $[AE] \perp [BD]$
 $|DE| = 2$ br
 $|EF| = 4$ br
 $\Rightarrow A(ABCD) = ?$



9.



- A) 1 B) 2 C) 3 D) 4 E) 5

ABCD dikdörtgen

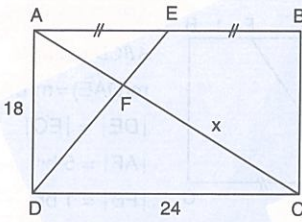
ABCD rectangle

$$|AE| = |EB|$$

$$|FC| = (3x - 1) \text{ br}$$

$$\Rightarrow |AF| = x = ?$$

10.



- A) 19 B) 20 C) 21 D) 22 E) 23

ABCD dikdörtgen

ABCD rectangle

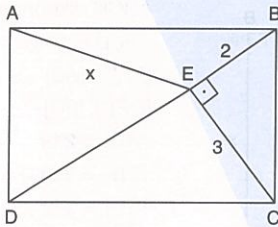
$$|AE| = |EB|$$

$$|AD| = 18 \text{ br}$$

$$|DC| = 24 \text{ br}$$

$$\Rightarrow |FC| = x = ?$$

11.



- A) $\frac{\sqrt{13}}{2}$ B) $\sqrt{13}$ C) $\frac{\sqrt{61}}{4}$ D) $\frac{\sqrt{61}}{2}$ E) $\sqrt{61}$

ABCD dikdörtgen

ABCD rectangle

[BD] köşegen

[BD] diagonal line

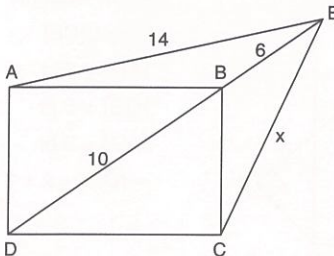
[CE] $\perp$ [BD]

$$|CE| = 3 \text{ br}$$

$$|BE| = 2 \text{ br}$$

$$\Rightarrow |AE| = x = ?$$

12.



- A) 100 B) $4\sqrt{6}$ C) 9 D) $6\sqrt{2}$ E) 8

ABCD dikdörtgen

ABCD rectangle

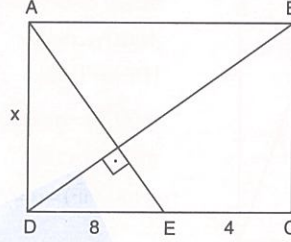
$$|AE| = 14 \text{ br}$$

$$|BD| = 10 \text{ br}$$

$$|BE| = 6 \text{ br}$$

$$\Rightarrow |CE| = x = ?$$

13.



- A) 2 B) $\sqrt{6}$ C) $2\sqrt{6}$ D) 6 E) $4\sqrt{6}$

ABCD dikdörtgen

ABCD rectangle

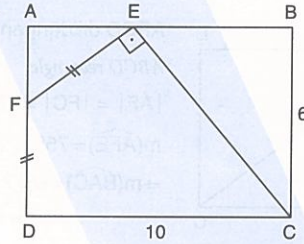
[AE] $\perp$ [BD]

$$|DE| = 8 \text{ br}$$

$$|EC| = 4 \text{ br}$$

$$\Rightarrow |AD| = x = ?$$

14.



- A) 10 B) 8 C) 4 D) $\frac{8}{3}$ E) 2

ABCD dikdörtgen

ABCD rectangle

[CE] $\perp$ [EF]

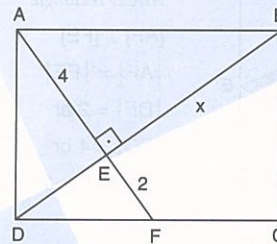
$$|EF| = |FD|$$

$$|DC| = 10 \text{ br}$$

$$|BC| = 6 \text{ br}$$

$$\Rightarrow A(AEF) = ?$$

15.



- A) $2\sqrt{2}$ B) $4\sqrt{2}$ C) $8\sqrt{2}$ D) 9 E) $9\sqrt{2}$

ABCD dikdörtgen

ABCD rectangle

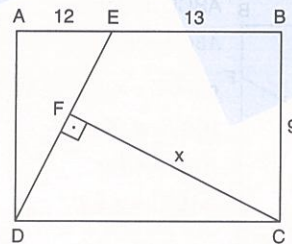
[AF] $\perp$ [BD]

$$|AE| = 4 \text{ br}$$

$$|EF| = 2 \text{ br}$$

$$\Rightarrow |BE| = x = ?$$

16.



- A) 10 B) 12 C) 13 D) 15 E) 16

ABCD dikdörtgen

ABCD rectangle

[CF] $\perp$ [DE]

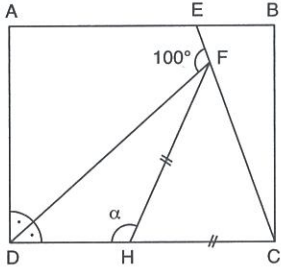
$$|BE| = 13 \text{ br}$$

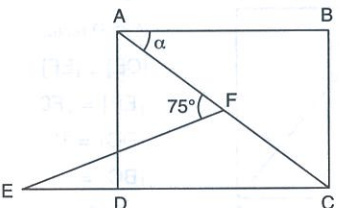
$$|EA| = 12 \text{ br}$$

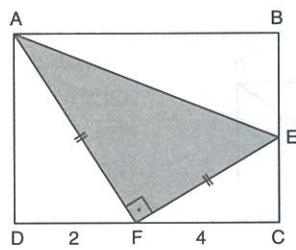
$$|BC| = 9 \text{ br}$$

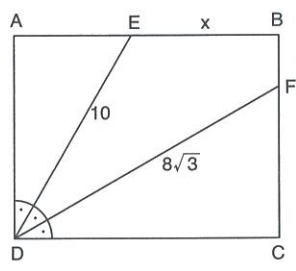
$$\Rightarrow |CF| = x = ?$$

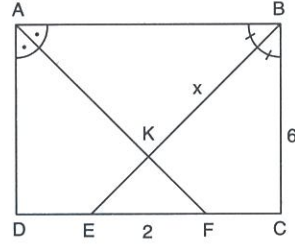


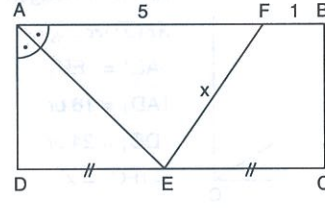
1. 
- ABCD dikdörtgen
 $ABCD$ rectangle
 $|HF| = |HC|$
 $m(\widehat{ADF}) = m(\widehat{FDC})$
 $m(\widehat{EFD}) = 100^\circ$
 $\Rightarrow m(\widehat{DHF}) = \alpha = ?$
- A) 100 B) 110 C) 115 D) 120 E) 125

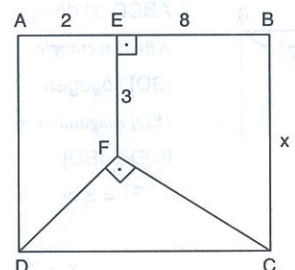
2. 
- ABCD dikdörtgen
 $ABCD$ rectangle
 $|AF| = |FC| = |ED|$
 $m(\widehat{AFE}) = 75^\circ$
 $\Rightarrow m(\widehat{BAC}) = \alpha = ?$
- A) 20 B) 25 C) 30 D) 45 E) 50

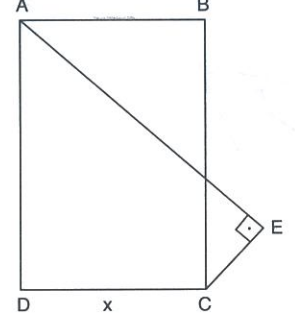
3. 
- ABCD dikdörtgen
 $ABCD$ rectangle
 $[AF] \perp [FE]$
 $|AF| = |FE|$
 $|DF| = 2 \text{ br}$
 $|FC| = 4 \text{ br}$
 $\Rightarrow A(\widehat{AFE}) = ?$
- A) 10 B) 8 C) 6 D) 5 E) 4

4. 
- ABCD dikdörtgen
 $ABCD$ rectangle
 $m(\widehat{ADE}) = m(\widehat{EDF}) = m(\widehat{FDC})$
 $|DF| = 8\sqrt{3} \text{ br}$
 $|DE| = 10 \text{ br}$
 $\Rightarrow |EB| = x = ?$
- A) $4\sqrt{3}$ B) 7 C) 12 D) 14 E) 16

5. 
- ABCD dikdörtgen
 $ABCD$ rectangle
 $m(\widehat{DAF}) = m(\widehat{FAB})$
 $m(\widehat{ABE}) = m(\widehat{EBC})$
 $|EF| = 2 \text{ br}$
 $|BC| = 6 \text{ br}$
 $\Rightarrow |BK| = x = ?$
- A) $\sqrt{2}$ B) $3\sqrt{2}$ C) $5\sqrt{2}$ D) 10 E) 12

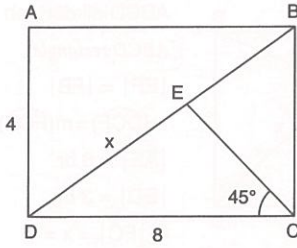
6. 
- ABCD dikdörtgen
 $ABCD$ rectangle
 $m(\widehat{DAE}) = m(\widehat{EAB})$
 $|DE| = |EC|$
 $|AF| = 5 \text{ br}$
 $|FB| = 1 \text{ br}$
 $\Rightarrow |EF| = x = ?$
- A) 3 B) $3\sqrt{2}$ C) $\sqrt{13}$ D) $\sqrt{15}$ E) $\sqrt{21}$

7. 
- ABCD dikdörtgen
 $ABCD$ rectangle
 $[EF] \perp [AB]$
 $[DF] \perp [FC]$
 $|AE| = 2 \text{ br}$
 $|EB| = 8 \text{ br}$
 $|EF| = 3 \text{ br}$
 $\Rightarrow |BC| = x = ?$
- A) 6 B) 7 C) 8 D) 9 E) 10

8. 
- ABCD dikdörtgen
 $ABCD$ rectangle
 $[AE] \perp [CE]$
 $|AE| = 7 \text{ br}$
 $|CE| = 5 \text{ br}$
 $|AD| = 8 \text{ br}$
 $\Rightarrow |DC| = x = ?$
- A) $\sqrt{2}$ B) $\sqrt{3}$ C) $\sqrt{5}$ D) $\sqrt{7}$ E) $\sqrt{10}$



9.



ABCD dikdörtgen

ABCD rectangle

$$m(\widehat{DCE}) = 45^\circ$$

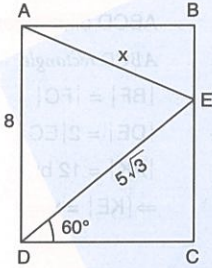
$$|DC| = 8 \text{ br}$$

$$|AD| = 4 \text{ br}$$

$$\Rightarrow |DE| = x = ?$$

- A) 24 B) 16 C) $8\sqrt{5}$ D) $4\sqrt{5}$ E) $\frac{8\sqrt{5}}{3}$

10.



ABCD dikdörtgen

ABCD rectangle

$$m(\widehat{EDC}) = 60^\circ$$

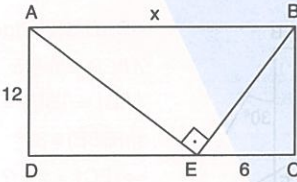
$$|AD| = 8 \text{ br}$$

$$|DE| = 5\sqrt{3} \text{ br}$$

$$\Rightarrow |AE| = x = ?$$

- A) 6 B) 5 C) $\sqrt{21}$ D) $\sqrt{19}$ E) $\sqrt{15}$

11.



ABCD dikdörtgen

ABCD rectangle

$$[AE] \perp [BE]$$

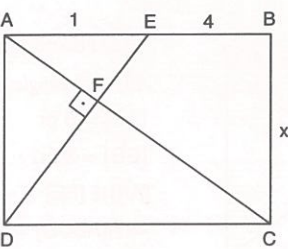
$$|AD| = 12 \text{ br}$$

$$|EC| = 6 \text{ br}$$

$$\Rightarrow |AB| = x = ?$$

- A) 12 B) $12\sqrt{5}$ C) 30 D) $30\sqrt{5}$ E) 32

12.



ABCD dikdörtgen

ABCD rectangle

$$[DF] \perp [AC]$$

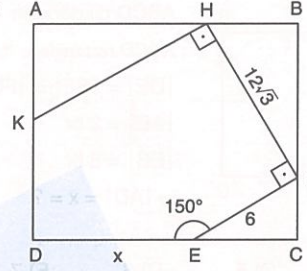
$$|AE| = 1 \text{ br}$$

$$|EB| = 4 \text{ br}$$

$$\Rightarrow |BC| = x = ?$$

- A) $\sqrt{5}$ B) 3 C) $\frac{7}{2}$ D) 4 E) $\frac{9}{2}$

13.



ABCD dikdörtgen

ABCD rectangle

$$[KH] \perp [HF]$$

$$[EF] \perp [HF]$$

$$m(\widehat{DEF}) = 150^\circ$$

$$|EF| = 6 \text{ br}$$

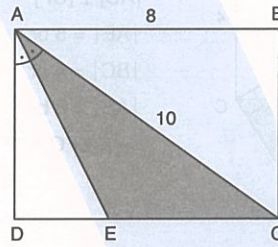
$$|HF| = 12\sqrt{3} \text{ br}$$

$$|AK| = 2|KD|$$

$$\Rightarrow |DE| = x = ?$$

- A) $4\sqrt{3}$ B) $6\sqrt{3}$ C) $10\sqrt{3}$ D) $11\sqrt{3}$ E) $17\sqrt{3}$

14.



ABCD dikdörtgen

ABCD rectangle

$$m(\widehat{DAE}) = m(\widehat{EAC})$$

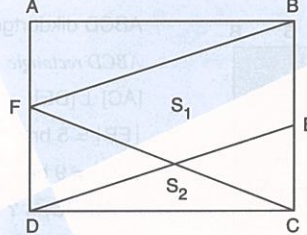
$$|AC| = 10 \text{ br}$$

$$|AB| = 8 \text{ br}$$

$$\Rightarrow A(AEC) = ?$$

- A) 12 B) 15 C) 20 D) 25 E) 30

15.



ABCD dikdörtgen

ABCD rectangle

FBED paralelkenar

FBED parallelogram

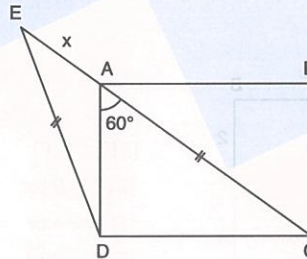
$$S_1 + S_2 = 18 \text{ br}^2$$

$$|BE| = 3|EC|$$

$$\Rightarrow A(ABCD) = ?$$

- A) 16 B) 24 C) 32 D) 36 E) 40

16.



ABCD dikdörtgen

ABCD rectangle

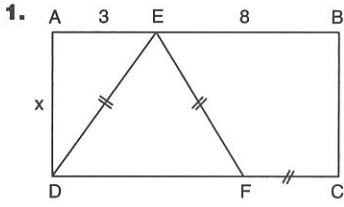
$$m(\widehat{DAC}) = 60^\circ$$

$$|ED| = |AC|$$

$$|BC| = 4 \text{ br}$$

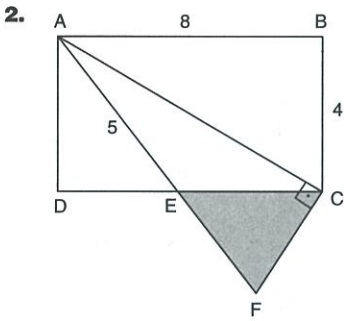
$$\Rightarrow |EA| = x = ?$$

- A) $\frac{\sqrt{13}}{2}$ B) $\sqrt{13}$ C) $2 - 2\sqrt{13}$
D) $2\sqrt{13}$ E) $-2 + 2\sqrt{13}$



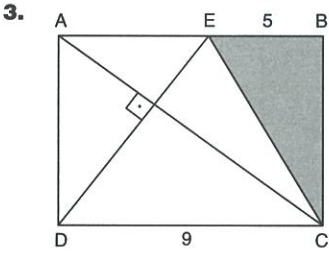
ABCD dikdörtgen
ABCD rectangle
 $|DE| = |EF| = |FC|$
 $|AE| = 3$ br
 $|EB| = 8$ br
 $\Rightarrow |AD| = x = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7



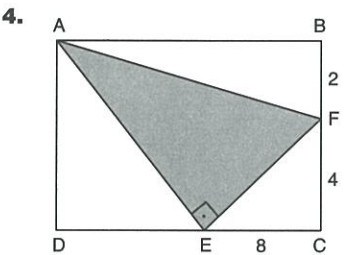
ABCD dikdörtgen
ABCD rectangle
 $[AC] \perp [EF]$
 $|AE| = 5$ br
 $|BC| = 4$ br
 $|AB| = 8$ br
 $\Rightarrow A(EFC) = ?$

- A) 5 B) $4\sqrt{5}$ C) 10 D) $10\sqrt{5}$ E) 20



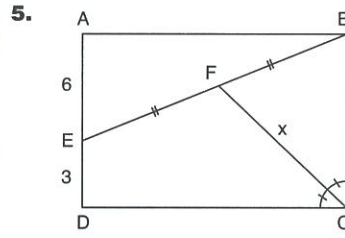
ABCD dikdörtgen
ABCD rectangle
 $[AC] \perp [DE]$
 $|EB| = 5$ br
 $|DC| = 9$ br
 $\Rightarrow A(EBC) = ?$

- A) 10 B) 15 C) 20 D) 25 E) 30



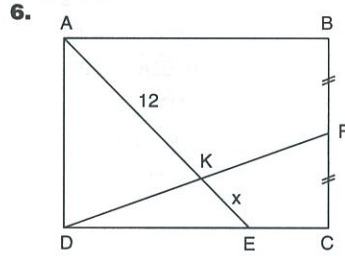
ABCD dikdörtgen
ABCD rectangle
 $[AE] \perp [EF]$
 $|BF| = 2$ br
 $|FC| = 4$ br
 $|EC| = 8$ br
 $\Rightarrow A(AEF) = ?$

- A) 15 B) 20 C) 25 D) 30 E) 60



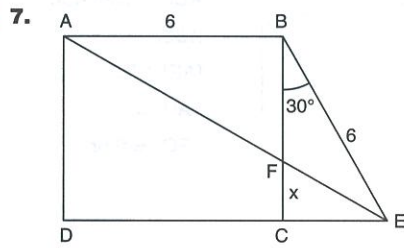
ABCD dikdörtgen
ABCD rectangle
 $|EF| = |FB|$
 $m(\widehat{DCF}) = m(\widehat{FCB})$
 $|AE| = 6$ br
 $|ED| = 3$ br
 $\Rightarrow |FC| = x = ?$

- A) 3 B) 6 C) $6\sqrt{2}$ D) $6\sqrt{3}$ E) 12



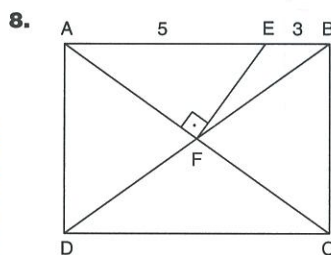
ABCD dikdörtgen
ABCD rectangle
 $|BF| = |FC|$
 $|DE| = 2|EC|$
 $|AK| = 12$ br
 $\Rightarrow |KE| = x = ?$

- A) 12 B) 10 C) 8 D) 6 E) 4



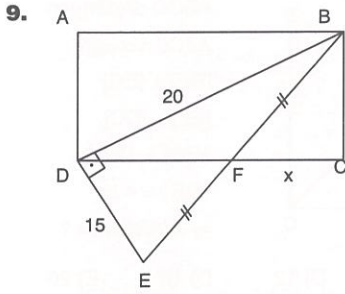
ABCD dikdörtgen
ABCD rectangle
 $|AB| = |BE| = 6$ br
 $m(\widehat{CBE}) = 30^\circ$
 $\Rightarrow |FC| = x = ?$

- A) $\frac{\sqrt{2}}{2}$ B) $\frac{\sqrt{3}}{2}$ C) $\sqrt{2}$ D) $\sqrt{3}$ E) $2\sqrt{3}$



ABCD dikdörtgen
ABCD rectangle
 $|AE| = 5$ br
 $|EB| = 3$ br
 $[AF] \perp [FE]$
 $\Rightarrow A(ABCD) = ?$

- A) 16 B) 28 C) 32 D) 48 E) 64

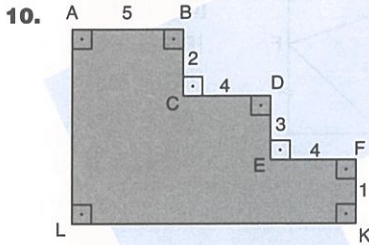


ABCD dikdörtgen

ABCD rectangle

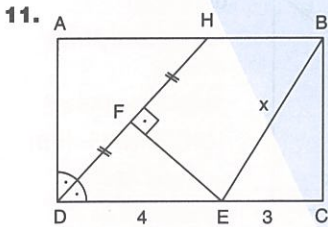
 $[BD] \perp [DE]$ $|EF| = |FB|$ $|BD| = 20$ br $|DE| = 15$ br $\Rightarrow |FC| = x = ?$

- A) 2 B) 3,5 C) 5 D) 7,5 E) 10

 $|AB| = 5$ br $|CD| = |EF| = 4$ br $|DE| = 3$ br $|BC| = 2$ br $|FK| = 1$ br $\Rightarrow$ Taralı alan = ?

Shaded area = ?

- A) 48 B) 50 C) 51 D) 52 E) 54

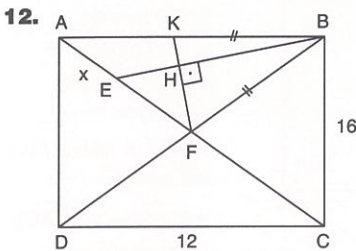


ABCD dikdörtgen

ABCD rectangle

 $[EF] \perp [DH]$ $|DF| = |FH|$ $|DE| = 4$ br $|EC| = 3$ br $\Rightarrow |BE| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

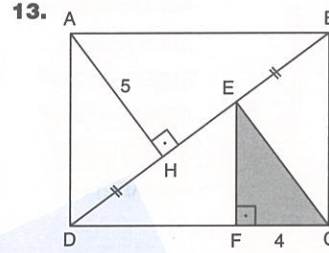


ABCD dikdörtgen

ABCD rectangle

 $[BH] \perp [KF]$ $|KB| = |FB|$ $|BC| = 16$ br $|DC| = 12$ br $\Rightarrow |AE| = x = ?$

- A) 1 B)
- $\frac{7}{5}$
- C)
- $\frac{18}{7}$
- D)
- $\frac{25}{11}$
- E)
- $\frac{60}{11}$

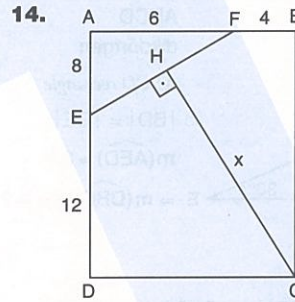


ABCD dikdörtgen

ABCD rectangle

 $|DH| = |EB|$ $[AH] \perp [DB]$ $[EF] \perp [DC]$ $|FC| = 4$ br $|AH| = 5$ br $\Rightarrow A(EFC) = ?$

- A) 2 B) 4 C) 6 D) 8 E) 12

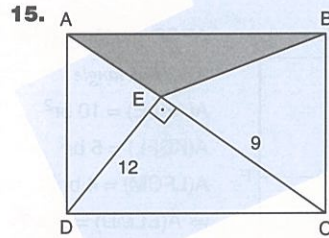


ABCD dikdörtgen

ABCD rectangle

 $[CH] \perp [EF]$ $|AF| = 6$ br $|FB| = 4$ br $|AE| = 8$ br $|ED| = 12$ br $\Rightarrow |CH| = x = ?$

- A) 20 B) 18 C) 16 D) 15,2 E) 11,2

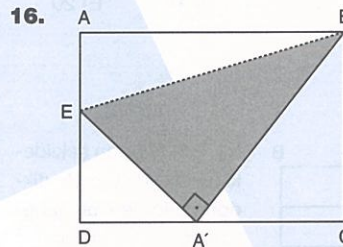


ABCD dikdörtgen

ABCD rectangle

 $[DE] \perp [AC]$ $|EC| = 9$ br $|DE| = 12$ br $\Rightarrow A(AEB) = ?$

- A) 54 B) 72 C) 84 D) 96 E) 184



ABCD dikdörtgen

ABCD rectangle

 $[EA'] \perp [BA']$ $|AB| = 17$ br $|BC| = 8$ br

A noktası $\overrightarrow{EB}$ doğrusu üzerinde katlanarak $[DC]$ kenarı üzerinde A' noktasına getiriliyor.

Point A is folded over $\overrightarrow{EB}$ line and corresponds to point A' over $[DC]$ edge.

 $\Rightarrow A(EA'B) = ?$

- A)
- $\frac{17}{4}$
- B)
- $\frac{289}{4}$
- C)
- $\frac{289}{8}$
- D) 15 E) 18



1. ABCD dikdörtgen
 $ABCD$ rectangle
 $A(AED) = 12 \text{ br}^2$
 $A(DEC) = 10 \text{ br}^2$
 $A(BEC) = 6 \text{ br}^2$
 $\Rightarrow A(ABE) = ?$
- A) 6 B) 8 C) 10 D) 12 E) 14

2. ABCD dikdörtgen
 $ABCD$ rectangle
 $|BD| = |CE|$
 $m(\widehat{AED}) = 32^\circ$
 $E \Rightarrow m(\widehat{DBC}) = \alpha = ?$
- A) 16 B) 26 C) 36 D) 64 E) 70

3. ABCD dikdörtgen
 $ABCD$ rectangle
 $A(AKLE) = 10 \text{ br}^2$
 $A(KBFL) = 5 \text{ br}^2$
 $A(LFCM) = 4 \text{ br}^2$
 $\Rightarrow A(ELMD) = S = ?$
- A) 4 B) 8 C) 12 D) 16 E) 20

4. Eş 7 dikdörtgen şekildeki gibi belirtiliyor. Bu dikdörtgenlerden bir tanesinin alanı 20 br^2 'dir.
The rhombohedrons are specified as in figure. If one of the surface area of these rhombohedrons is 20 unit^2
 $\Rightarrow \text{Ç}(ABCD) = ?$
- A) 20 B) 22 C) 24 D) 40 E) 48

PUZA YAYINLARI

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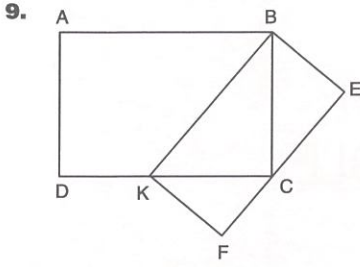
PUZA YAYINLARI

5. ABCD dikdörtgen
 $ABCD$ rectangle
 $[DE] \perp [EC]$
 $[EF] \perp [DC]$
 $|BC| = |DF|$
 $|DE| = 4 \text{ br}$
 $\Rightarrow A(ABCD) = ?$
- A) 4 B) 8 C) 12 D) 16 E) 20

6. ABCD dikdörtgen
 $ABCD$ rectangle
 $[DE] \perp [EF]$
 $|BF| = |FC|$
 $|DE| = 5 \text{ br}$
 $|AF| = 10 \text{ br}$
 $\Rightarrow |EF| = ?$
- A) 5 B) $5\sqrt{2}$ C) $5\sqrt{3}$ D) 20 E) 25

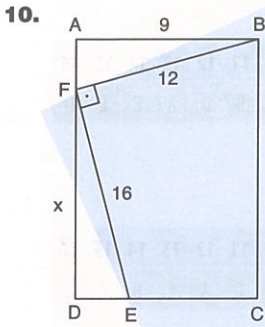
7. ABCD, EFKL, MNPR dikdörtgen
 $ABCD, EFKL, MNPR$ rectangle
 $A(ABCD) = 165 \text{ br}^2$
 $|ON| = |NF| = |FB|$
 $\Rightarrow \text{Taralı Alan} = ?$
Shaded Area = ?
- A) 31 B) 48 C) 55 D) 69 E) 93

8. ABCD dikdörtgen
 $ABCD$ rectangle
 B köşesi $[AC]$ doğrusu üzerine katlanıyor.
Point B is folding $[AC]$ line segment.
 $m(\widehat{DAB'}) = m(\widehat{B'AC})$
 $|AC| = 6\sqrt{3} \text{ br}$
 $\Rightarrow A(ABCD) = ?$
- A) $9\sqrt{3}$ B) $12\sqrt{3}$ C) 16 D) $18\sqrt{3}$ E) $27\sqrt{3}$



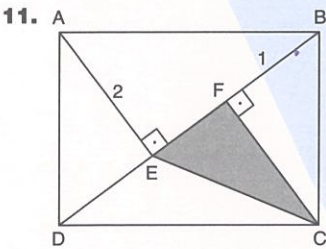
ABCD ve BEFK
dikdörtgen
ABCD and BEFK
rectangle
 $|DK| = 2|KC|$
 $A(BEFK) = 16 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 8 B) 16 C) 24 D) 32 E) 48



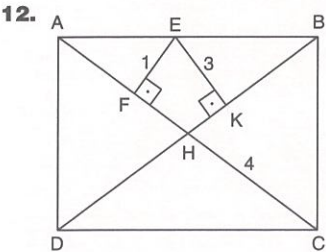
ABCD dikdörtgen
ABCD rectangle
 $[BF] \perp [FE]$
 $|AB| = 9 \text{ br}$
 $|BE| = 12 \text{ br}$
 $|FE| = 16 \text{ br}$
 $\Rightarrow |FD| = x = ?$

- A) $\frac{9}{2}$ B) 9 C) 12 D) 15 E) 16



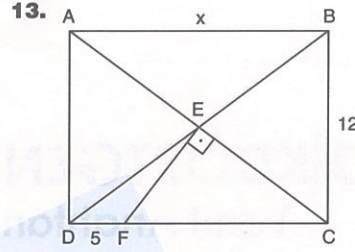
ABCD dikdörtgen
ABCD rectangle
 $[AE] \perp [BD]$
 $[FC] \perp [BD]$
 $|AE| = 2 \text{ br}$
 $|FB| = 1 \text{ br}$
 $\Rightarrow A(ECF) = ?$

- A) 2 B) 3 C) 6 D) 12 E) 15



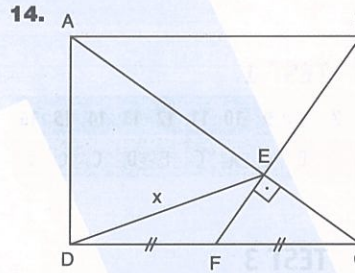
ABCD dikdörtgen
ABCD rectangle
 $[EF] \perp [AC]$
 $[EK] \perp [BD]$
 $|CH| = 4 \text{ br}$
 $|EK| = 3 \text{ br}$
 $|EF| = 1 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 8 B) 16 C) 24 D) 32 E) 40



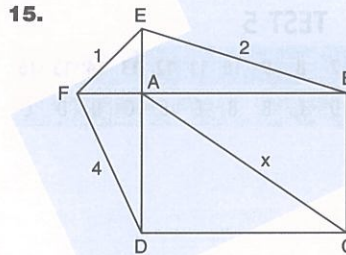
ABCD dikdörtgen
ABCD rectangle
 $[EF] \perp [AC]$
 $|BC| = 12 \text{ br}$
 $|DF| = 5 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) 2 B) 6 C) 9 D) 12 E) 18



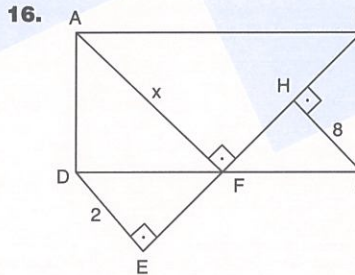
ABCD dikdörtgen
ABCD rectangle
 $[FE] \perp [AC]$
 $|FC| = 2\sqrt{3} \text{ br}$
 $|DF| = |FC|$
 $\Rightarrow |DE| = x = ?$

- A) $\sqrt{39}$ B) $\sqrt{37}$ C) $\sqrt{35}$ D) $\sqrt{30}$ E) $\sqrt{24}$



ABCD dikdörtgen
ABCD rectangle
F, A, B noktaları
doğrusal
F, A, B points are linear
E, A, D noktaları
doğrusal
E, A, D points are linear
 $|FE| = 1 \text{ br}$
 $|EB| = 2 \text{ br}$
 $|FD| = 4 \text{ br}$
 $\Rightarrow |AC| = x = ?$

- A) 2 B) $\sqrt{5}$ C) $\sqrt{7}$ D) $\sqrt{13}$ E) $\sqrt{19}$



ABCD dikdörtgen
ABCD rectangle
 $[AF] \perp [BE]$
 $[CH] \perp [BE]$
 $[DE] \perp [BE]$
 $|DE| = 2 \text{ br}$
 $|CH| = 8 \text{ br}$
 $\Rightarrow |AF| = x = ?$

- A) 4 B) 6 C) 8 D) 10 E) 12



DİKDÖRTGEN RECTANGLE

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	B	C	D	E	E	C	B	C	A	C	E	D	C	C	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	E	A	E	C	E	A	B	B	B	D	A	E	E	D

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	A	E	D	C	D	C	A	B	D	B	E	D	B	D

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	E	A	B	C	C	B	E	E	D	C	A	E	B	C	E

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	B	D	C	E	D	C	B	B	E	E	C	D	D	C

TEST 6

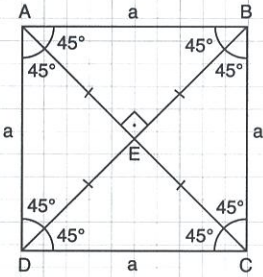
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	B	B	E	D	C	C	E	E	C	B	D	E	E	E	D



KARE SQUARE



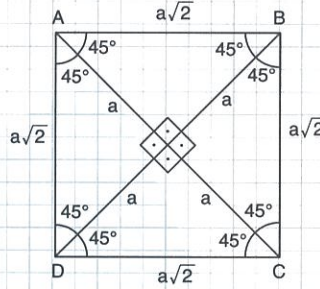
ÖZELLİK|Property 1



ABCD kare
ABCD square

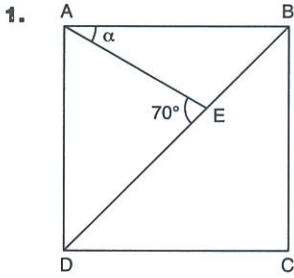
$$\begin{aligned} \angle(ABCD) &= 4a \\ A(ABCD) &= a^2 \end{aligned}$$

ÖZELLİK|Property 2



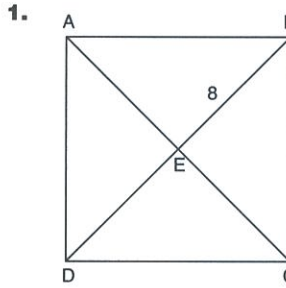
ABCD kare
ABCD square

Köşegenler dik
kesişir.
Diagonals are intersect
perpendicular.

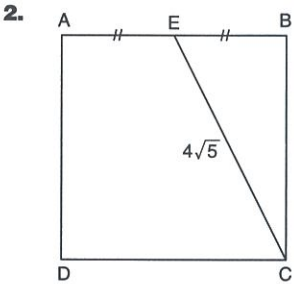


ABCD kare
ABCD square
 $\Rightarrow \alpha = ?$

25

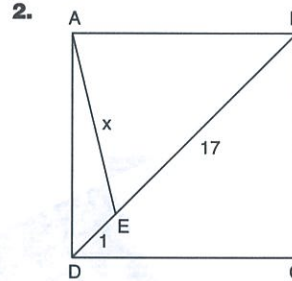


ABCD kare
ABCD square
 $\Rightarrow \angle(ABCD) = ?$
 $\Rightarrow A(ABCD) = ?$

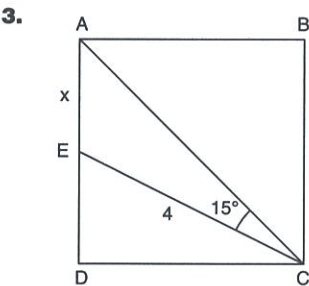
 $32\sqrt{2}, 128$ 

ABCD kare
ABCD square
 $\Rightarrow A(ABCD) = ?$

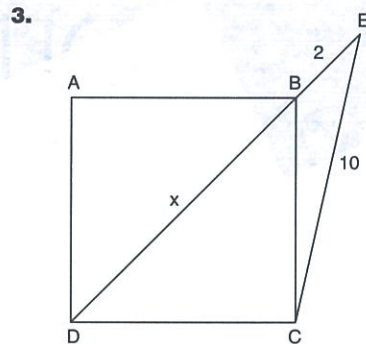
64



ABCD kare
ABCD square
 $\Rightarrow x = ?$

 $\sqrt{145}$ 

ABCD kare
ABCD square
 $\Rightarrow x = ?$

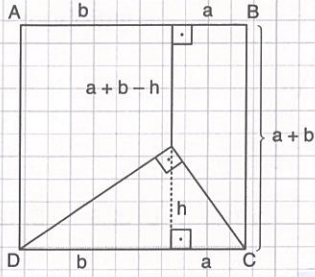
 $2\sqrt{3} - 2$ 

ABCD kare
ABCD square
 $\Rightarrow x = ?$

12



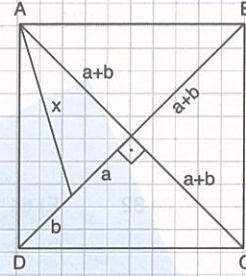
ÖZELLİK|Property 3



ABCD kare
ABCD square

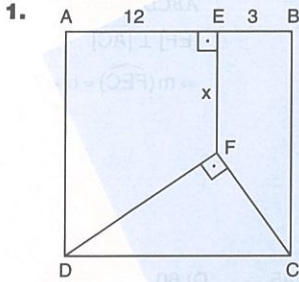
$$h^2 = a \cdot b$$

ÖZELLİK|Property 4



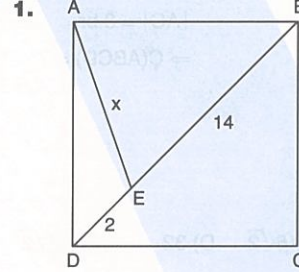
ABCD kare
ABCD square

$$x^2 = a^2 + (a+b)^2$$



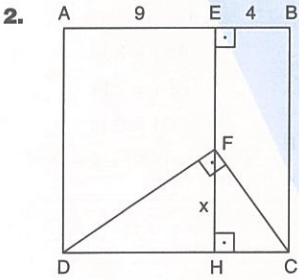
ABCD kare
ABCD square
 $\Rightarrow x = ?$

9



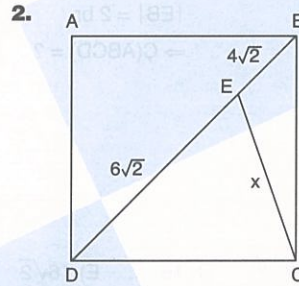
ABCD kare
ABCD square
 $\Rightarrow x = ?$

10



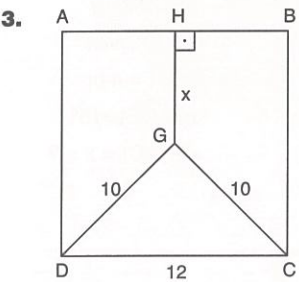
ABCD kare
ABCD square
 $\Rightarrow x = ?$

6



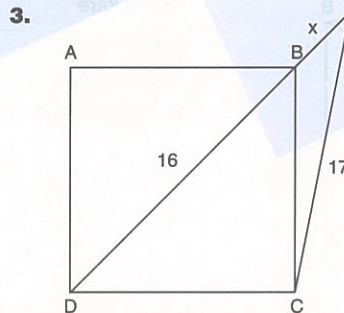
ABCD kare
ABCD square
 $\Rightarrow x = ?$

$2\sqrt{13}$



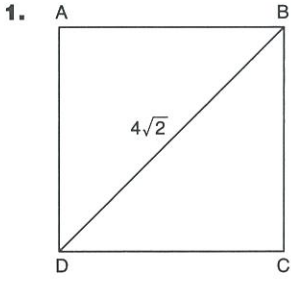
ABCD kare
ABCD square
 $\Rightarrow x = ?$

4



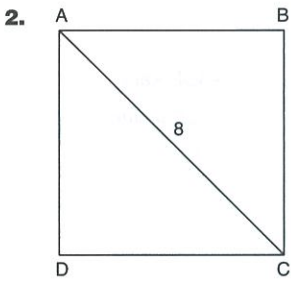
ABCD kare
ABCD square
 $\Rightarrow x = ?$

7



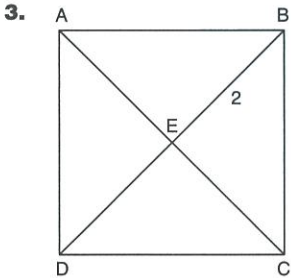
- A) 4 B) 16 C) 25 D) 32 E) 64

ABCD kare
ABCD square
 $|BD| = 4\sqrt{2}$ br
 $\Rightarrow A(ABCD) = ?$



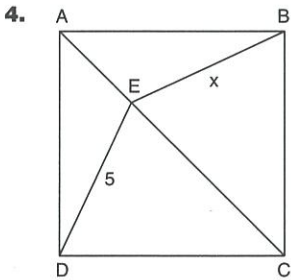
- A) $8\sqrt{2}$ B) 16 C) $16\sqrt{2}$ D) 32 E) $32\sqrt{2}$

ABCD kare
ABCD square
 $|AC| = 8$ br
 $\Rightarrow \checkmark(ABCD) = ?$



- A) $4\sqrt{2}$ B) 8 C) $8\sqrt{2}$ D) 16 E) $16\sqrt{2}$

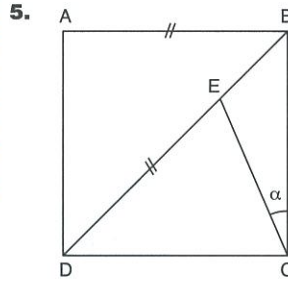
ABCD kare
ABCD square
 $|EB| = 2$ br
 $\Rightarrow \checkmark(ABCD) = ?$



- A) $\frac{5}{2}$ B) 5 C) $5\sqrt{2}$ D) $5\sqrt{3}$ E) 10

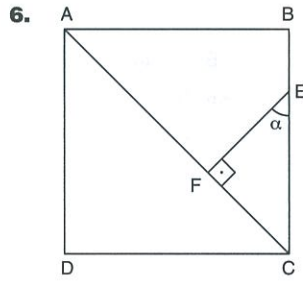
ABCD kare
ABCD square
 $|ED| = 5$ br
 $\Rightarrow |EB| = x = ?$

PUZA YAYINLARI



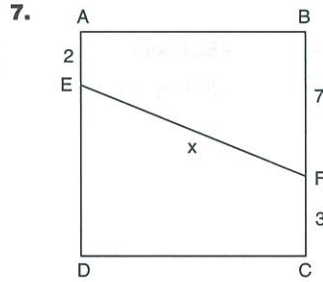
- A) 42,5 B) 30 C) 32,5 D) 22,5 E) 12,5

ABCD kare
ABCD square
 $|AB| = |ED|$
 $\Rightarrow m(\widehat{ECB}) = \alpha = ?$



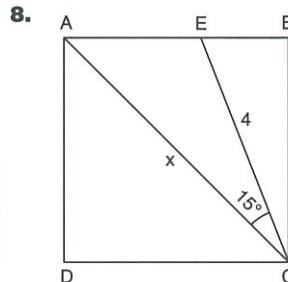
- A) 15 B) 30 C) 45 D) 60 E) 75

ABCD kare
ABCD square
 $[EF] \perp [AC]$
 $\Rightarrow m(\widehat{FEC}) = \alpha = ?$



- A) 5 B) 6 C) 10 D) $5\sqrt{5}$ E) $10\sqrt{5}$

ABCD kare
ABCD square
 $|AE| = 2$ br
 $|BF| = 7$ br
 $|FC| = 3$ br
 $\Rightarrow |EF| = x = ?$



- A) $2\sqrt{3}$ B) $4\sqrt{3}$ C) 8 D) $2\sqrt{6}$ E) $4\sqrt{6}$

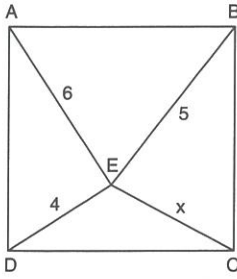
ABCD kare
ABCD square
 $|EC| = 4$ br
 $m(\widehat{ACE}) = 15^\circ$
 $\Rightarrow |AC| = x = ?$

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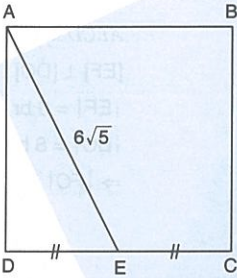
9.



ABCD kare
 ABCD square
 $|AE| = 6$ br
 $|BE| = 5$ br
 $|DE| = 4$ br
 $\Rightarrow |EC| = x = ?$

- A) $\sqrt{3}$ B) $\sqrt{5}$ C) 3 D) 5 E) $\frac{24}{5}$

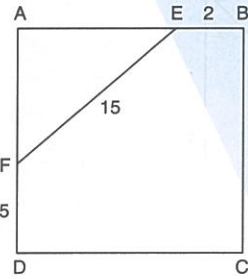
10.



ABCD kare
 ABCD square
 $|DE| = |EC|$
 $|AE| = 6\sqrt{5}$ br
 $\Rightarrow A(ABCD) = ?$

- A) 36 B) 64 C) 100 D) 121 E) 144

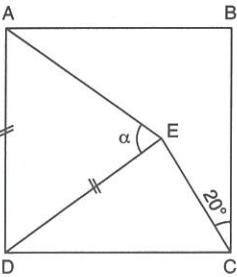
11.



ABCD kare
 ABCD square
 $|EB| = 2$ br
 $|FE| = 15$ br
 $|FD| = 5$ br
 $\Rightarrow \angle(ABCD) = ?$

- A) 40 B) 44 C) 48 D) 56 E) 60

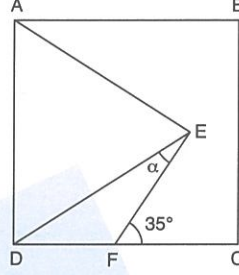
12.



ABCD kare
 ABCD square
 $|AD| = |DE|$
 $m(\widehat{ECB}) = 20^\circ$
 $\Rightarrow m(\widehat{AED}) = \alpha = ?$

- A) 40 B) 50 C) 65 D) 70 E) 135

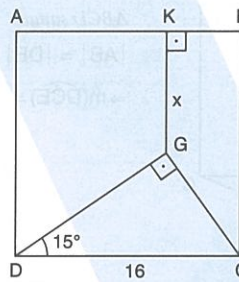
13.



ABCD kare
 ABCD square
 AED eşkenar üçgen
 AED equilateral triangle
 $m(\widehat{EFC}) = 35^\circ$
 $\Rightarrow m(\widehat{DEF}) = \alpha = ?$

- A) 5 B) 10 C) 12 D) 15 E) 20

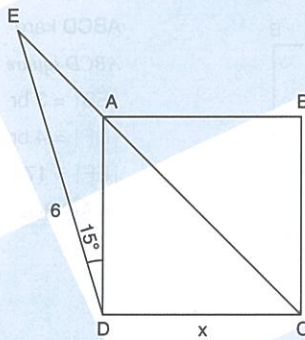
14.



ABCD kare
 ABCD square
 $[DG] \perp [GC]$
 $[GK] \perp [AB]$
 $m(\widehat{GDC}) = 15^\circ$
 $\Rightarrow |KG| = x = ?$

- A) 14 B) 12 C) 8 D) 6 E) 4

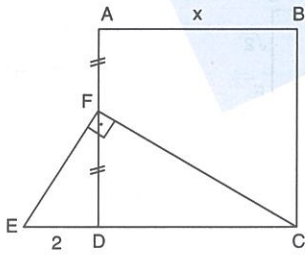
15.



ABCD kare
 ABCD square
 $|ED| = 6$ br
 $m(\widehat{ADE}) = 15^\circ$
 $\Rightarrow |DC| = x = ?$

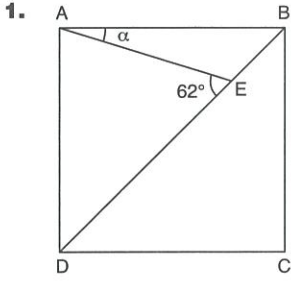
- A) 3 B) $3\sqrt{2}$ C) $3\sqrt{3}$ D) $3\sqrt{6}$ E) 6

16.



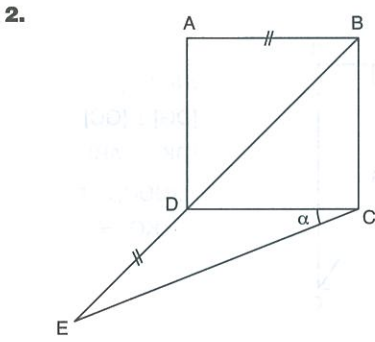
ABCD kare
 ABCD square
 $|AF| = |FD|$
 $[EF] \perp [FC]$
 $|ED| = 2$ br
 $\Rightarrow |AB| = x = ?$

- A) 2 B) 4 C) 6 D) 8 E) 16



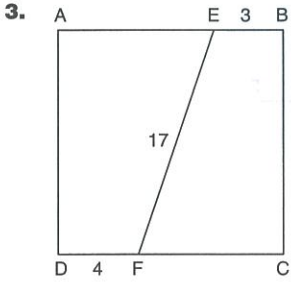
ABCD kare
 ABCD square
 $m(\widehat{AED}) = 62^\circ$
 $\Rightarrow m(\widehat{EAB}) = \alpha = ?$

- A) 12 B) 15 C) 17 D) 22 E) 27



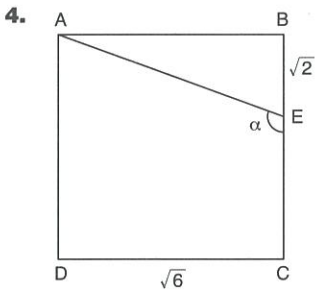
ABCD kare
 ABCD square
 $|AB| = |DE|$
 $\Rightarrow m(\widehat{DCE}) = \alpha = ?$

- A) 12,5 B) 15 C) 20 D) 22,5 E) 25



ABCD kare
 ABCD square
 $|EB| = 3 \text{ br}$
 $|DF| = 4 \text{ br}$
 $|EF| = 17 \text{ br}$
 $\Rightarrow A(ABCD) = ?$

- A) 100 B) 121 C) 144 D) 169 E) 225



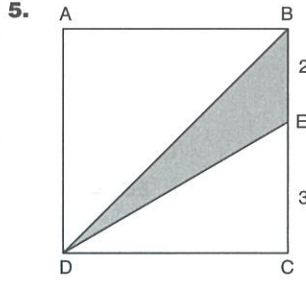
ABCD kare
 ABCD square
 $|EB| = \sqrt{2} \text{ br}$
 $|DC| = \sqrt{6} \text{ br}$
 $\Rightarrow m(\widehat{AEC}) = \alpha = ?$

- A) 150 B) 135 C) 120 D) 90 E) 75

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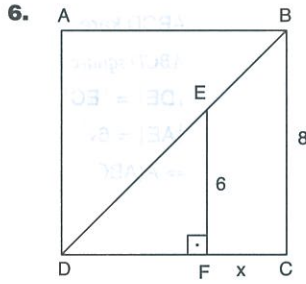
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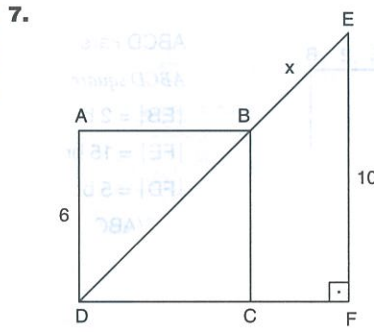
ABCD kare
 ABCD square
 $|BE| = 2 \text{ br}$
 $|EC| = 3 \text{ br}$
 $\Rightarrow A(BDE) = ?$

- A) 5 B) 6 C) 10 D) 12 E) 15



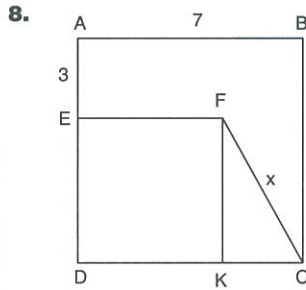
ABCD kare
 ABCD square
 $[EF] \perp [DC]$
 $|EF| = 6 \text{ br}$
 $|BC| = 8 \text{ br}$
 $\Rightarrow |FC| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5



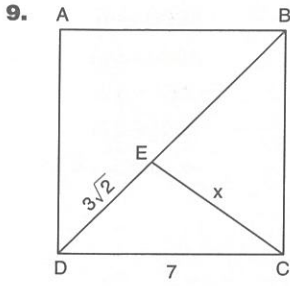
ABCD kare
 ABCD square
 $[EF] \perp [DF]$
 $|EF| = 10 \text{ br}$
 $|AD| = 6 \text{ br}$
 $\Rightarrow |BE| = x = ?$

- A) 2 B) $2\sqrt{2}$ C) 4 D) $4\sqrt{2}$ E) 6



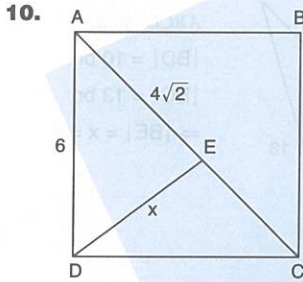
ABCD, EFKD kare
 ABCD, EFKD square
 $|AB| = 7 \text{ br}$
 $|AE| = 3 \text{ br}$
 $\Rightarrow |FC| = x = ?$

- A) $10\sqrt{2}$ B) 10 C) $4\sqrt{2}$ D) 5 E) 4



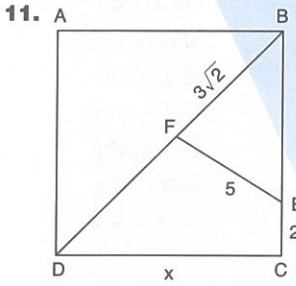
ABCD kare
 ABCD square
 $|DC| = 7$ br
 $|DE| = 3\sqrt{2}$ br
 $\Rightarrow |EC| = x = ?$

- A) 7 B) 6 C) 5 D) 4 E) 3



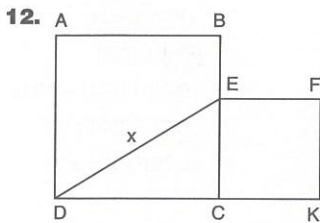
ABCD kare
 ABCD square
 $|AE| = 4\sqrt{2}$ br
 $|AD| = 6$ br
 $\Rightarrow |ED| = x = ?$

- A) $2\sqrt{2}$ B) 5 C) 6 D) $2\sqrt{5}$ E) $2\sqrt{7}$



ABCD kare
 ABCD square
 $|BF| = 3\sqrt{2}$ br
 $|FE| = 5$ br
 $|EC| = 2$ br
 $\Rightarrow |DC| = x = ?$

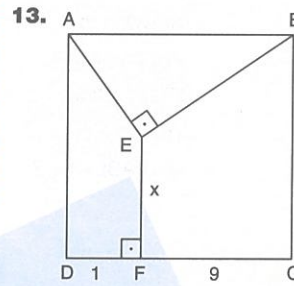
- A) 9 B) 8 C) 7 D) 6 E) 5



ABCD, EFKC kare
 ABCD, EFKC square
 $A(ABCD) + A(EFKC) = 72$ br²
 $\Rightarrow |DE| = x = ?$

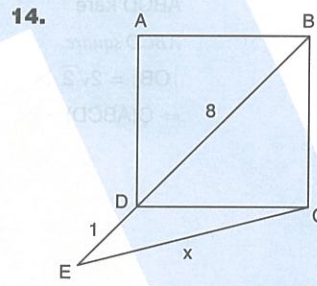
- A) 4 B) 6 C) $4\sqrt{2}$ D) $6\sqrt{2}$ E) 12

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ABCD kare
 ABCD square
 $[AE] \perp [EB]$
 $[EF] \perp [DC]$
 $|DF| = 1$ br
 $|FC| = 9$ br
 $\Rightarrow |EF| = x = ?$

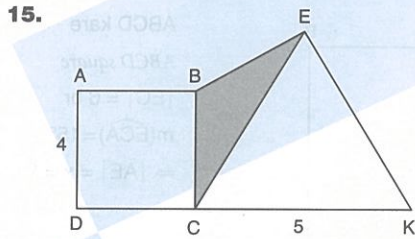
- A) 3 B) 4 C) 5 D) 6 E) 7



ABCD kare
 ABCD square
 $|BD| = 8$ br
 $|DE| = 1$ br
 $\Rightarrow |EC| = x = ?$

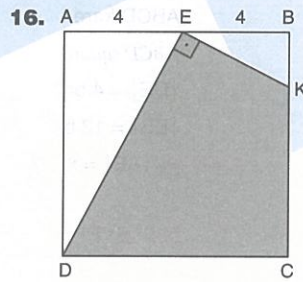
- A) 3 B) 5 C) $4\sqrt{2}$ D) $\sqrt{41}$ E) 7

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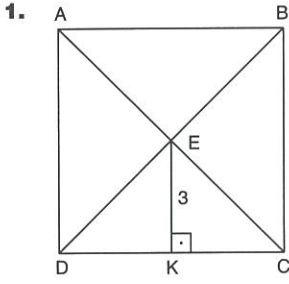
ABCD kare
 ABCD square
 ECK eşkenar üçgen
 ECK equilateral triangle
 $|AD| = 4$ br
 $|CK| = 5$ br
 $\Rightarrow A(BEC) = ?$

- A) $\frac{5}{2}$ B) 5 C) $5\sqrt{3}$ D) 10 E) $10\sqrt{3}$



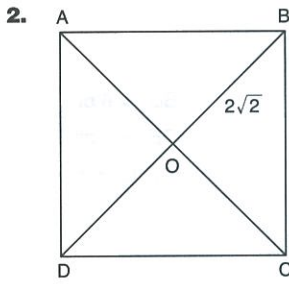
ABCD kare
 ABCD square
 $|AE| = |EB| = 4$ br
 $\Rightarrow A(EKCD) = ?$

- A) 16 B) 24 C) 32 D) 44 E) 48



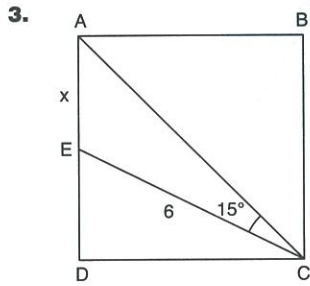
ABCD kare
 ABCD square
 $[EK] \perp [DC]$
 $|EK| = 3$ br
 $\Rightarrow A(ABCD) = ?$

- A) 9 B) 16 C) 25 D) 36 E) 64



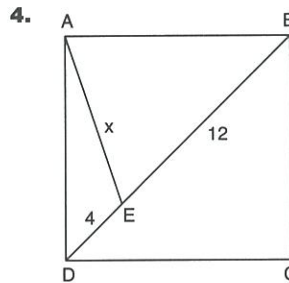
ABCD kare
 ABCD square
 $|OB| = 2\sqrt{2}$ br
 $\Rightarrow \angle(ABCD) = ?$

- A) 8 B) $8\sqrt{2}$ C) 16 D) $16\sqrt{2}$ E) 32



ABCD kare
 ABCD square
 $|EC| = 6$ br
 $m(\widehat{ECA}) = 15^\circ$
 $\Rightarrow |AE| = x = ?$

- A) $3\sqrt{3}$ B) $6\sqrt{3}$ C) $3\sqrt{3} - 3$
 D) $3\sqrt{3} + 3$ E) $6\sqrt{3} + 3$



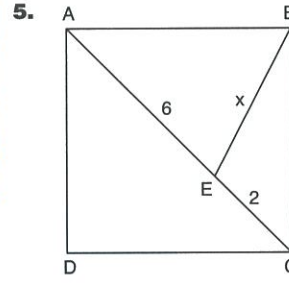
ABCD kare
 ABCD square
 $|DE| = 4$ br
 $|EB| = 12$ br
 $\Rightarrow |AE| = x = ?$

- A) 4 B) $2\sqrt{5}$ C) 5 D) $4\sqrt{5}$ E) 8

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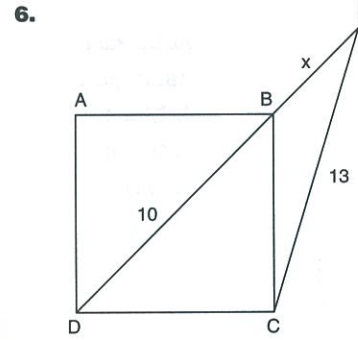
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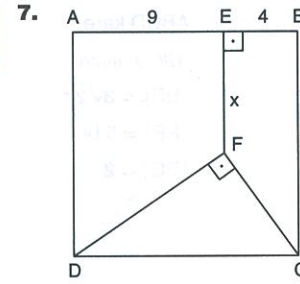
ABCD kare
 ABCD square
 $|AE| = 6$ br
 $|EC| = 2$ br
 $\Rightarrow |BE| = x = ?$

- A) 2 B) $2\sqrt{5}$ C) $4\sqrt{2}$ D) $4\sqrt{3}$ E) $4\sqrt{5}$



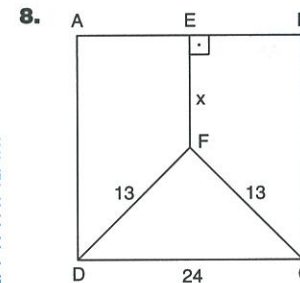
ABCD kare
 ABCD square
 $|BD| = 10$ br
 $|EC| = 13$ br
 $\Rightarrow |BE| = x = ?$

- A) 5 B) 7 C) 9 D) 12 E) 13



ABCD kare
 ABCD square
 $|EB| = 4$ br
 $|AE| = 9$ br
 $[EF] \perp [AB]$
 $[DF] \perp [FC]$
 $\Rightarrow |EF| = x = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9

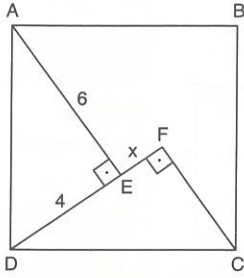


ABCD kare
 ABCD square
 $[FE] \perp [AB]$
 $|DF| = |FC| = 13$ br
 $|DC| = 24$ br
 $\Rightarrow |EF| = x = ?$

- A) 19 B) 17 C) 16 D) 15 E) 12



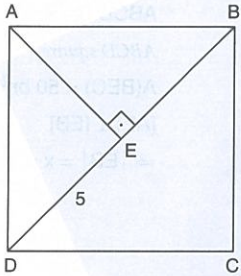
9.



ABCD kare
ABCD square
[AE] $\perp$ [DF]
[DF] $\perp$ [FC]
|AE| = 6 br
|DE| = 4 br
 $\Rightarrow$ |EF| = x = ?

- A) 1 B) 2 C) 3 D) 4 E) 5

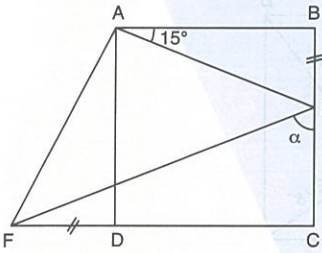
10.



ABCD kare
ABCD square
[AE] $\perp$ [BD]
|DE| = 5 br
 $\Rightarrow$ A(ABCD) = ?

- A) 100 B) 75 C) 50 D) 25 E) 20

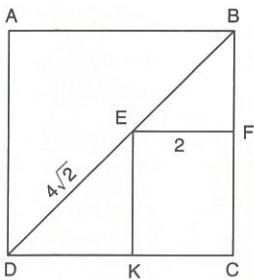
11.



ABCD kare
ABCD square
|BE| = |FD|
 $m(\widehat{BAE}) = 15^\circ$
 $\Rightarrow m(\widehat{FEC}) = \alpha = ?$

- A) 15 B) 30 C) 45 D) 60 E) 75

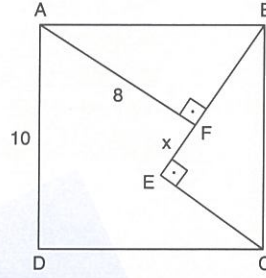
12.



ABCD kare
ABCD square
EFCK dikdörtgen
EFCK rectangle
|EF| = 2 br
|DE| = $4\sqrt{2}$ br
 $\Rightarrow$ A(ABCD) = ?

- A) 25 B) 36 C) 49 D) 64 E) 81

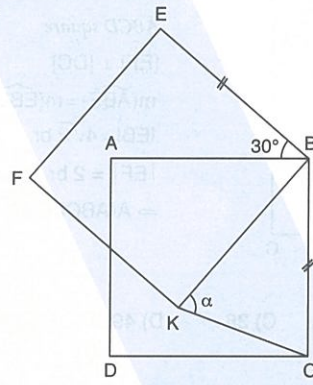
13.



ABCD kare
ABCD square
[AF] $\perp$ [EB]
[CE] $\perp$ [EB]
|AF| = 8 br
|AD| = 10 br
 $\Rightarrow$ |EF| = x = ?

- A) 1 B) 2 C) 3 D) 4 E) 5

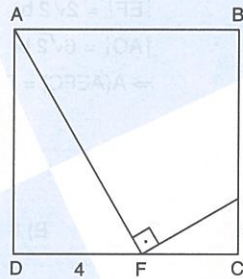
14.



ABCD, EBKF kare
ABCD, EBKF square
|EB| = |BC|
 $m(\widehat{EBA}) = 30^\circ$
 $\Rightarrow m(\widehat{BKC}) = \alpha = ?$

- A) 75 B) 60 C) 50 D) 45 E) 30

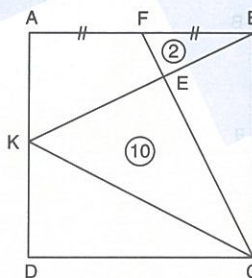
15.



ABCD kare
ABCD square
[AF] $\perp$ [FE]
|EC| = 2 br
|DF| = 4 br
 $\Rightarrow$ A(ABCD) = ?

- A) 16 B) 25 C) 36 D) 49 E) 64

16.

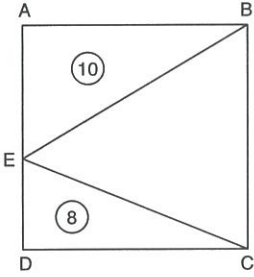


ABCD kare
ABCD square
|BF| = |FA|
A(EFB) = 2 br^2
A(EKC) = 10 br^2
 $\Rightarrow$ A(ABCD) = ?

- A) 64 B) 54 C) 48 D) 36 E) 32



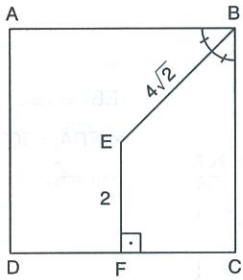
1.



- A) 16 B) 20 C) 24 D) 28 E) 32

ABCD kare
 ABCD square
 $A(\triangle ABE) = 10 \text{ br}^2$
 $A(\triangle EDC) = 8 \text{ br}^2$
 $\Rightarrow \hat{C}(\text{ABCD}) = ?$

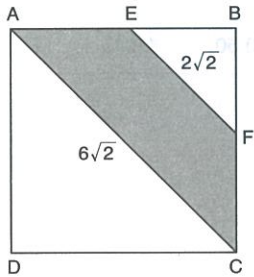
2.



- A) 16 B) 25 C) 36 D) 49 E) 64

ABCD kare
 ABCD square
 $[EF] \perp [DC]$
 $m(\widehat{ABE}) = m(\widehat{EBC})$
 $|EB| = 4\sqrt{2} \text{ br}$
 $|EF| = 2 \text{ br}$
 $\Rightarrow A(\text{ABCD}) = ?$

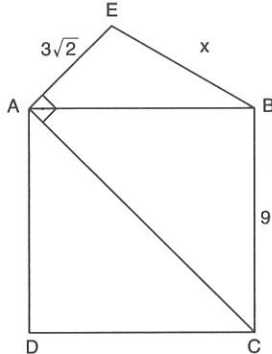
3.



- A) 24 B) 16 C) 14 D) 12 E) 8

ABCD kare
 ABCD square
 $[EF] \parallel [AC]$
 $|EF| = 2\sqrt{2} \text{ br}$
 $|AC| = 6\sqrt{2} \text{ br}$
 $\Rightarrow A(\triangle AEF) = ?$

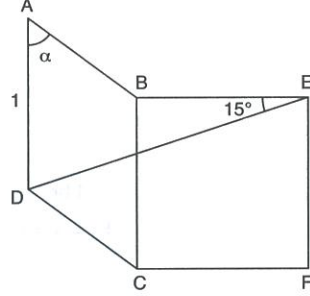
4.



- A) 3 B) $3\sqrt{2}$ C) $3\sqrt{5}$ D) $5\sqrt{2}$ E) $6\sqrt{5}$

ABCD kare
 ABCD square
 $[EA] \perp [AC]$
 $|EA| = 3\sqrt{2} \text{ br}$
 $|BC| = 9 \text{ br}$
 $\Rightarrow |EB| = x = ?$

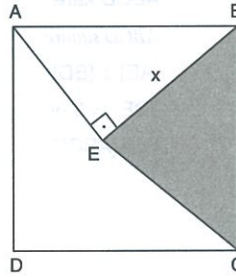
5.



- A) 15 B) 30 C) 45 D) 60 E) 75

BEFC kare
 BEFC square
 ABCD eşkenar
 dörtgen
 ABCD rhombus
 $|AD| = 1 \text{ br}$
 $|DE| = \sqrt{2} \text{ br}$
 $m(\widehat{BED}) = 15^\circ$
 $\Rightarrow m(\widehat{DAB}) = \alpha = ?$

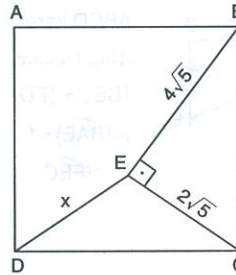
6.



- A) 10 B) 8 C) 6 D) 4 E) 3

ABCD kare
 ABCD square
 $A(\triangle BEC) = 50 \text{ br}^2$
 $[AE] \perp [EB]$
 $\Rightarrow |EB| = x = ?$

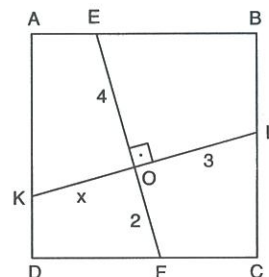
7.



- A) $2\sqrt{10}$ B) 6 C) $\sqrt{35}$ D) $2\sqrt{5}$ E) 4

ABCD kare
 ABCD square
 $[BE] \perp [EC]$
 $|BE| = 4\sqrt{5} \text{ br}$
 $|EC| = 2\sqrt{5} \text{ br}$
 $\Rightarrow |ED| = x = ?$

8.

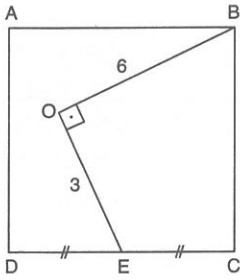


- A) 1 B) 2 C) 3 D) 4 E) 5

ABCD kare
 ABCD square
 $[EF] \perp [KL]$
 $|EO| = 4 \text{ br}$
 $|OF| = 2 \text{ br}$
 $|OL| = 3 \text{ br}$
 $\Rightarrow |KO| = x = ?$



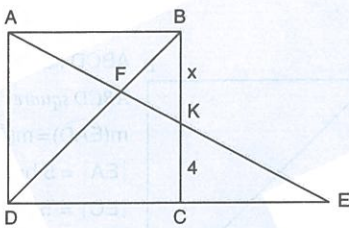
9.



ABCD kare
ABCD square
[BO] $\perp$ [OE]
|BO| = 6 br
|OE| = 3 br
|DE| = |EC|
 $\Rightarrow A(ABCD) = ?$

- A) 100 B) 81 C) 64 D) 49 E) 36

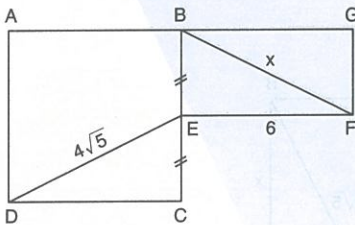
10.



ABCD kare
ABCD square
|BD| = |CE|
|KC| = 4 br
 $\Rightarrow |BK| = x = ?$

- A) $\sqrt{2}$ B) 2 C) $2\sqrt{2}$ D) 4 E) $4\sqrt{2}$

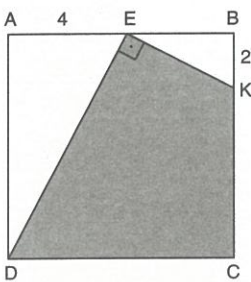
11. A



ABCD kare
ABCD square
BGFE dikdörtgen
BGFE rectangle
|DE| = $4\sqrt{5}$ br
|EF| = 6 br
|BE| = |EC|
 $\Rightarrow |BF| = x = ?$

- A) $2\sqrt{13}$ B) 7 C) $4\sqrt{3}$ D) 4 E) 5

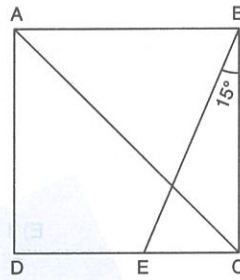
12.



ABCD kare
ABCD square
[DE] $\perp$ [EK]
|BK| = 2 br
|AE| = 4 br
 $\Rightarrow A(DEKC) = ?$

- A) 64 B) 48 C) 44 D) 32 E) 24

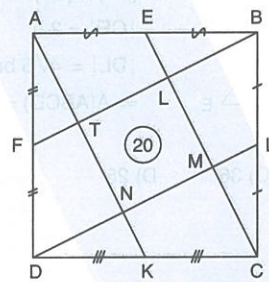
13.



ABCD kare
ABCD square
 $m(\widehat{EBC}) = 15^\circ$
|BE| = 8 br
 $\Rightarrow |AC| = ?$

- A) 4 B) $4\sqrt{2}$ C) $4\sqrt{3}$
D) 8 E) $4 + 4\sqrt{3}$

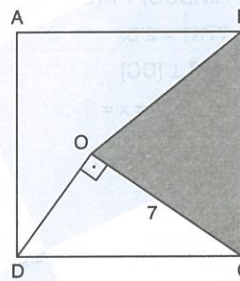
14.



ABCD kare
ABCD is square
E, F, K, L bulundukları kenarların orta noktaları
E, F, K, L are the midpoints of sides
 $A(LMNT) = 20 \text{ br}^2$
 $\Rightarrow A(ABCD) = ?$

- A) 100 B) 80 C) 75 D) 70 E) 60

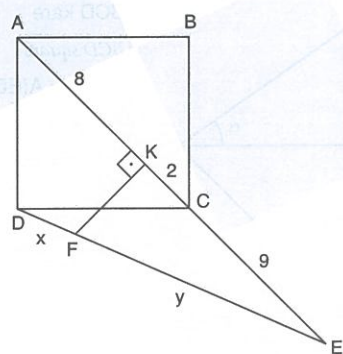
15.



ABCD kare
ABCD square
[DO] $\perp$ [OC]
|OC| = 7 br
 $\Rightarrow A(BOC) = ?$

- A) 7 B) 14 C) $\frac{49}{2}$ D) 49 E) 98

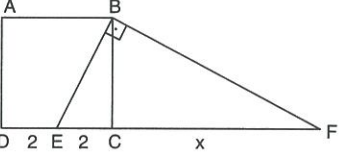
16.

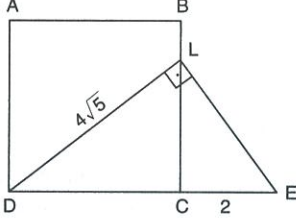


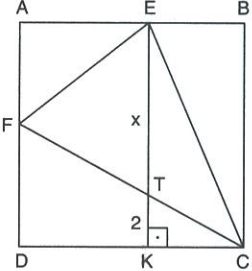
ABCD kare
ABCD square
[FK] $\perp$ [AE]
|AK| = 8 br
|KC| = 2 br
|CE| = 9 br
|DF| = x
|FE| = y
 $\Rightarrow \frac{x}{y} = ?$

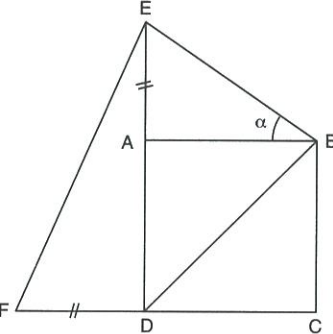
- A) $\frac{8}{11}$ B) $\frac{5}{11}$ C) $\frac{3}{11}$ D) $\frac{2}{9}$ E) $\frac{1}{9}$

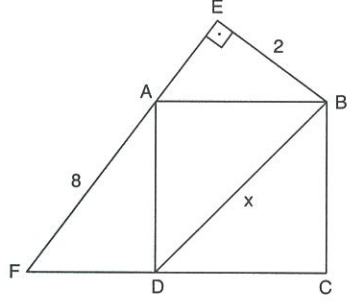


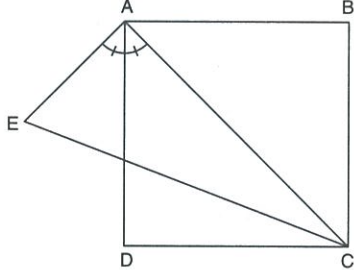
1. 
- ABCD kare
ABCD square
[EB] $\perp$ [BF]
|DE| = |EC| = 2 br
 $\Rightarrow$ |CF| = x = ?
- A) 8 B) 6 C) 4 D) 2 E) 1

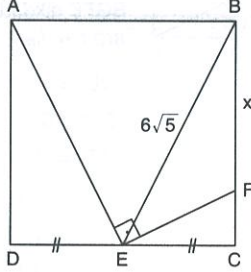
2. 
- ABCD kare
ABCD square
[DL] $\perp$ [LE]
|CE| = 2 br
|DL| = $4\sqrt{5}$ br
 $\Rightarrow$ A(ABCD) = ?
- A) 64 B) 49 C) 36 D) 25 E) 16

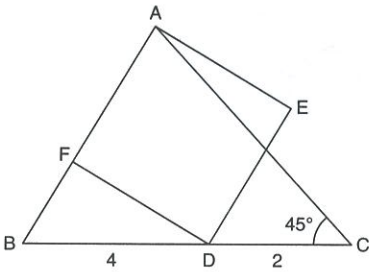
3. 
- ABCD kare
ABCD square
A(ABCD) + A(EFC) = 88 br²
|TK| = 2 br
[EK] $\perp$ [DC]
 $\Rightarrow$ |ET| = x = ?
- A) 4 B) 5 C) 6 D) 7 E) 8

4. 
- ABCD kare
ABCD square
A(EDF) = A(EDB)
|EA| = |FD|
 $\Rightarrow$ m($\widehat{EBA}$) = α = ?
- A) 75 B) 60 C) 45 D) 30 E) 15

5. 
- ABCD kare
ABCD square
[EB] $\perp$ [FE]
|EB| = 2 br
|AF| = 8 br
 $\Rightarrow$ |BD| = x = ?
- A) 2 B) $2\sqrt{4}$ C) 4 D) $4\sqrt{2}$ E) 8

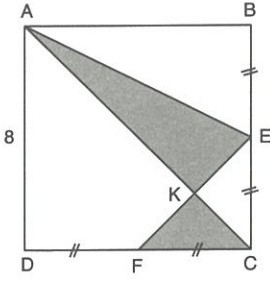
6. 
- ABCD kare
ABCD square
m($\widehat{EAD}$) = m($\widehat{DAC}$)
|EA| = 5 br
|EC| = $5\sqrt{3}$ br
 $\Rightarrow$ Ç(ABCD) = ?
- A) 12 B) 16 C) 20 D) 24 E) 28

7. 
- ABCD kare
ABCD square
[AE] $\perp$ [EF]
|DE| = |EC|
|BE| = $6\sqrt{5}$ br
 $\Rightarrow$ |BF| = x = ?
- A) 4 B) 5 C) $6\sqrt{2}$ D) $6\sqrt{5}$ E) 9

8. 
- AEDF kare
ABCD square
|BD| = 4 br
|DC| = 2 br
m($\widehat{ACB}$) = 45°
 $\Rightarrow$ |AB| = ?
- A) 2 B) $\frac{2\sqrt{6}}{3}$ C) $\sqrt{5}$ D) $\sqrt{6}$ E) $2\sqrt{6}$



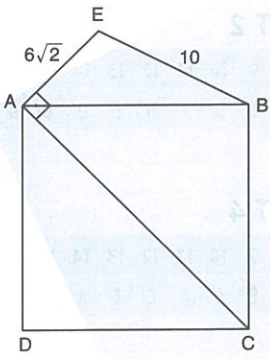
9.



ABCD kare
ABCD square
 $|AD| = 8$ br
 $|BE| = |EC|$
 $|DF| = |FC|$
 $\Rightarrow$ Taralı Alan = ?
Shaded area = ?

- A) 8 B) 12 C) 16 D) 20 E) 24

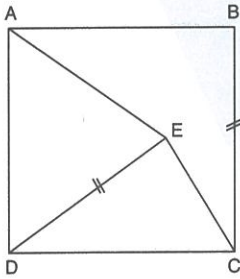
10.



ABCD kare
ABCD square
 $[EA] \perp [AC]$
 $|AE| = 6\sqrt{2}$ br
 $|EB| = 10$ br
 $\Rightarrow \angle(ABCD) = ?$

- A) 32 B) 40 C) 48 D) 56 E) 60

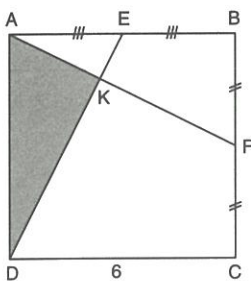
11.



ABCD kare
ABCD square
 $|DE| = |EC|$
 $\Rightarrow m(\widehat{AEC}) = ?$

- A) 135 B) 125 C) 120 D) 115 E) 110

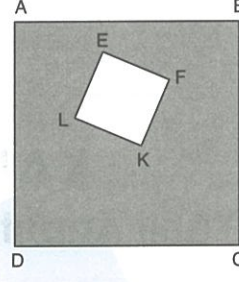
12.



ABCD kare
ABCD square
 $|AE| = |EB|$
 $|BF| = |FC|$
 $|DC| = 6$ br
 $\Rightarrow A(KD) = ?$

- A) $\frac{15}{2}$ B) $\frac{36}{5}$ C) 9 D) 12 E) $\frac{40}{3}$

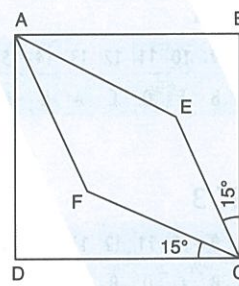
13.



ABCD ve EFKL kare
ABCD and EFKL square
Karelerin çevreleri toplamı 24 br
The sum of the circumferences of the squares is 24 units
Taralı alan 12 br^2
Shaded area = 12 br^2
 $\Rightarrow \angle(ABCD) = ?$

- A) 16 B) 20 C) 24 D) 28 E) 32

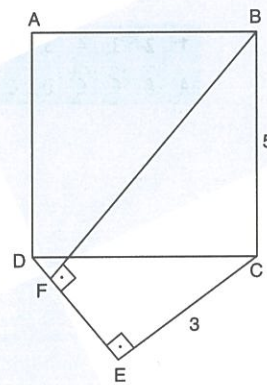
14.



ABCD kare
ABCD square
AECF eşkenar dörtgen
AECF rhombus
 $\angle(AECF) = 24$ br
 $m(\widehat{ECB}) = m(\widehat{DCF}) = 15^\circ$
 $\Rightarrow \angle(ABCD) = ?$

- A) $12\sqrt{3}$ B) $14\sqrt{3}$ C) $16\sqrt{3}$ D) $12\sqrt{6}$ E) $12\sqrt{2}$

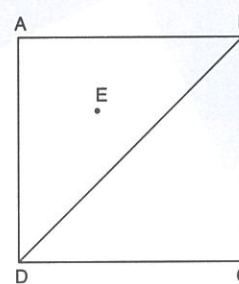
15.



ABCD kare
ABCD square
 $|BC| = 5$ br
 $|EC| = 3$ br
 $[BF] \perp [DE]$
 $[EC] \perp [DE]$
 $\Rightarrow |BF| = ?$

- A) 8 B) 7 C) 6 D) 4 E) 2

16.



ABCD kare
ABCD square
 $A(ABCD) = 32 \text{ br}^2$
E, ABD üçgeninin içinde bir nokta
E is a point inside the ABD triangle
 $\Rightarrow [CE]$ nin alabileceği en küçük tamsayı değeri kaçtır?

$\Rightarrow$ What is the minimum integer value that $[CE]$ can be?

- A) 3 B) 4 C) 5 D) 6 E) 7



KARE SQUARE

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	C	B	D	C	D	D	B	E	D	C	A	B	B	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	E	C	A	B	D	D	C	D	A	D	E	D	B	D

TEST 3

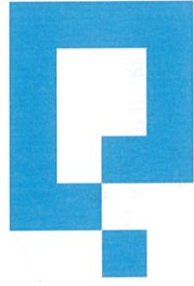
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	C	D	B	B	C	A	B	C	D	B	B	A	E	E

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	B	C	B	A	A	C	E	C	A	C	E	A	C	C

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	A	C	C	D	C	E	E	C	D	A	B	A	D	B	C



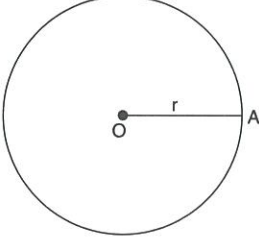
ÇEMBERDE AÇI

ANGLE IN CIRCLE



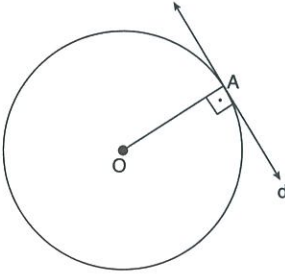
TANIMLAR | Definitions

1.



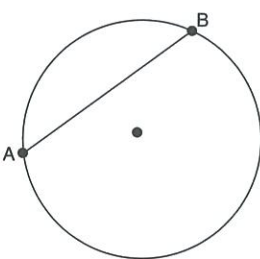
O, çemberin merkezi
O, is the center of the circle
r, çemberin yarıçapıdır.
r is the radius of the circle

2.



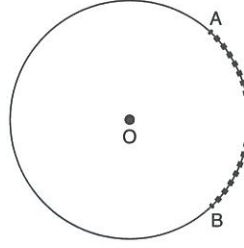
TEĞET (Tangent):
Çemberin yalnız bir noktada kesen doğruya denir.
The tangent line touches a circle at exactly one point and is perpendicular to the radius of the circle at the point of contact.

3.



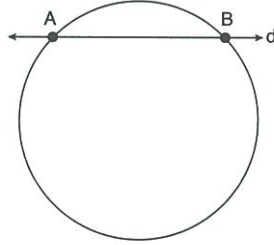
KİRİŞ (Chord):
Çemberin farklı iki noktasını birleştiren doğru parçasına denir.
A line segment that connects two points on a circle.

4.



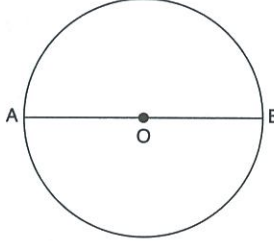
YAY (Arc):
A ve B noktaları arasında kalan kısma denir.
An arc is the part of circle's between the points A and B.

5.



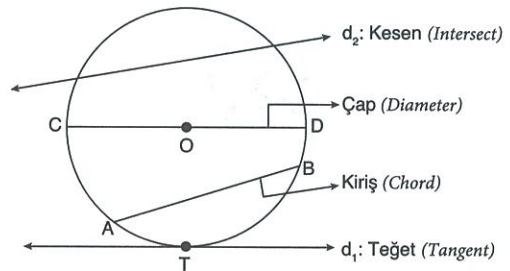
KESEN (Intersect):
Çemberi farklı iki noktadan kesen doğrulara denir.
A line intersects on two distinct points of the circle.

6.



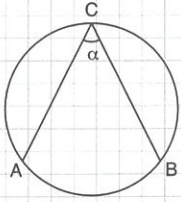
ÇAP (Diameter):
O merkezinden geçen [AB] kirişine çemberin çapı denir.
A chord that passes through the center of a circle.

7.



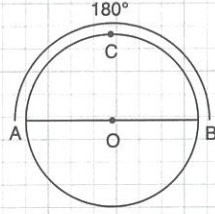


ÖZELLİK|Property 1



$$m(\widehat{ACB}) = \alpha$$

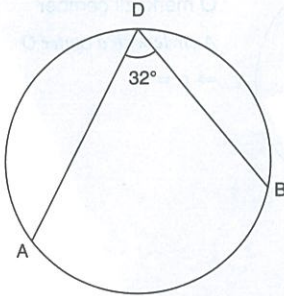
$$m(\widehat{AB}) = 2\alpha$$



O merkez
O center

$$m(\widehat{ACB}) = 180^\circ$$

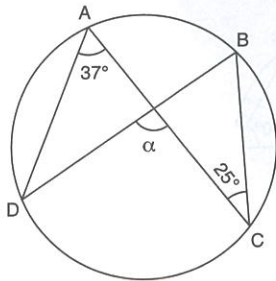
1.



$$\Rightarrow m(\widehat{AB}) = ?$$

64

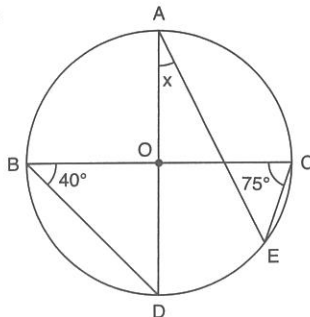
2.



$$\Rightarrow \alpha = ?$$

62

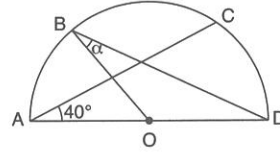
3.



O merkezli çember
A Circle with a center O
 $\Rightarrow x = ?$

25

4.



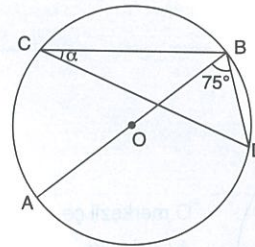
[AD] çap (diameter)

$$m(\widehat{BC}) = 20^\circ$$

$$\Rightarrow \alpha = ?$$

40

5.

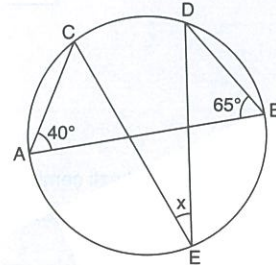


[AB] çap (diameter)

$$\Rightarrow \alpha = ?$$

15

6.

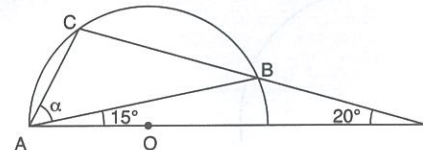


[AB] çap (diameter)

$$\Rightarrow x = ?$$

15

7.



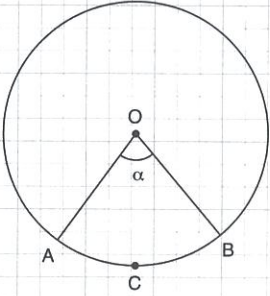
O merkezli yarıym çember (A semi circle with a center O)

$$\Rightarrow \alpha = ?$$

40



ÖZELLİK|Property 2

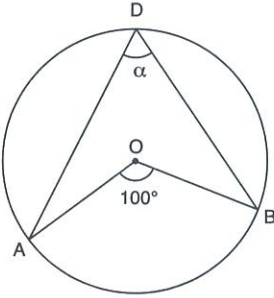


O merkezli çember
A Circle with a center O

$$m(\widehat{AOB}) = \alpha$$

$$m(\widehat{ACB}) = \alpha$$

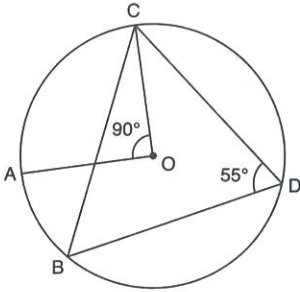
1.



O merkezli çember
A Circle with a center O
 $\Rightarrow \alpha = ?$

50

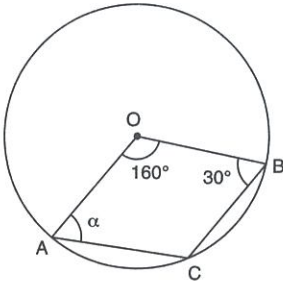
2.



O merkezli çember
A Circle with a center O
 $\Rightarrow m(\widehat{AB}) = ?$

20

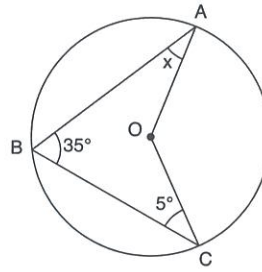
3.



O merkezli çember
A Circle with a center O
 $\Rightarrow \alpha = ?$

70

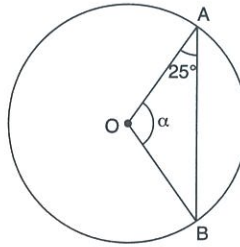
4.



O merkezli çember
A circle with a center O
 $\Rightarrow x = ?$

30

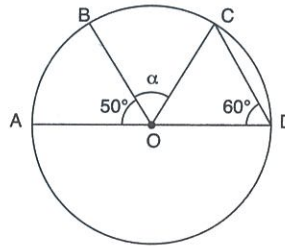
5.



O merkezli çember
A circle with a center O
 $\Rightarrow \alpha = ?$

130

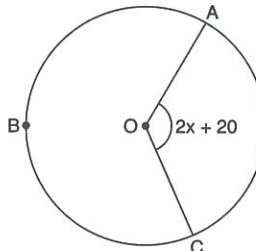
6.



[AD] çap (diameter)
 $\Rightarrow \alpha = ?$

70

7.

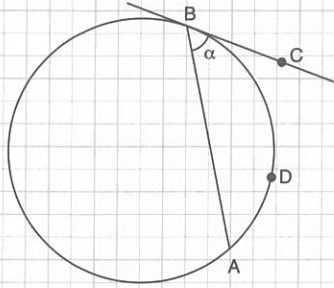


O merkezli çember
A circle with a center O
 $m(\widehat{ABC}) = 240^\circ$
 $\Rightarrow x = ?$

50



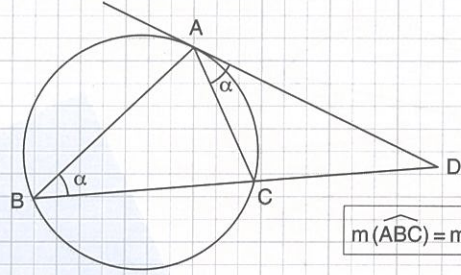
ÖZELLİK|Property 3



$$m(\widehat{ABC}) = \alpha$$

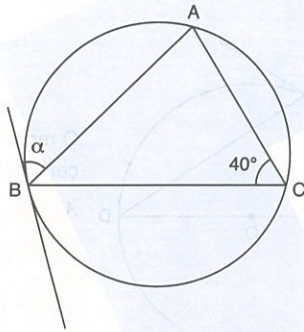
$$m(\widehat{ADB}) = 2\alpha$$

ÖZELLİK|Property 4



$$m(\widehat{ABC}) = m(\widehat{CAD})$$

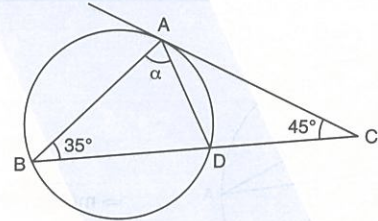
1.



$$\Rightarrow \alpha = ?$$

40

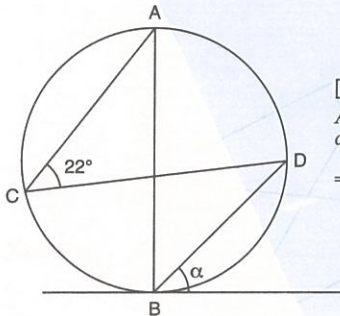
1.



$$\Rightarrow \alpha = ?$$

65

2.

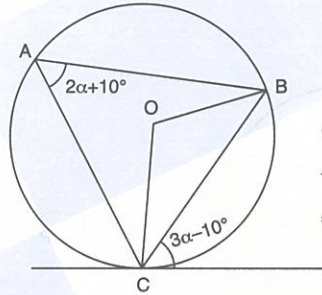


[AB] çaplı çember
A Circle with a diameter
of [AB]

$$\Rightarrow \alpha = ?$$

68

2.

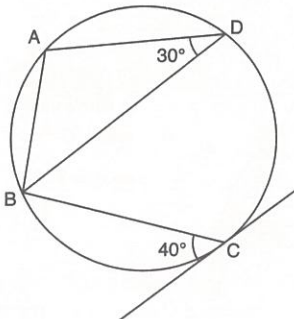


O merkezli çember
A Circle with a center O

$$\Rightarrow m(\widehat{COB}) = ?$$

100

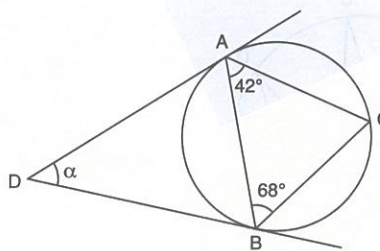
3.



$$\Rightarrow m(\widehat{ABC}) = ?$$

110

3.

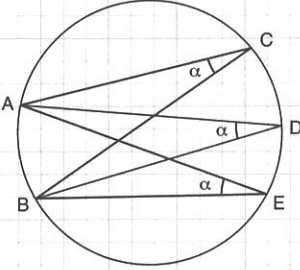


$$\Rightarrow \alpha = ?$$

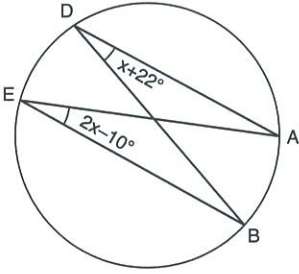
40



ÖZELLİK|Property 5



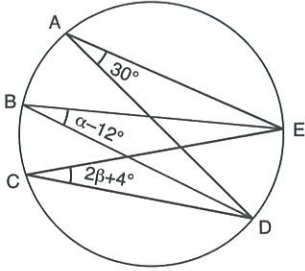
1.



$$\Rightarrow m(\widehat{AB}) = ?$$

108

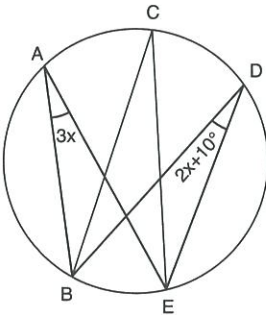
2.



$$\Rightarrow \alpha - \beta = ?$$

29

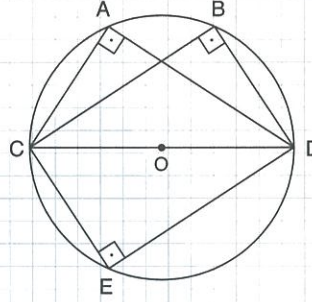
3.



$$\Rightarrow m(\widehat{BCE}) = ?$$

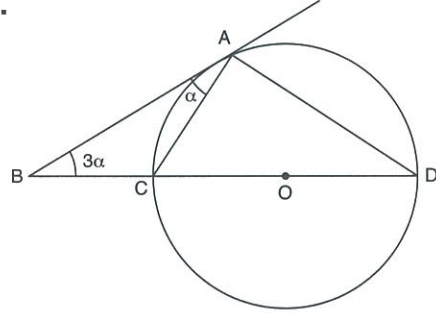
30

ÖZELLİK|Property 6



O merkezli çember
A Circle with a center O

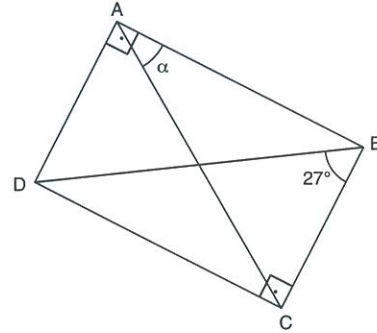
1.



O merkezli çember
A Circle with a center O
 $\Rightarrow \alpha = ?$

18

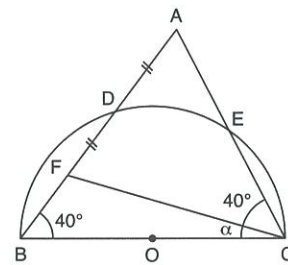
2.



$$\Rightarrow \alpha = ?$$

63

3.

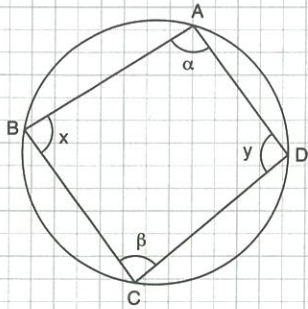


O merkezli çember
A Circle with a center O
 $\Rightarrow \alpha = ?$

30



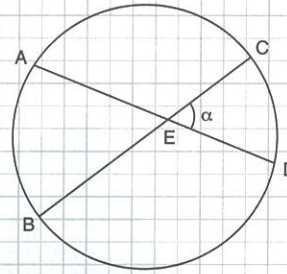
ÖZELLİK|Property 7



ABCD Kirişler Dörtgeni
ABCD Inscribed quadrilateral

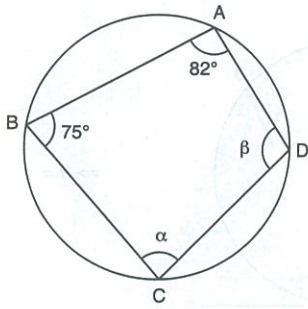
$$\begin{aligned}\alpha + \beta &= 180^\circ \\ x + y &= 180^\circ\end{aligned}$$

ÖZELLİK|Property 8



$$\alpha = \frac{m(\widehat{AB}) + m(\widehat{CD})}{2}$$

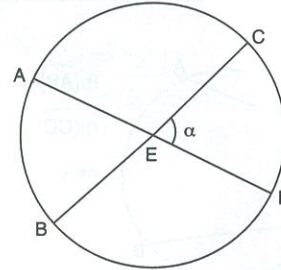
1.



$$\Rightarrow \beta - \alpha = ?$$

7

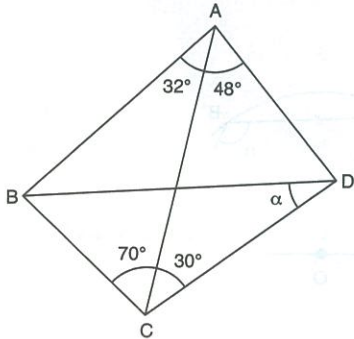
1.



$$\begin{aligned}m(\widehat{AB}) &= 100^\circ \\ m(\widehat{CD}) &= 70^\circ \\ \Rightarrow \alpha &= ?\end{aligned}$$

85

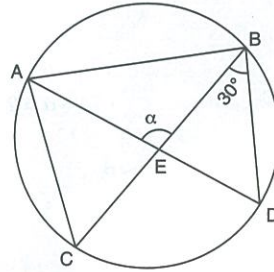
2.



$$\Rightarrow \alpha = ?$$

32

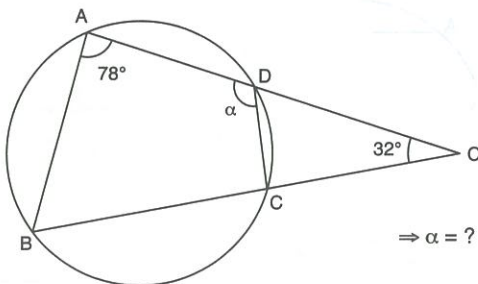
2.



$$\begin{aligned}\text{ABC eşkenar üçgen} \\ \text{ABC equilateral triangle} \\ \Rightarrow \alpha &= ?\end{aligned}$$

90

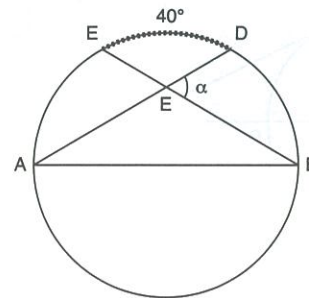
3.



$$\Rightarrow \alpha = ?$$

110

3.



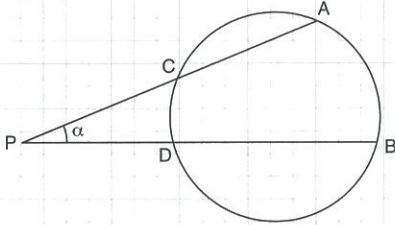
$$\begin{aligned}\text{[AB] çaplı çember} \\ \text{A Circle with a} \\ \text{diameter [AB]}\end{aligned}$$

$$\Rightarrow \alpha = ?$$

70

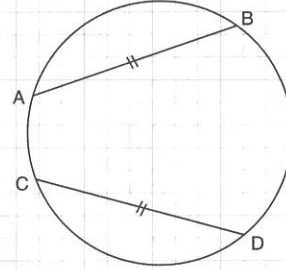


ÖZELLİK|Property 9



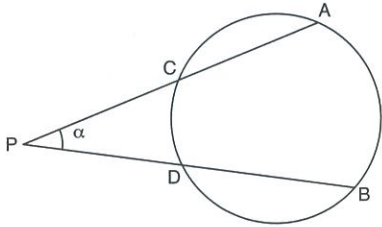
$$\alpha = \frac{m(\widehat{AB}) - m(\widehat{CD})}{2}$$

ÖZELLİK|Property 10



$$|AB| = |CD| \Rightarrow m(\widehat{AB}) = m(\widehat{CD})$$

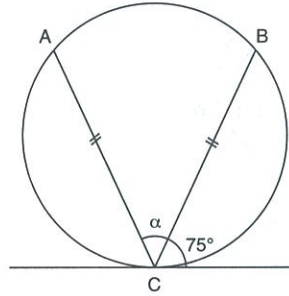
1.



$$\begin{aligned} m(\widehat{AB}) &= 75^\circ \\ m(\widehat{CD}) &= 25^\circ \\ \Rightarrow \alpha &= ? \end{aligned}$$

25

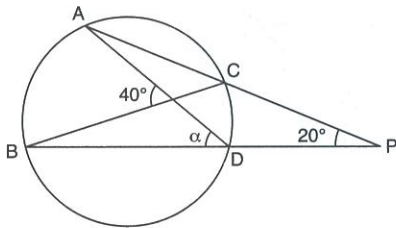
1.



$$\Rightarrow \alpha = ?$$

30

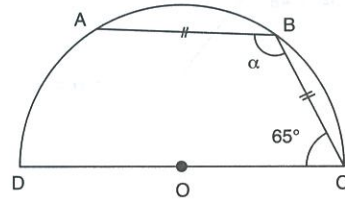
2.



$$\Rightarrow \alpha = ?$$

30

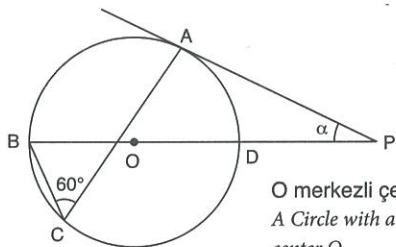
2.



O merkezli çember
A Circle with a
center O
 $\Rightarrow \alpha = ?$

130

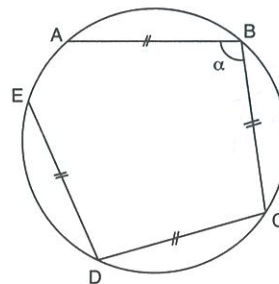
3.



O merkezli çember
A Circle with a
center O
 $\Rightarrow \alpha = ?$

30

3.

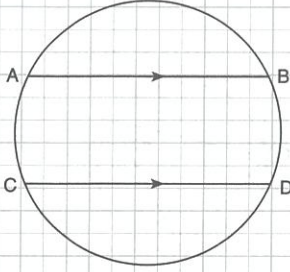


$$\begin{aligned} m(\widehat{AE}) &= 60^\circ \\ \Rightarrow \alpha &= ? \end{aligned}$$

105

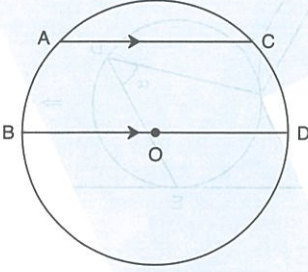


ÖZELLİK|Property 11



$$[AB] \parallel [CD] \Rightarrow m(\widehat{AC}) = m(\widehat{BD})$$

1.



O merkezli çember
A Circle with a center O

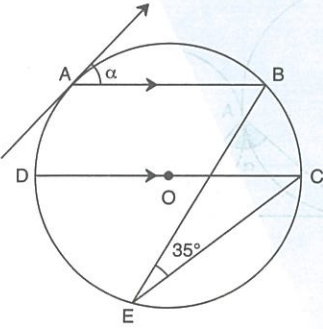
$$[AC] \parallel [BD]$$

$$m(\widehat{AB}) = 50^\circ$$

$$\Rightarrow m(\widehat{AC}) = ?$$

80

2.



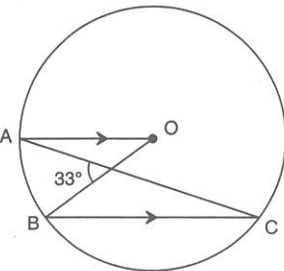
O merkezli çember
A Circle with a center O

$$[AB] \parallel [DC]$$

$$\Rightarrow \alpha = ?$$

20

3.



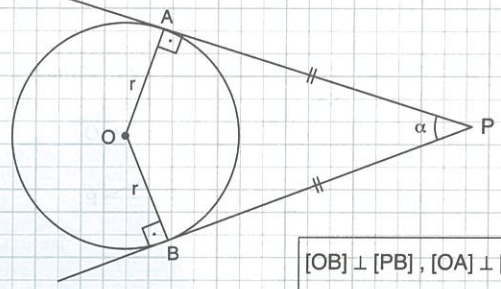
O merkezli çember
A Circle with a center O

$$[AO] \parallel [BC]$$

$$\Rightarrow m(\widehat{BC}) = ?$$

136

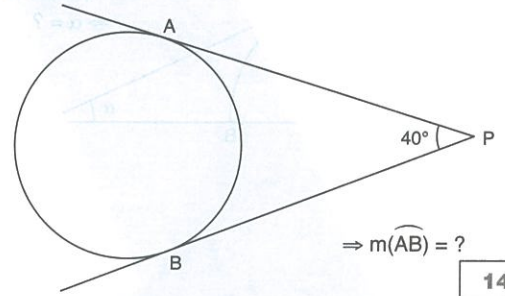
ÖZELLİK|Property 12



$$[OB] \perp [PB], [OA] \perp [PA]$$

$$\alpha + m(\widehat{AB}) = 180^\circ$$

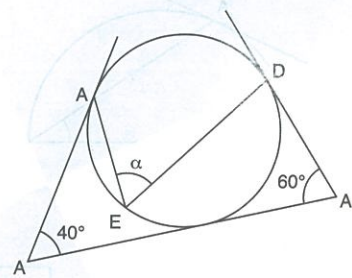
1.



$$\Rightarrow m(\widehat{AB}) = ?$$

140

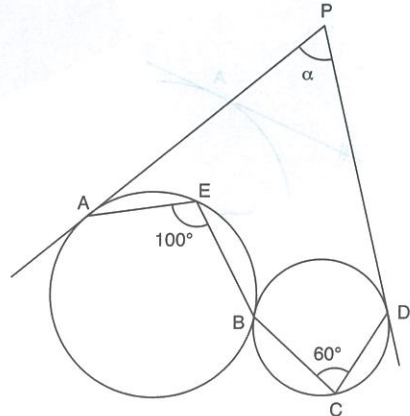
2.



$$\Rightarrow \alpha = ?$$

50

3.

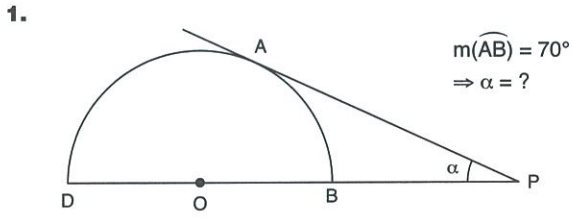
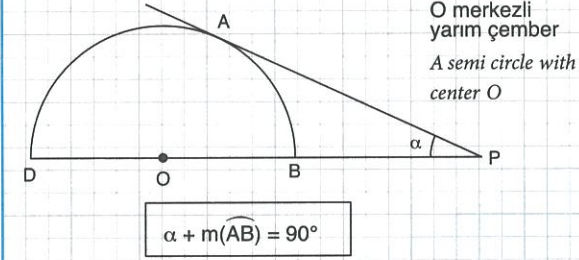


$$\Rightarrow \alpha = ?$$

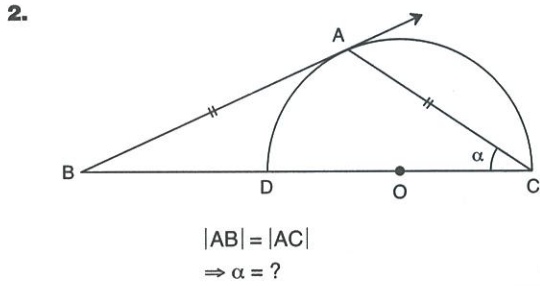
80



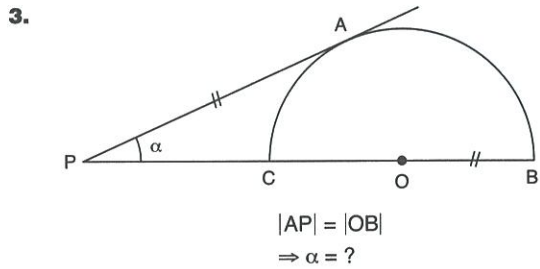
ÖZELLİK|Property 13



20

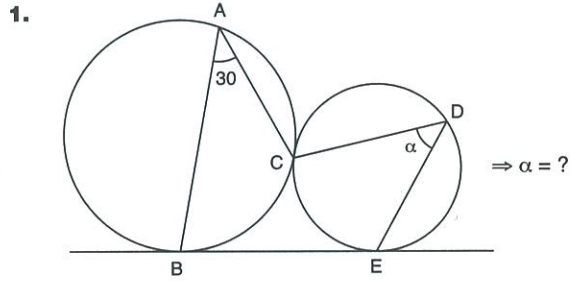
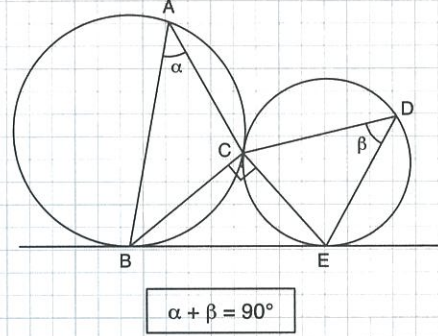


30

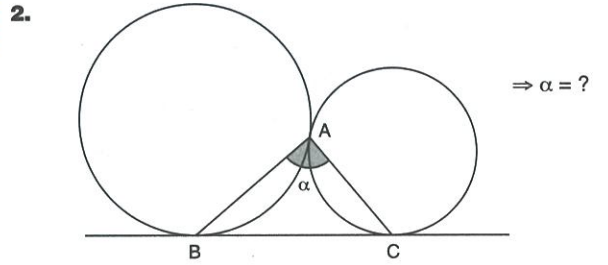


45

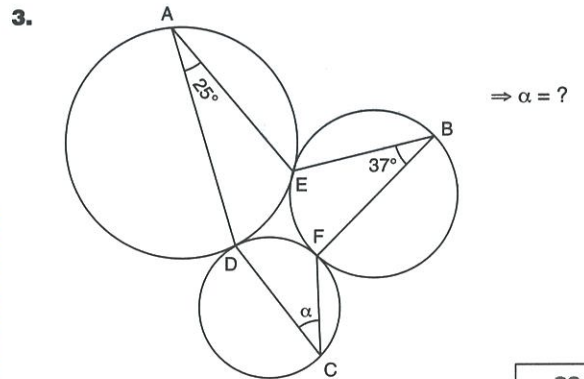
ÖZELLİK|Property 14



60



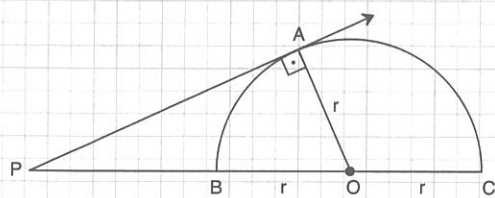
90



28



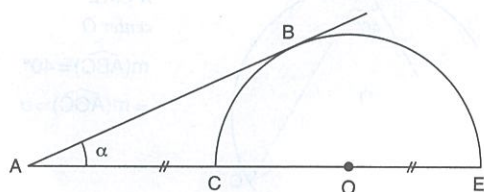
ÖZELLİK|Property 15



O merkezli yarım çember

A semi circle with a center O

1.



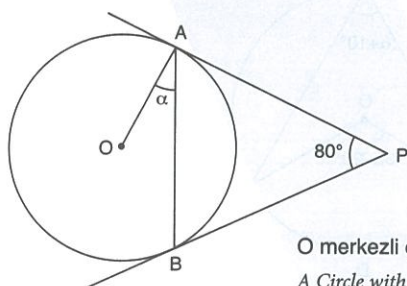
O merkezli yarım çember

A semi circle with a center O

$$\Rightarrow \alpha = ?$$

30

2.



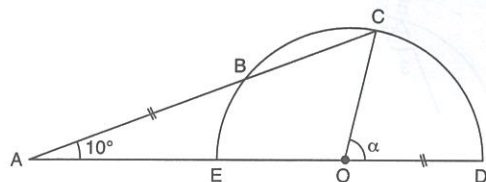
O merkezli çember

A Circle with a center O

$$\Rightarrow \alpha = ?$$

40

3.



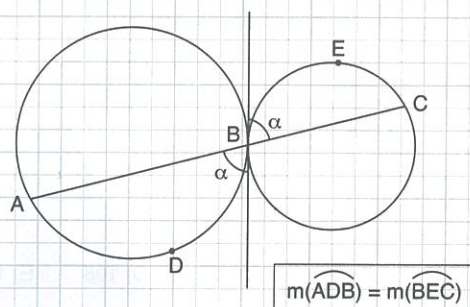
O merkezli yarım çember

A semi circle with a center O

$$\Rightarrow \alpha = ?$$

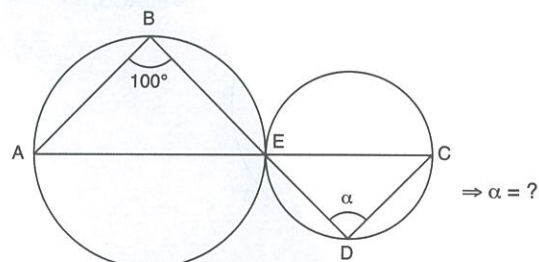
30

ÖZELLİK|Property 16



$$m(\widehat{ADB}) = m(\widehat{BEC})$$

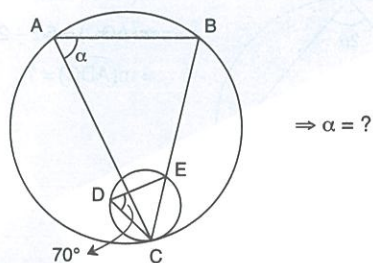
1.



$$\Rightarrow \alpha = ?$$

100

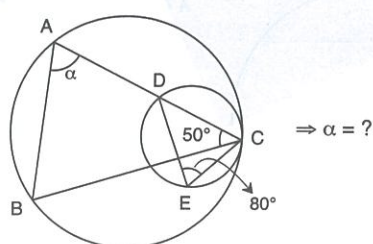
2.



$$\Rightarrow \alpha = ?$$

70

3.

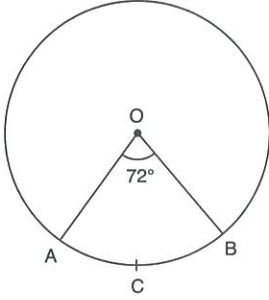


$$\Rightarrow \alpha = ?$$

50



1.



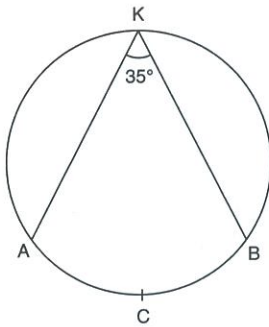
O merkezli çember

A Circle with a center O

$$m(\widehat{AOB}) = 72^\circ \\ \Rightarrow m(\widehat{ACB}) = ?$$

- A) 36 B) 48 C) 72 D) 108 E) 144

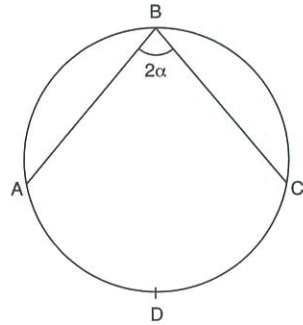
2.



$$m(\widehat{AKB}) = 35^\circ \\ \Rightarrow m(\widehat{ACB}) = ?$$

- A) $\frac{35}{2}$ B) 35 C) 70 D) 140 E) 280

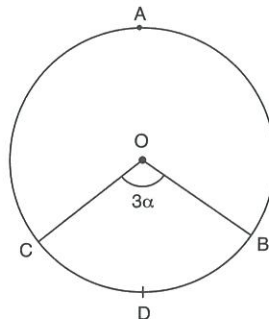
3.



$$m(\widehat{ABC}) = 2\alpha \\ m(\widehat{ADC}) = 5\alpha - 20^\circ \\ \Rightarrow m(\widehat{ADC}) = ?$$

- A) $\frac{40}{3}$ B) 20 C) $\frac{80}{3}$ D) 40 E) 80

4.



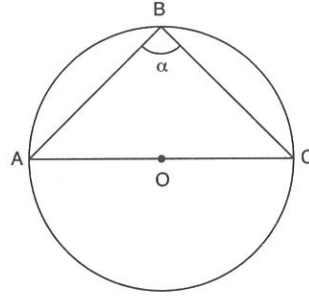
O merkezli çember

A Circle with a center O

$$m(\widehat{BOC}) = 3\alpha \\ m(\widehat{CDB}) = 2\alpha + 40^\circ \\ \Rightarrow m(\widehat{BAC}) = ?$$

- A) 80 B) 120 C) 240 D) 280 E) 320

5.



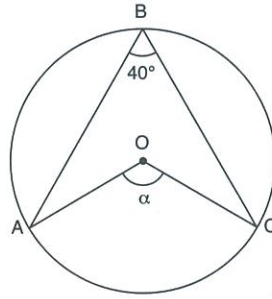
O merkezli çember

A Circle with a center O

$$\Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 30 B) 60 C) 75 D) 90 E) 120

6.



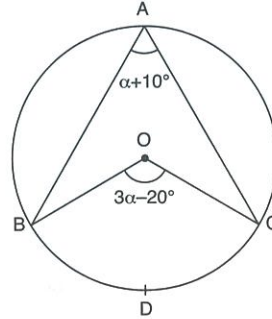
O merkezli çember

A Circle with a center O

$$m(\widehat{ABC}) = 40^\circ \\ \Rightarrow m(\widehat{AOC}) = \alpha = ?$$

- A) 20 B) 40 C) 60 D) 80 E) 160

7.



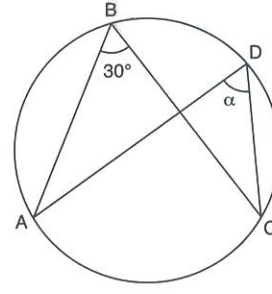
O merkezli çember

A Circle with a center O

$$m(\widehat{BAC}) = \alpha + 10^\circ \\ m(\widehat{BOC}) = 3\alpha - 20^\circ \\ \Rightarrow m(\widehat{BDC}) = ?$$

- A) 120 B) 100 C) 80 D) 50 E) 40

8.

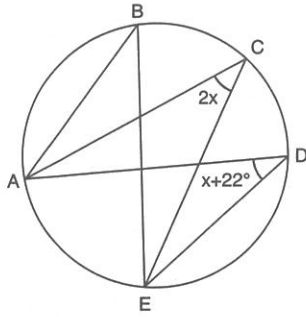


$$m(\widehat{ABC}) = 30^\circ \\ \Rightarrow m(\widehat{ADC}) = \alpha = ?$$

- A) 15 B) 30 C) 45 D) 60 E) 90



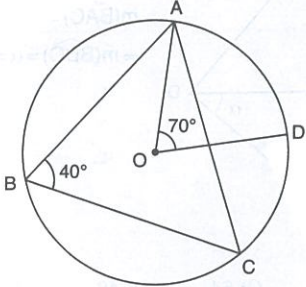
9.



$$\begin{aligned} m(\widehat{ACE}) &= 2x \\ m(\widehat{ADE}) &= x + 22^\circ \\ \Rightarrow m(\widehat{ABE}) &= ? \end{aligned}$$

- A) 44 B) 32 C) 24 D) 22 E) 11

10.

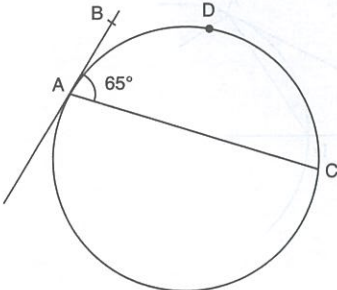


O merkezli çember
A Circle with a center O

$$\begin{aligned} m(\widehat{ABC}) &= 40^\circ \\ m(\widehat{AOD}) &= 70^\circ \\ \Rightarrow m(\widehat{DC}) &= ? \end{aligned}$$

- A) 10 B) 20 C) 30 D) 40 E) 50

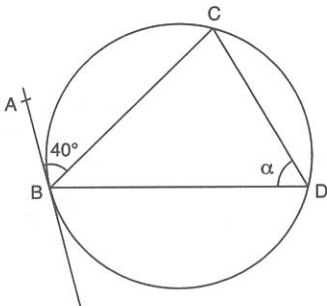
11.



$$\begin{aligned} m(\widehat{BAC}) &= 65^\circ \\ \Rightarrow m(\widehat{ADC}) &= ? \end{aligned}$$

- A) 22,5 B) 32,5 C) 65 D) 115 E) 130

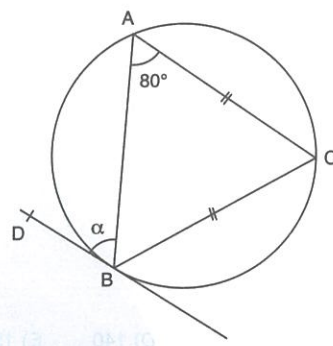
12.



$$\begin{aligned} m(\widehat{ABC}) &= 40^\circ \\ \Rightarrow m(\widehat{CDB}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 30 C) 40 D) 80 E) 140

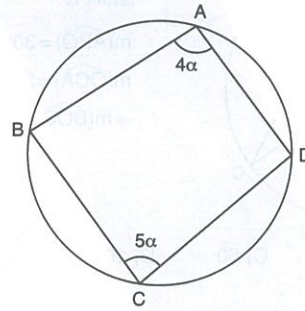
13.



$$\begin{aligned} |AC| &= |BC| \\ m(\widehat{BAC}) &= 80^\circ \\ \Rightarrow m(\widehat{ABD}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 30 C) 40 D) 60 E) 80

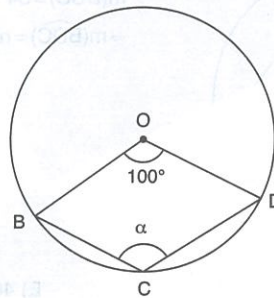
14.



$$\begin{aligned} m(\widehat{BAD}) &= 4\alpha \\ m(\widehat{BCD}) &= 5\alpha \\ \Rightarrow m(\widehat{BAD}) &= ? \end{aligned}$$

- A) 20 B) 80 C) 100 D) 160 E) 200

15.

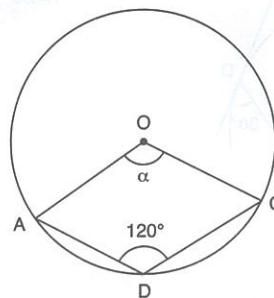


O merkezli çember
A Circle with a center O

$$\begin{aligned} m(\widehat{BOD}) &= 100^\circ \\ \Rightarrow m(\widehat{BCD}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 80 C) 100 D) 130 E) 150

16.



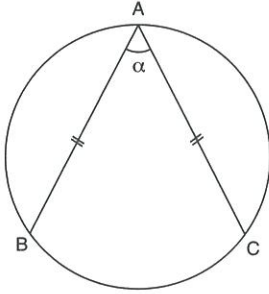
O merkezli çember
A Circle with a center O

$$\begin{aligned} m(\widehat{ADC}) &= 120^\circ \\ \Rightarrow m(\widehat{AOC}) &= \alpha = ? \end{aligned}$$

- A) 50 B) 65 C) 100 D) 120 E) 230



1.



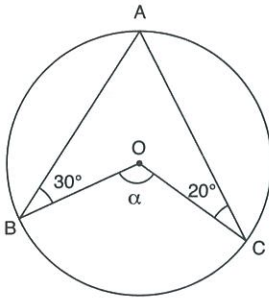
$$|AB| = |AC|$$

$$m(\widehat{AC}) = 130^\circ$$

$$\Rightarrow m(\widehat{BAC}) = \alpha = ?$$

- A) 50 B) 100 C) 120 D) 140 E) 150

2.



O merkezli çember
A Circle with a center O

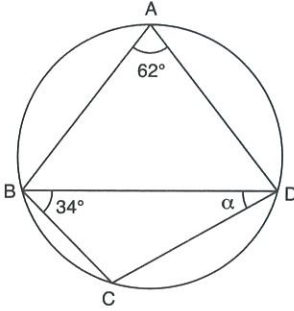
$$m(\widehat{ABO}) = 30^\circ$$

$$m(\widehat{OCA}) = 20^\circ$$

$$\Rightarrow m(\widehat{BOC}) = \alpha = ?$$

- A) 20 B) 30 C) 50 D) 100 E) 120

3.



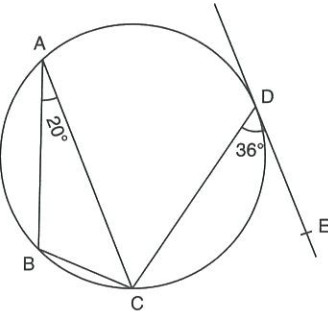
$$m(\widehat{BAD}) = 62^\circ$$

$$m(\widehat{DBC}) = 34^\circ$$

$$\Rightarrow m(\widehat{BDC}) = \alpha = ?$$

- A) 12 B) 24 C) 28 D) 34 E) 46

4.



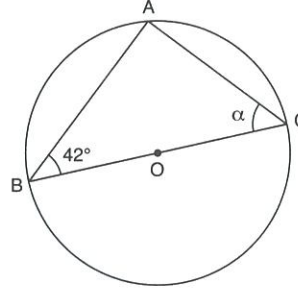
$$m(\widehat{BAC}) = 20^\circ$$

$$m(\widehat{CDE}) = 36^\circ$$

$$\Rightarrow m(\widehat{BCD}) = \alpha = ?$$

- A) 56 B) 78 C) 124 D) 126 E) 132

5.



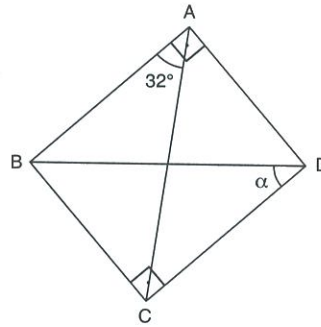
O merkezli çember
A Circle with a center O

$$m(\widehat{ABC}) = 42^\circ$$

$$\Rightarrow m(\widehat{ACB}) = \alpha = ?$$

- A) 21 B) 42 C) 48 D) 64 E) 84

6.



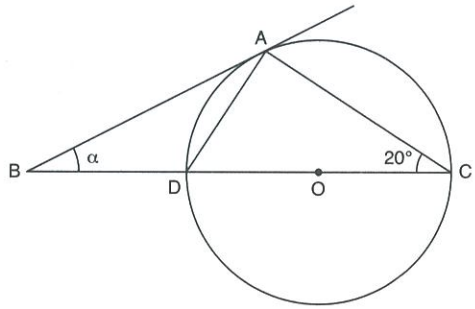
[AB] ⊥ [AD]
[BC] ⊥ [CD]

$$m(\widehat{BAC}) = 32^\circ$$

$$\Rightarrow m(\widehat{BDC}) = \alpha = ?$$

- A) 84 B) 76 C) 64 D) 48 E) 32

7.



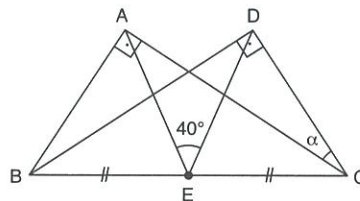
O merkezli çember
A Circle with a center O

$$m(\widehat{ACB}) = 20^\circ$$

$$\Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 20 B) 30 C) 40 D) 50 E) 70

8.



[BA] ⊥ [AC]
[BD] ⊥ [DC]
|BE| = |EC|

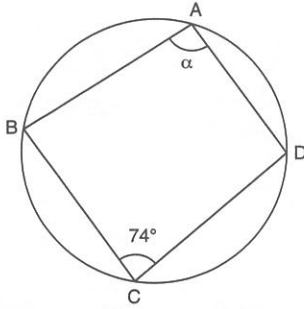
$$m(\widehat{AED}) = 40^\circ$$

$$\Rightarrow m(\widehat{ACD}) = \alpha = ?$$

- A) 10 B) 20 C) 40 D) 80 E) 140



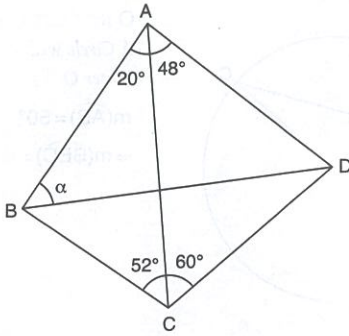
9.



$$m(\widehat{BCD}) = 74^\circ \\ \Rightarrow m(\widehat{BAD}) = \alpha = ?$$

- A) 37 B) 74 C) 90 D) 106 E) 143

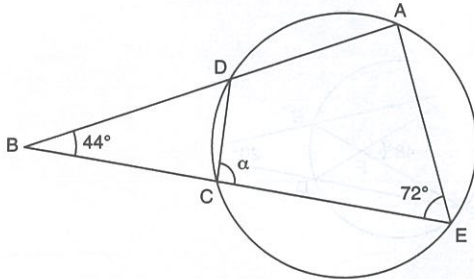
10.



$$m(\widehat{BAC}) = 20^\circ \\ m(\widehat{DAC}) = 48^\circ \\ m(\widehat{DCA}) = 60^\circ \\ m(\widehat{ACB}) = 52^\circ \\ \Rightarrow m(\widehat{ABD}) = \alpha = ?$$

- A) 10 B) 15 C) 26 D) 30 E) 60

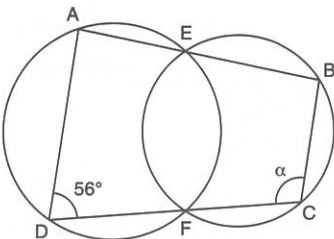
11.



$$m(\widehat{AEB}) = 72^\circ \quad m(\widehat{ABE}) = 44^\circ \quad \Rightarrow m(\widehat{DCE}) = \alpha = ?$$

- A) 116 B) 98 C) 64 D) 58 E) 48

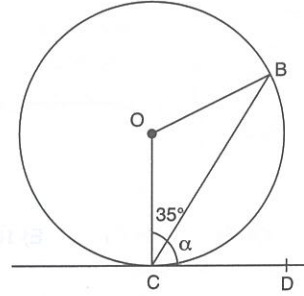
12.



$$m(\widehat{ADC}) = 56^\circ \\ \Rightarrow m(\widehat{BCD}) = \alpha = ?$$

- A) 28 B) 34 C) 56 D) 112 E) 124

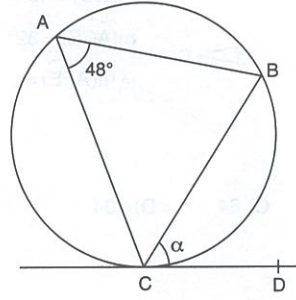
13.



O merkezli çember
A Circle with a
center O
 $m(\widehat{OCB}) = 35^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$

- A) 35 B) 55 C) 70 D) 110 E) 140

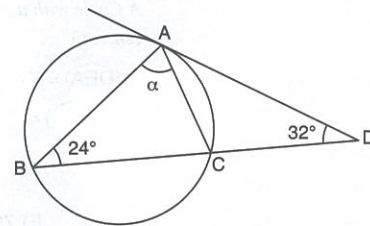
14.



$$m(\widehat{BAC}) = 48^\circ \\ \Rightarrow m(\widehat{BCD}) = \alpha = ?$$

- A) 96 B) 78 C) 56 D) 48 E) 24

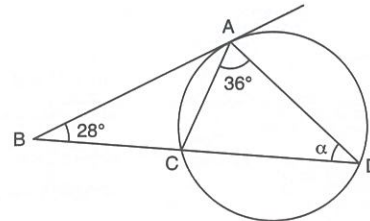
15.



$$m(\widehat{ABD}) = 24^\circ \\ m(\widehat{ADB}) = 32^\circ \\ \Rightarrow m(\widehat{BAC}) = \alpha = ?$$

- A) 112 B) 100 C) 98 D) 84 E) 72

16.

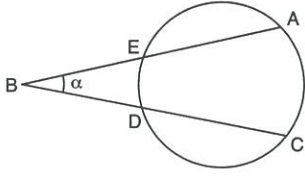


$$m(\widehat{ABD}) = 28^\circ \\ m(\widehat{CAD}) = 36^\circ \\ \Rightarrow m(\widehat{ADB}) = \alpha = ?$$

- A) 36 B) 48 C) 52 D) 58 E) 64



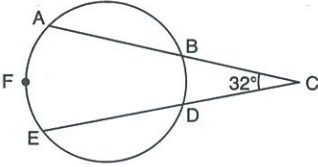
1.



$$\begin{aligned} m(\widehat{AC}) &= 80^\circ \\ m(\widehat{ED}) &= 20^\circ \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 30 B) 50 C) 60 D) 80 E) 100

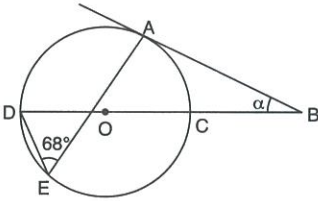
2.



$$\begin{aligned} m(\widehat{BD}) &= 40^\circ \\ m(\widehat{ACE}) &= 32^\circ \\ \Rightarrow m(\widehat{AFE}) &= ? \end{aligned}$$

- A) 4 B) 56 C) 64 D) 104 E) 114

3.

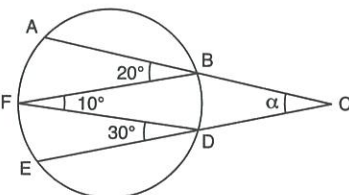


O merkezli çember
A Circle with a center O

$$\begin{aligned} m(\widehat{DEA}) &= 68^\circ \\ \Rightarrow m(\widehat{ABD}) &= \alpha = ? \end{aligned}$$

- A) 22 B) 44 C) 46 D) 68 E) 76

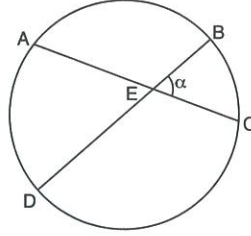
4.



$$\begin{aligned} m(\widehat{ABF}) &= 20^\circ \\ m(\widehat{BFD}) &= 10^\circ \\ m(\widehat{FDE}) &= 30^\circ \\ \Rightarrow m(\widehat{ACE}) &= \alpha = ? \end{aligned}$$

- A) 120 B) 80 C) 60 D) 40 E) 20

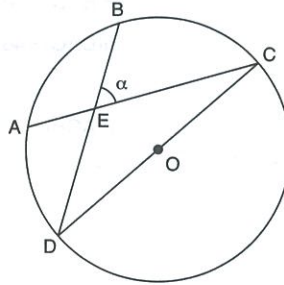
5.



$$\begin{aligned} m(\widehat{BC}) &= 40^\circ \\ m(\widehat{AD}) &= 56^\circ \\ \Rightarrow m(\widehat{BEC}) &= \alpha = ? \end{aligned}$$

- A) 20 B) 28 C) 36 D) 48 E) 96

6.

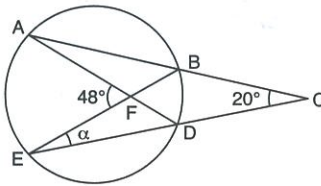


O merkezli çember
A Circle with a center O

$$\begin{aligned} m(\widehat{AB}) &= 50^\circ \\ \Rightarrow m(\widehat{BEC}) &= \alpha = ? \end{aligned}$$

- A) 115 B) 100 C) 85 D) 75 E) 65

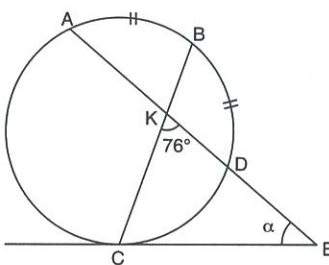
7.



$$\begin{aligned} m(\widehat{AFE}) &= 48^\circ \\ m(\widehat{ACE}) &= 20^\circ \\ \Rightarrow m(\widehat{BED}) &= \alpha = ? \end{aligned}$$

- A) 8 B) 10 C) 14 D) 20 E) 24

8.

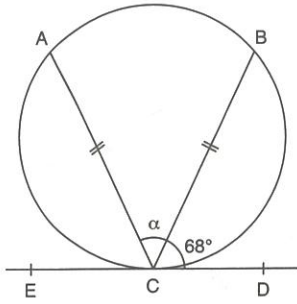


$$\begin{aligned} m(\widehat{AB}) &= m(\widehat{BD}) \\ m(\widehat{CKE}) &= 76^\circ \\ \Rightarrow m(\widehat{AEC}) &= \alpha = ? \end{aligned}$$

- A) 28 B) 38 C) 42 D) 56 E) 76



9.



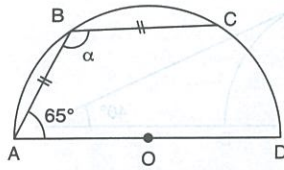
$$|AC| = |BC|$$

$$m(\widehat{BCD}) = 68^\circ$$

$$\Rightarrow m(\widehat{ACB}) = \alpha = ?$$

- A) 34 B) 44 C) 56 D) 68 E) 88

10.



O merkezli yarım çember
A semi circle with a center O

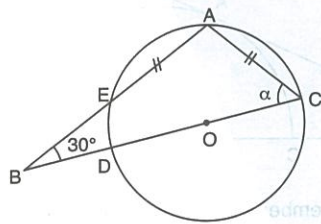
$$|AB| = |BC|$$

$$m(\widehat{BAD}) = 65^\circ$$

$$\Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 70 B) 85 C) 110 D) 120 E) 130

11.



O merkezli çember
A Circle with a center O

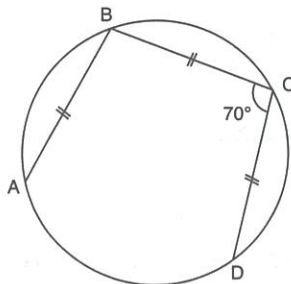
$$|EA| = |AC|$$

$$m(\widehat{ABC}) = 30^\circ$$

$$\Rightarrow m(\widehat{ACB}) = \alpha = ?$$

- A) 20 B) 40 C) 50 D) 60 E) 70

12.



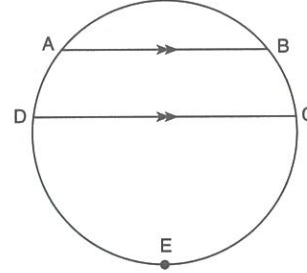
$$|AB| = |BC| = |CD|$$

$$m(\widehat{BCD}) = 70^\circ$$

$$\Rightarrow m(\widehat{AD}) = ?$$

- A) 30 B) 45 C) 60 D) 70 E) 90

13.



$$[AB] \parallel [DC]$$

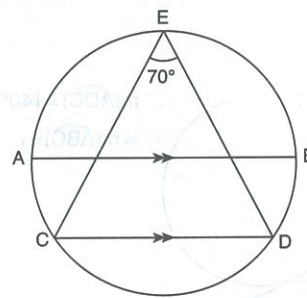
$$m(\widehat{AB}) = 50^\circ$$

$$m(\widehat{DEC}) = 240^\circ$$

$$\Rightarrow m(\widehat{AD}) = ?$$

- A) 35 B) 55 C) 70 D) 85 E) 90

14.



[AB] çaplı çember
A Circle with a diameter [AB]

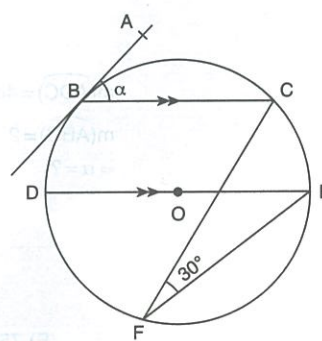
$$[AB] \parallel [CD]$$

$$m(\widehat{CED}) = 70^\circ$$

$$\Rightarrow m(\widehat{AC}) = ?$$

- A) 10 B) 20 C) 30 D) 40 E) 50

15.



O merkezli çember
A Circle with a center O

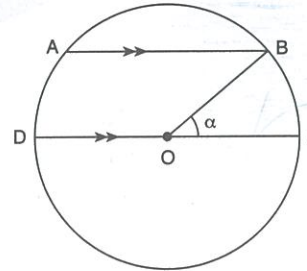
$$[BC] \parallel [DE]$$

$$m(\widehat{CFE}) = 30^\circ$$

$$\Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 75 B) 70 C) 60 D) 45 E) 30

16.



O merkezli çember
A Circle with a center O

$$[AB] \parallel [DC]$$

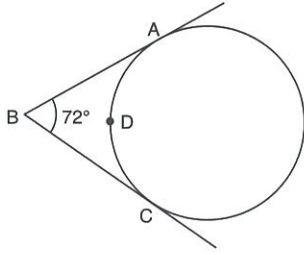
$$m(\widehat{AB}) = 80^\circ$$

$$\Rightarrow m(\widehat{BOC}) = \alpha = ?$$

- A) 80 B) 60 C) 50 D) 40 E) 25



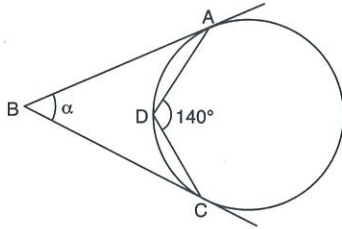
1.



$$m(\widehat{ABC}) = 72^\circ \\ \Rightarrow m(\widehat{ADC}) = ?$$

- A) 36 B) 72 C) 108 D) 144 E) 156

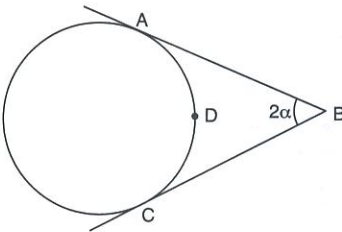
2.



$$m(\widehat{ADC}) = 140^\circ \\ \Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 35 B) 40 C) 70 D) 80 E) 100

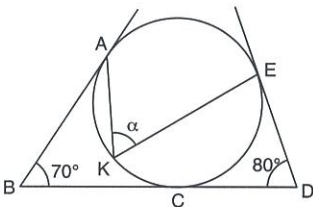
3.



$$m(\widehat{ADC}) = 4\alpha \\ m(\widehat{ABC}) = 2\alpha \\ \Rightarrow \alpha = ?$$

- A) 15 B) 30 C) 45 D) 60 E) 75

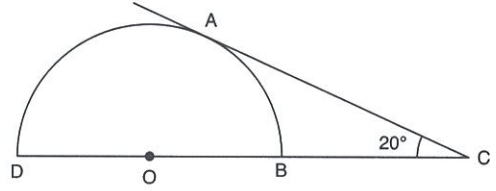
4.



$$m(\widehat{ABD}) = 70^\circ \\ m(\widehat{EDB}) = 80^\circ \\ \Rightarrow m(\widehat{AKE}) = \alpha = ?$$

- A) 30 B) 45 C) 60 D) 75 E) 90

5.

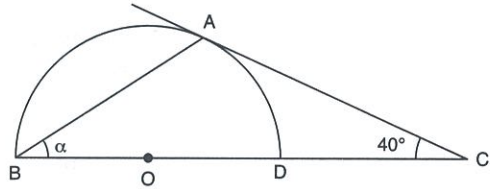


O merkezli yarım çember A semi circle with a center O

$$m(\widehat{ACD}) = 20^\circ \Rightarrow m(\widehat{AB}) = ?$$

- A) 20 B) 40 C) 60 D) 70 E) 160

6.

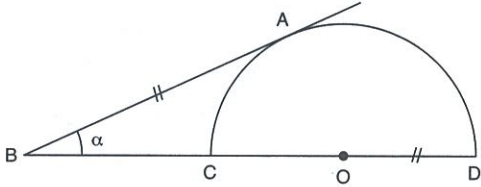


O merkezli yarım çember A semi circle with a center O

$$m(\widehat{ACB}) = 40^\circ \Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 20 B) 25 C) 40 D) 50 E) 70

7.

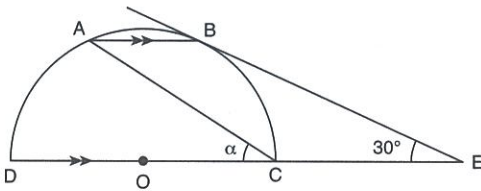


O merkezli yarım çember A semi circle with a center O

$$|AB| = |OD| \Rightarrow m(\widehat{ABD}) = \alpha = ?$$

- A) 15 B) 30 C) 45 D) 60 E) 75

8.



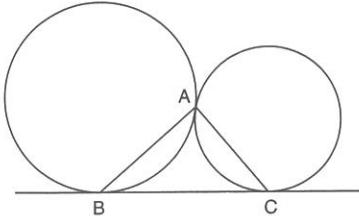
O merkezli yarım çember A semi circle with a center O

$$[AB] \parallel [DE] \quad m(\widehat{BED}) = 30^\circ \Rightarrow m(\widehat{ACD}) = \alpha = ?$$

- A) 15 B) 30 C) 45 D) 60 E) 75



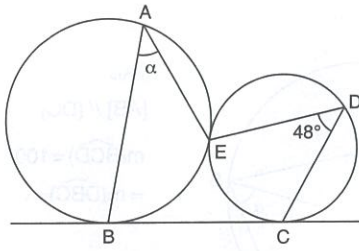
9.



$$\Rightarrow m(\widehat{BAC}) = ?$$

- A) 90 B) 75 C) 60 D) 45 E) 30

10.

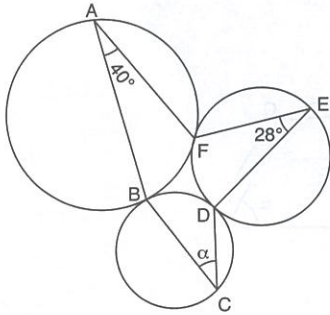


$$m(\widehat{EDC}) = 48^\circ$$

$$\Rightarrow m(\widehat{BAE}) = \alpha = ?$$

- A) 24 B) 42 C) 48 D) 84 E) 96

11.



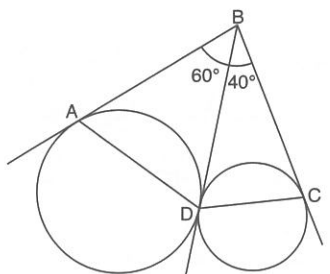
$$m(\widehat{BAF}) = 40^\circ$$

$$m(\widehat{FED}) = 28^\circ$$

$$\Rightarrow m(\widehat{BCD}) = \alpha = ?$$

- A) 12 B) 22 C) 32 D) 48 E) 68

12.



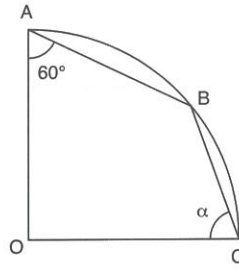
$$m(\widehat{ABD}) = 60^\circ$$

$$m(\widehat{DBC}) = 40^\circ$$

$$\Rightarrow m(\widehat{ADC}) = ?$$

- A) 60 B) 80 C) 100 D) 120 E) 130

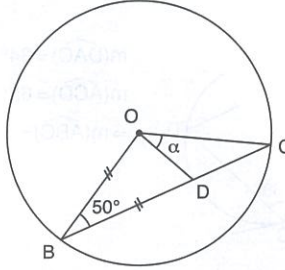
13.



O merkezli çeyrek çember
A quarter circle with a center O
 $m(\widehat{OAB}) = 60^\circ$
 $\Rightarrow m(\widehat{BCO}) = \alpha = ?$

- A) 75 B) 60 C) 45 D) 30 E) 15

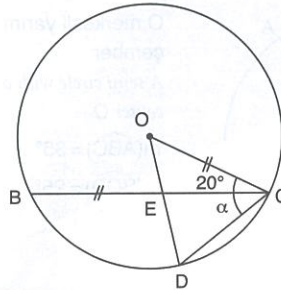
14.



O merkezli çember
A Circle with a center O
 $|OB| = |BD|$
 $m(\widehat{OBC}) = 50^\circ$
 $\Rightarrow m(\widehat{DOC}) = \alpha = ?$

- A) 5 B) 10 C) 15 D) 20 E) 25

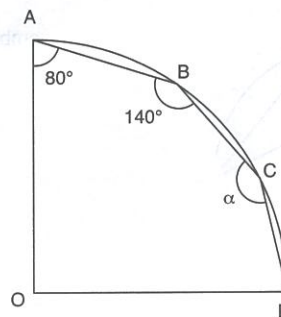
15.



O merkezli çember
A Circle with a center O
 $|BE| = |OC|$
 $m(\widehat{OCB}) = 20^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$

- A) 10 B) 15 C) 20 D) 25 E) 40

16.

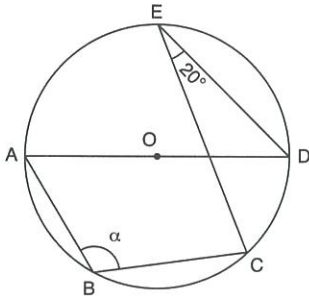


O merkezli çeyrek çember
A quarter circle with a center O
 $m(\widehat{OAB}) = 80^\circ$
 $m(\widehat{ABC}) = 140^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$

- A) 110 B) 125 C) 130 D) 145 E) 160



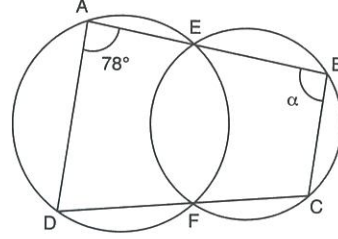
1.



O merkezli çember
A Circle with a
center O
 $m(\widehat{CED}) = 20^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 110 B) 120 C) 130 D) 140 E) 200

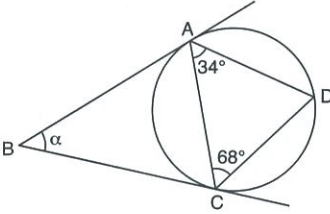
5.



$m(\widehat{DAB}) = 78^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 12 B) 39 C) 78 D) 102 E) 112

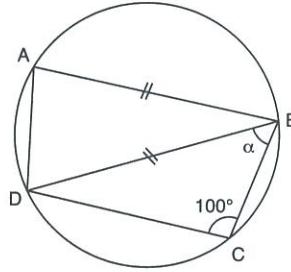
2.



$m(\widehat{DAC}) = 34^\circ$
 $m(\widehat{ACD}) = 68^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

- A) 24 B) 36 C) 42 D) 48 E) 54

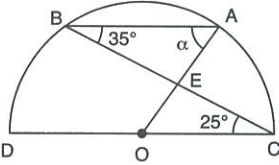
6.



$|AB| = |BD|$
 $|AB| \parallel |DC|$
 $m(\widehat{BCD}) = 100^\circ$
 $\Rightarrow m(\widehat{DBC}) = \alpha = ?$

- A) 20 B) 40 C) 50 D) 60 E) 80

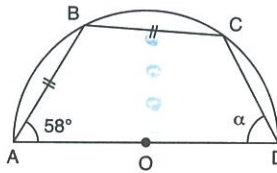
3.



O merkezli yarım
çember
A semi circle with a
center O
 $m(\widehat{ABC}) = 35^\circ$
 $m(\widehat{BCD}) = 25^\circ$
 $\Rightarrow m(\widehat{BAO}) = \alpha = ?$

- A) 20 B) 35 C) 45 D) 55 E) 60

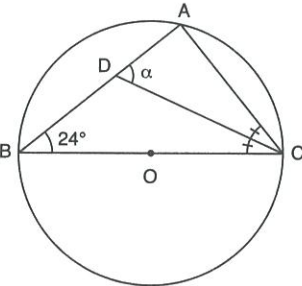
7.



O merkezli yarım
çember
A semi circle with a
center O
 $|AB| = |BC|$
 $m(\widehat{BAD}) = 58^\circ$
 $\Rightarrow m(\widehat{CDA}) = \alpha = ?$

- A) 128 B) 108 C) 66 D) 64 E) 54

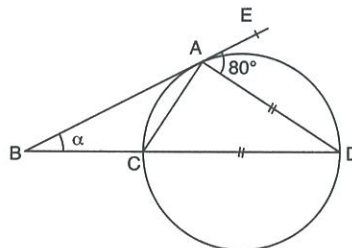
4.



O merkezli çember
A Circle with a
center O
 $m(\widehat{ACD}) = m(\widehat{DCB})$
 $m(\widehat{ABC}) = 24^\circ$
 $\Rightarrow m(\widehat{ADC}) = \alpha = ?$

- A) 57 B) 48 C) 38 D) 36 E) 33

8.

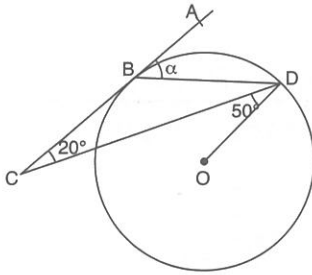


$m(\widehat{EAD}) = 80^\circ$
 $|AD| = |DC|$
 $\Rightarrow m(\widehat{ABD}) = \alpha = ?$

- A) 15 B) 20 C) 30 D) 45 E) 60



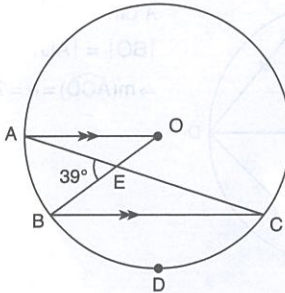
9.



O merkezli çember
A Circle with O
 $m(\widehat{ACD}) = 20^\circ$
 $m(\widehat{ODC}) = 50^\circ$
 $\Rightarrow m(\widehat{ABD}) = \alpha = ?$

- A) 30 B) 40 C) 50 D) 60 E) 80

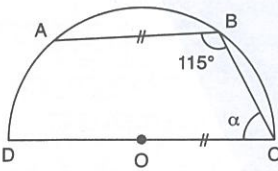
10.



O merkezli çember
A Circle with a center O
[AO] // [BC]
 $m(\widehat{AEB}) = 39^\circ$
 $\Rightarrow m(\widehat{BDC}) = ?$

- A) 128 B) 108 C) 94 D) 84 E) 72

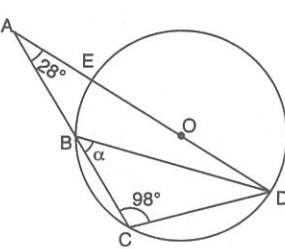
11.



O merkezli yarım çember
A semi circle with center O
|AB| = |OC|
 $m(\widehat{ABC}) = 115^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$

- A) 30 B) 40 C) 45 D) 50 E) 55

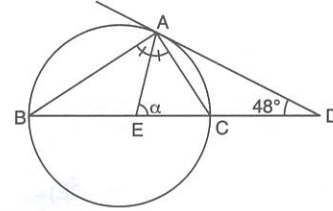
12.



O merkezli çember
A Circle with a center O
 $m(\widehat{CAD}) = 28^\circ$
 $m(\widehat{ACD}) = 98^\circ$
 $\Rightarrow m(\widehat{DBC}) = \alpha = ?$

- A) 36 B) 40 C) 44 D) 45 E) 52

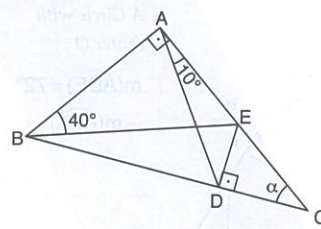
13.



$m(\widehat{BAE}) = m(\widehat{EAC})$
 $m(\widehat{ADB}) = 48^\circ$
 $\Rightarrow m(\widehat{AED}) = \alpha = ?$

- A) 24 B) 48 C) 66 D) 72 E) 78

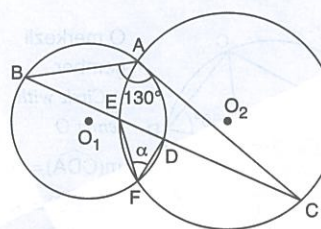
14.



[BA] $\perp$ [AC]
[ED] $\perp$ [BC]
 $m(\widehat{DAC}) = 10^\circ$
 $m(\widehat{ABE}) = 40^\circ$
 $\Rightarrow m(\widehat{ACB}) = \alpha = ?$

- A) 10 B) 20 C) 30 D) 40 E) 50

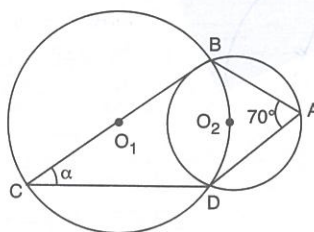
15.



O_1 ve O_2 merkezli çemberler
Circle with central points O_1 and O_2
 $m(\widehat{BAC}) = 130^\circ$
 $\Rightarrow m(\widehat{EFD}) = \alpha = ?$

- A) 30 B) 45 C) 50 D) 65 E) 80

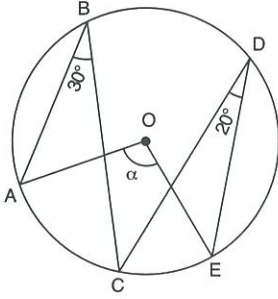
16.



O_1 ve O_2 merkezli çemberler
Circle with central points O_1 and O_2
 $O_2 \in (\widehat{BD})$
 $m(\widehat{BAD}) = 70^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$

- A) 10 B) 20 C) 30 D) 40 E) 50

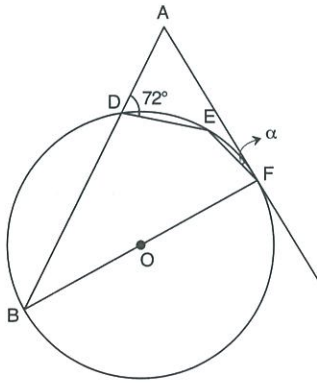
1.



- A) 25 B) 50 C) 75 D) 100 E) 150

O merkezli çember
A Circle with
center O
 $m(\widehat{ABC}) = 30^\circ$
 $m(\widehat{CDE}) = 20^\circ$
 $\Rightarrow m(\widehat{AOE}) = \alpha = ?$

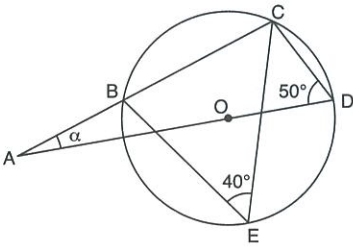
2.



- A) 9 B) 18 C) 27 D) 36 E) 48

O merkezli çember
A Circle with
center O
 $m(\widehat{ADE}) = 72^\circ$
 $\Rightarrow m(\widehat{EFA}) = \alpha = ?$

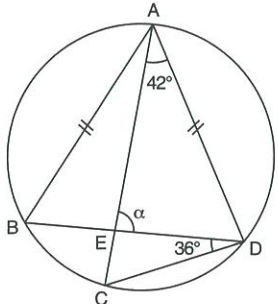
3.



- A) 10 B) 15 C) 20 D) 25 E) 30

O merkezli çember
A Circle with
center O
 $m(\widehat{CDA}) = 50^\circ$
 $m(\widehat{BEC}) = 40^\circ$
 $\Rightarrow m(\widehat{CAD}) = \alpha = ?$

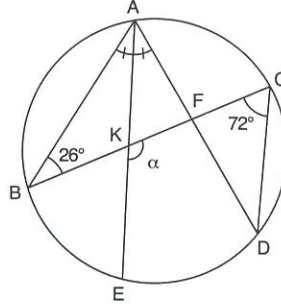
4.



- A) 45 B) 53 C) 62 D) 65 E) 87

$|AB| = |AD|$
 $m(\widehat{CAD}) = 42^\circ$
 $m(\widehat{BDC}) = 36^\circ$
 $\Rightarrow m(\widehat{AED}) = \alpha = ?$

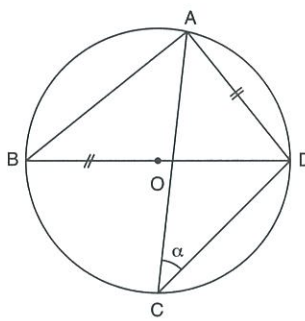
5.



- A) 44 B) 48 C) 52 D) 62 E) 118

$m(\widehat{BAE}) = m(\widehat{EAD})$
 $m(\widehat{ABC}) = 26^\circ$
 $m(\widehat{BCD}) = 72^\circ$
 $\Rightarrow m(\widehat{EKC}) = \alpha = ?$

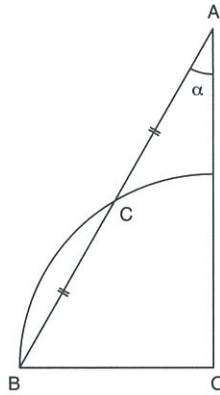
6.



- A) 15 B) 30 C) 45 D) 60 E) 75

O merkezli çember
A Circle with center O
 $|BO| \perp |AD|$
 $\Rightarrow m(\widehat{ACD}) = \alpha = ?$

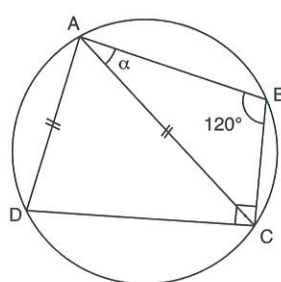
7.



- A) 45 B) 40 C) 30 D) 20 E) 10

O merkezli çeyrek çember
A quarter circle with
center O
 $|AC| = |CB|$
 $\Rightarrow m(\widehat{BAO}) = \alpha = ?$

8.

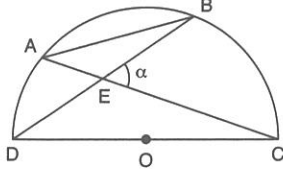


- A) 10 B) 15 C) 30 D) 40 E) 45

$|AD| = |AC|$
 $[BC] \perp [DC]$
 $m(\widehat{ABC}) = 120^\circ$
 $\Rightarrow m(\widehat{BAC}) = \alpha = ?$



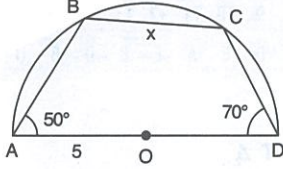
9.



O merkezli yarım çember
A semi circle with center O
 $|AB| = |DO| = 4$ br
 $\Rightarrow m(\widehat{BEC}) = \alpha = ?$

- A) 20 B) 30 C) 45 D) 50 E) 60

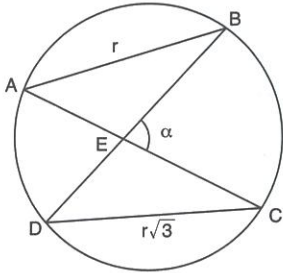
10.



O merkezli yarım çember
A semi circle with center O
 $m(\widehat{BAD}) = 50^\circ$
 $m(\widehat{CDA}) = 70^\circ$
 $|AO| = 5$ br
 $\Rightarrow |BC| = x = ?$

- A) $\frac{5}{2}$ B) 5 C) $5\sqrt{2}$ D) $5\sqrt{3}$ E) 20

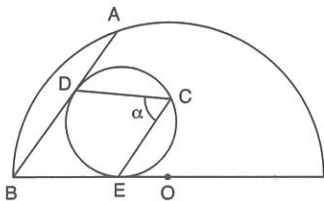
11.



r yarıçaplı çember
circle of radius r
 $|AB| = r$ br
 $|DC| = r\sqrt{3}$ br
 $\Rightarrow m(\widehat{BEC}) = \alpha = ?$

- A) 30 B) 45 C) 60 D) 75 E) 90

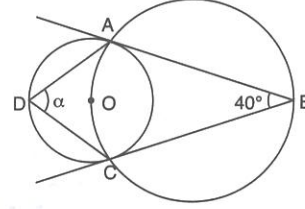
12.



O merkezli yarım çember
A semi circle with center O
 $m(\widehat{AB}) = 80^\circ$
 $\Rightarrow m(\widehat{DCE}) = \alpha = ?$

- A) 130 B) 100 C) 80 D) 65 E) 50

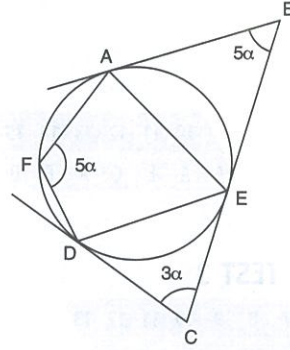
13.



O merkezli çember
A circle with center O
 $O \in (\widehat{AC})$
 $m(\widehat{ABC}) = 40^\circ$
 $\Rightarrow m(\widehat{ADC}) = \alpha = ?$

- A) 40 B) 50 C) 70 D) 80 E) 100

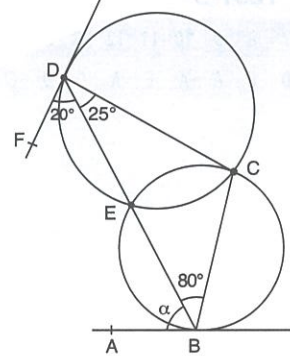
14.



$m(\widehat{ABC}) = 5\alpha$
 $m(\widehat{BCD}) = 3\alpha$
 $m(\widehat{AFD}) = 5\alpha$
 $\Rightarrow m(\widehat{AED}) = ?$

- A) 40 B) 60 C) 80 D) 100 E) 120

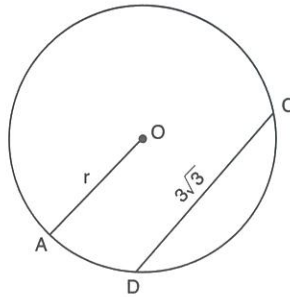
15.



$m(\widehat{FDB}) = 20^\circ$
 $m(\widehat{BDC}) = 25^\circ$
 $m(\widehat{DBC}) = 80^\circ$
 $\Rightarrow m(\widehat{DBA}) = \alpha = ?$

- A) 55 B) 50 C) 45 D) 40 E) 35

16.



O merkezli çember
A Circle with center O
 $|DC| = 3\sqrt{3}$ br
 $m(\widehat{CD}) = 120^\circ$
 $\Rightarrow |OA| = r = ?$

- A) $\frac{3}{2}$ B) 3 C) $3\sqrt{2}$ D) $3\sqrt{3}$ E) 6



ÇEMBERDE AÇI ANGLE IN CIRCLE

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	E	C	D	D	B	B	A	A	E	C	A	B	D	D

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	C	C	C	E	D	B	D	E	A	E	B	D	B	D

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	C	D	D	E	C	A	B	E	C	A	A	B	E	C

TEST 4

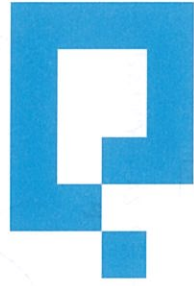
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	E	B	D	D	B	C	B	A	B	B	E	A	C	E	D

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	A	E	A	D	D	D	E	A	A	E	A	C	D	C	D

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	E	E	E	B	C	C	E	B	E	D	C	C	A	B

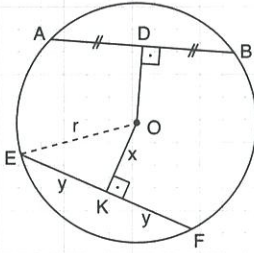


ÇEMBERDE UZUNLUK

LENGTH IN CIRCLE



ÖZELLİK|Property 1

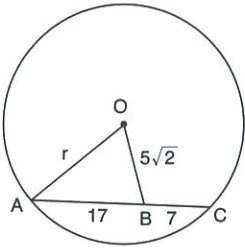


$$[OD] \perp [AB] \Rightarrow |AD| = |DB|$$

$$|OD| > |OK| \Rightarrow |AB| < |EF|$$

$$x^2 + y^2 = r^2$$

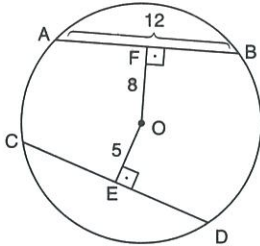
1.



$$\Rightarrow r = ?$$

13

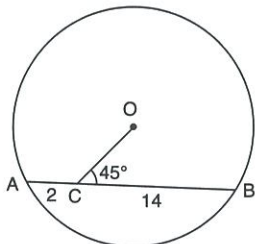
2.



$$\Rightarrow |CD| = ?$$

$10\sqrt{3}$

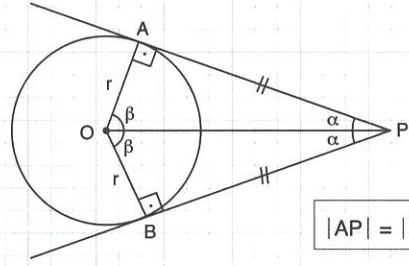
3.



$$\Rightarrow r = ?$$

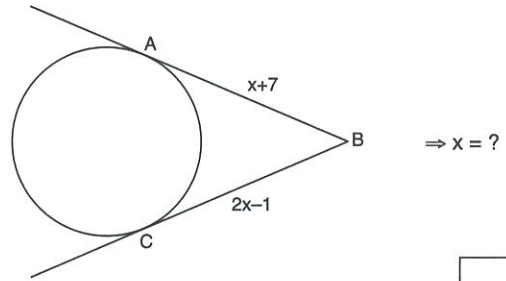
10

ÖZELLİK|Property 2



$$|AP| = |PB|$$

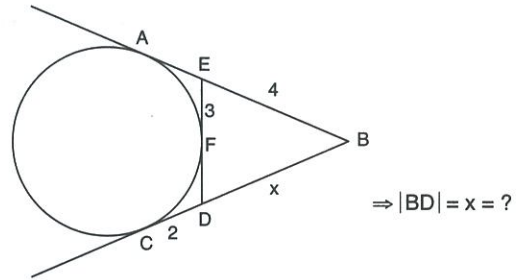
1.



$$\Rightarrow x = ?$$

8

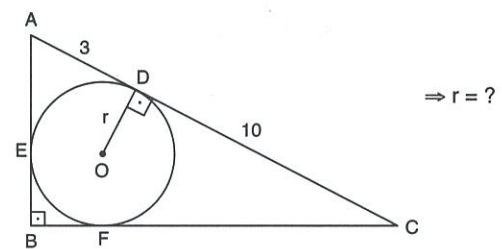
2.



$$\Rightarrow |BD| = x = ?$$

5

3.

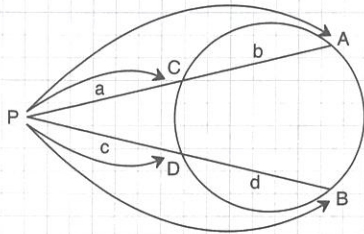


$$\Rightarrow r = ?$$

2

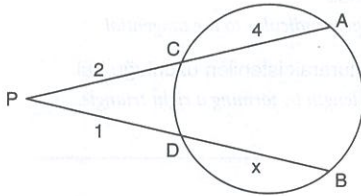


ÖZELLİK|Property 3



$$a(a + b) = c(c + d)$$

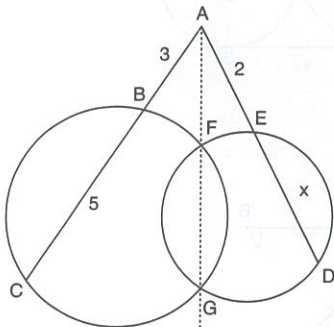
1.



$$\Rightarrow x = ?$$

11

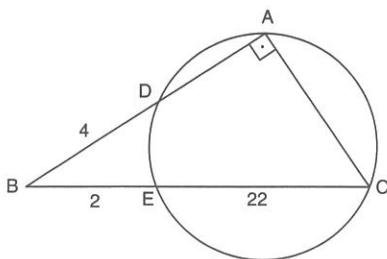
2.



$$\Rightarrow x = ?$$

10

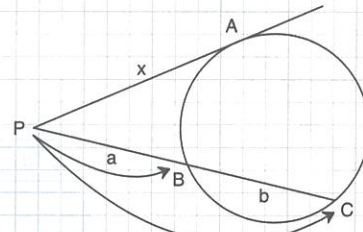
3.



$$\Rightarrow r = ?$$

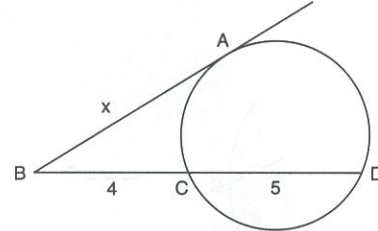
$2\sqrt{31}$

ÖZELLİK|Property 4



$$x^2 = a(a + b)$$

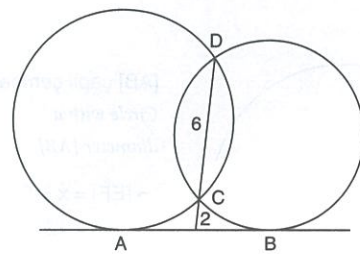
1.



$$\Rightarrow x = ?$$

6

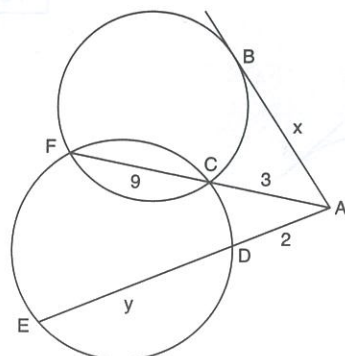
2.



$$\Rightarrow |AB| = ?$$

8

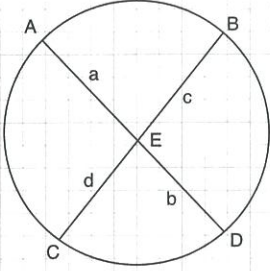
3.



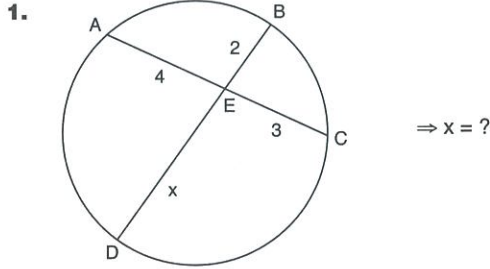
$$\Rightarrow y - x = ?$$

10

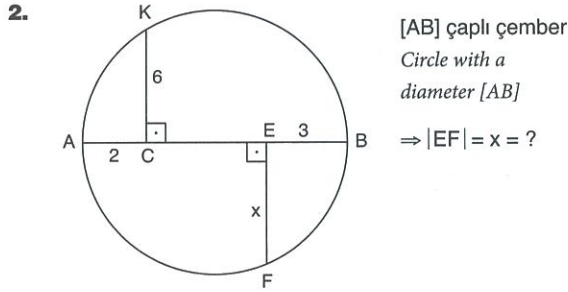
ÖZELLİK|Property 5



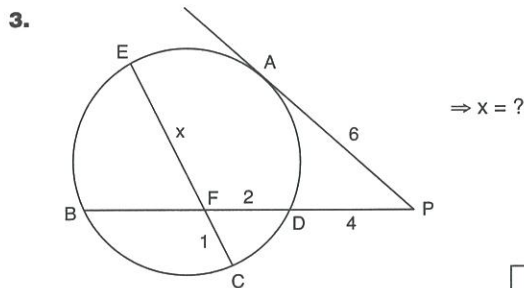
$$a \cdot b = c \cdot d$$



6

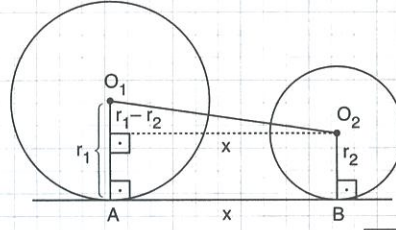


$\sqrt{51}$



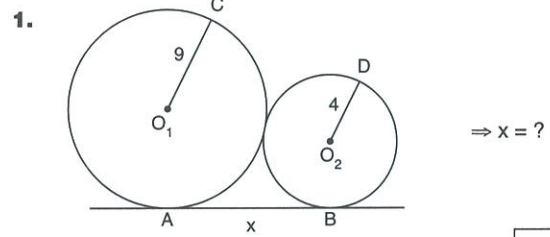
6

ÖZELLİK|Property 6

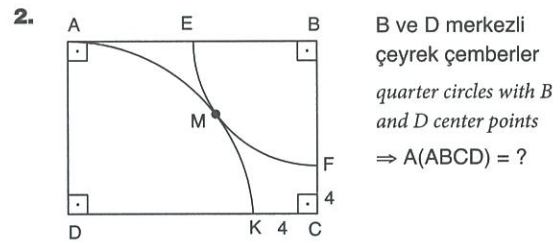


$$|O_1O_2|^2 = (r_1 - r_2)^2 + x^2$$

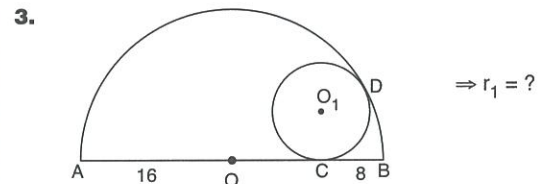
- Merkezden merkeze doğru çek.
Draw from the center to center.
- Teğetlere dik indir.
Draw a normal perpendicular to the tangential.
- Dik üçgen oluşturarak istenilen uzunluğu bul.
Find the desired length by forming a right triangle.



12



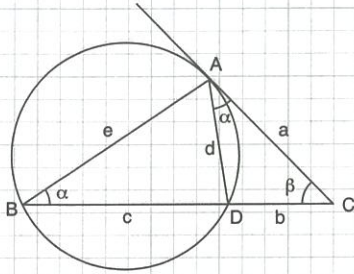
192



6



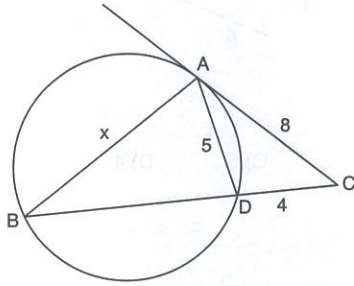
ÖZELLİK|Property 7



$\widehat{ABC} \approx \widehat{DAC}$ Benzer üçgenler
Similar triangles

$$\frac{d}{e} = \frac{b}{a} = \frac{a}{b+c}$$

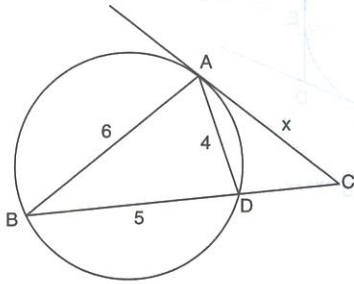
1.



$$\Rightarrow x = ?$$

10

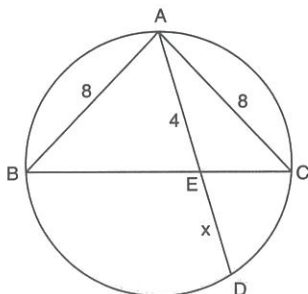
2.



$$\Rightarrow x = ?$$

6

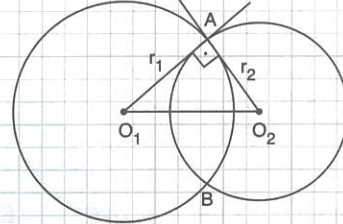
3.



$$\Rightarrow x = ?$$

12

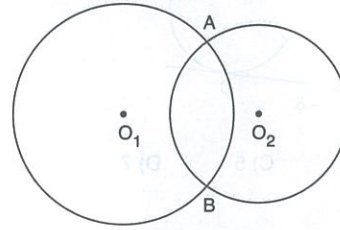
ÖZELLİK|Property 8



Çemberler dik kesişiyor
The circles intersect perpendicularly

$$(r_1)^2 + (r_2)^2 = |O_1O_2|^2$$

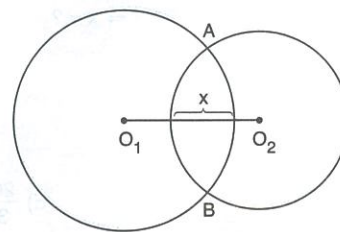
1.



Çemberler
dik kesişiyor
The circles intersect
perpendicularly
 $r_1 = 6$
 $r_2 = 8$
 $\Rightarrow |O_1O_2| = ?$

10

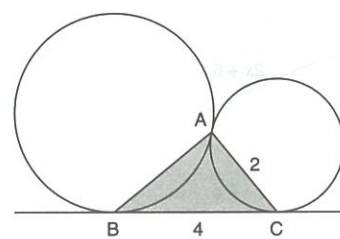
2.



Çemberler
dik kesişiyor
The circles intersect
perpendicularly
 $r_1 = 12$
 $r_2 = 5$
 $\Rightarrow x = ?$

4

3.

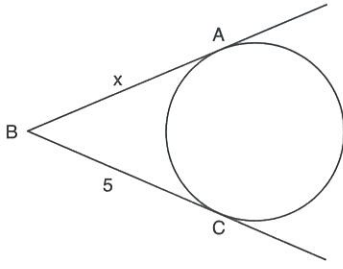


$$\Rightarrow A(ABC) = ?$$

$2\sqrt{3}$



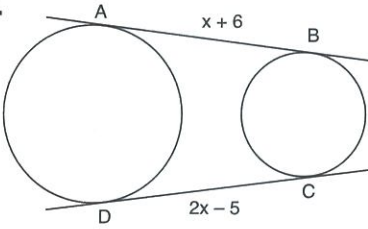
1.



$$|BC| = 5 \text{ br} \\ \Rightarrow |AB| = x = ?$$

- A) $\frac{3}{2}$ B) 2 C) $\frac{5}{2}$ D) 5 E) $\frac{15}{2}$

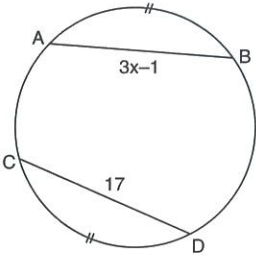
2.



$$|AB| = (x + 6) \text{ br} \\ |DC| = (2x - 5) \text{ br} \\ \Rightarrow x = ?$$

- A) 1 B) 3 C) 5 D) 7 E) 11

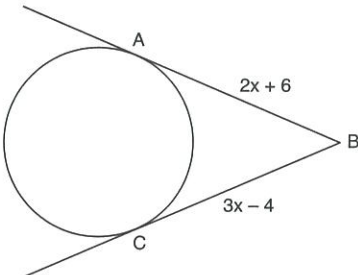
3.



$$m(\widehat{AB}) = m(\widehat{CD}) \\ |AB| = 3x - 1 \text{ br} \\ |CD| = 17 \text{ br} \\ \Rightarrow x = ?$$

- A) 4 B) 5 C) $\frac{16}{3}$ D) 6 E) $\frac{20}{3}$

4.

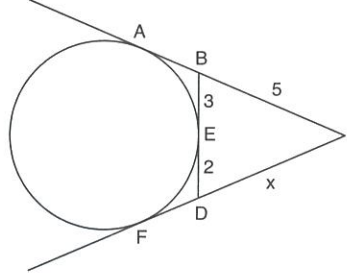


$$|AB| = 2x + 6 \\ |BC| = 3x - 4 \\ \Rightarrow x = ?$$

- A) 2 B) 4 C) 6 D) 8 E) 10

PUZA YAYINLARI

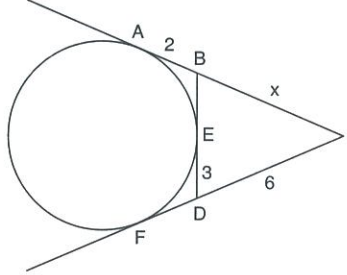
5.



$$|BE| = 3 \text{ br} \\ |ED| = 2 \text{ br} \\ |BC| = 5 \text{ br} \\ \Rightarrow |DC| = x = ?$$

- A) 7 B) 6 C) 5 D) 4 E) 3

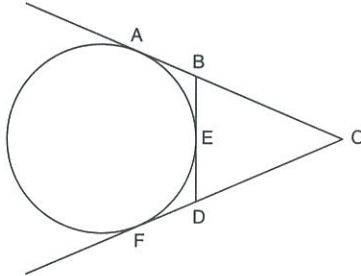
6.



$$|AB| = 2 \text{ br} \\ |ED| = 3 \text{ br} \\ |DC| = 6 \text{ br} \\ \Rightarrow |BC| = x = ?$$

- A) 7 B) 6 C) 5 D) 4 E) 3

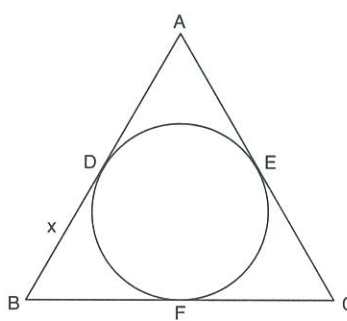
7.



$$|AC| = 8 \text{ br} \\ \Rightarrow \angle(BDC) = ?$$

- A) 4 B) 8 C) 16 D) 24 E) 32

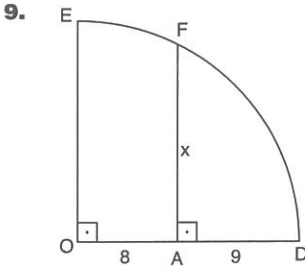
8.



$$|AB| = 7 \text{ br} \\ |AC| = 9 \text{ br} \\ |BC| = 8 \text{ br} \\ \Rightarrow |BD| = x = ?$$

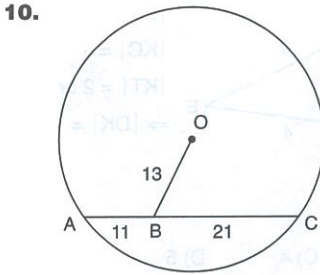
- A) 1 B) 2 C) 3 D) 4 E) 5

PUZA YAYINLARI



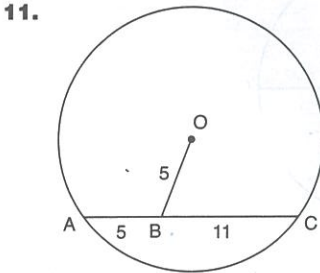
O merkezli çeyrek
çember
A quarter circle with a
center O
 $|OA| = 8 \text{ br}$
 $|AD| = 9 \text{ br}$
 $\Rightarrow |FA| = x = ?$

- A) 5 B) 9 C) 12 D) 15 E) 17



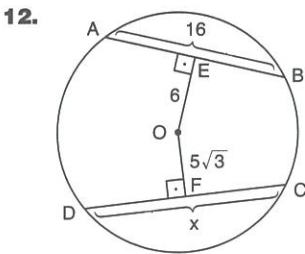
O merkezli çemberin
yarıçapı r
Radius r of a circle with a
center O
 $|OB| = 13 \text{ br}$
 $|AB| = 11 \text{ br}$
 $|BC| = 21 \text{ br}$
 $\Rightarrow r = ?$

- A) 20 B) 16 C) 15 D) 13 E) 12



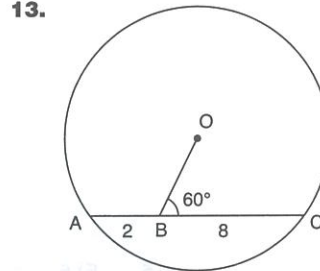
O merkezli çemberin
yarıçapı r
Radius r of a circle with a
center O
 $|OB| = |AB| = 5 \text{ br}$
 $|BC| = 11 \text{ br}$
 $\Rightarrow r = ?$

- A) 5 B) $2\sqrt{5}$ C) 10 D) $4\sqrt{5}$ E) $8\sqrt{5}$



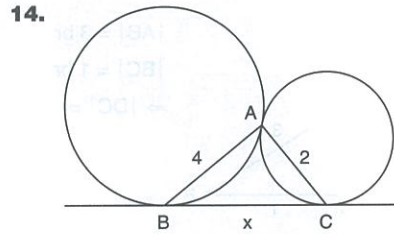
O merkezli çember
A circle with a center O
 $|AB| = 16 \text{ br}$
 $|OE| = 6 \text{ br}$
 $|OF| = 5\sqrt{3} \text{ br}$
 $\Rightarrow |DC| = x = ?$

- A) 20 B) 16 C) 12 D) 10 E) 8



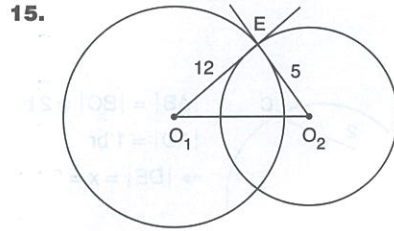
O merkezli
çemberin yarıçapı r
Radius r of a circle
with a center O
 $m(\widehat{OBC}) = 60^\circ$
 $|AB| = 2 \text{ br}$
 $|BC| = 8 \text{ br}$
 $\Rightarrow r = ?$

- A) $4\sqrt{3}$ B) 7 C) $2\sqrt{13}$ D) 8 E) 10



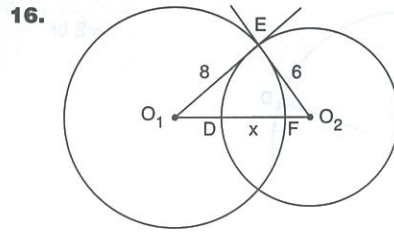
$|AB| = 4 \text{ br}$
 $|AC| = 2 \text{ br}$
 $\Rightarrow |BC| = x = ?$

- A) $\sqrt{5}$ B) $2\sqrt{5}$ C) 5 D) 8 E) $4\sqrt{5}$



O_1 ve O_2 merkezli
çemberler dik
kesişiyor.
Circles with O_1 and
 O_2 center intersect
perpendicularly
 $|O_1E| = 12 \text{ br}$
 $|O_2E| = 5 \text{ br}$
 $\Rightarrow |O_1O_2| = ?$

- A) 17 B) 15 C) 13 D) 12 E) 7

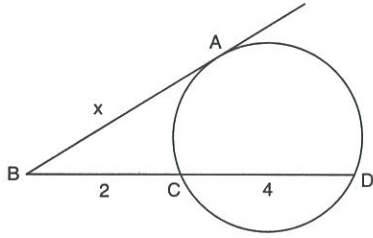


O_1 ve O_2 merkezli
çemberler dik
kesişiyor.
Circles with O_1 and
 O_2 center intersect
perpendicularly
 $|O_1E| = 8 \text{ br}$
 $|O_2E| = 6 \text{ br}$
 $\Rightarrow |DF| = x = ?$

- A) 2 B) 4 C) 5 D) 6 E) 8



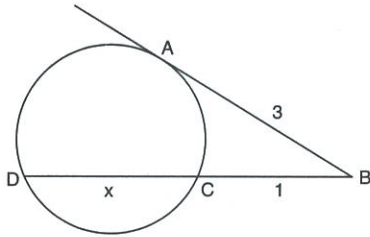
1.



$$\begin{aligned} |BC| &= 2 \text{ br} \\ |CD| &= 4 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) $2\sqrt{2}$ B) $2\sqrt{3}$ C) 4 D) $2\sqrt{5}$ E) 5

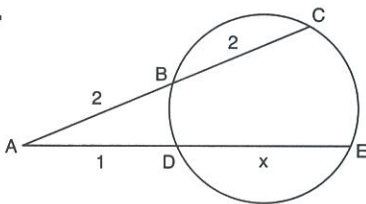
2.



$$\begin{aligned} |AB| &= 3 \text{ br} \\ |BC| &= 1 \text{ br} \\ \Rightarrow |DC| &= x = ? \end{aligned}$$

- A) 8 B) $4\sqrt{5}$ C) 5 D) $2\sqrt{5}$ E) 3

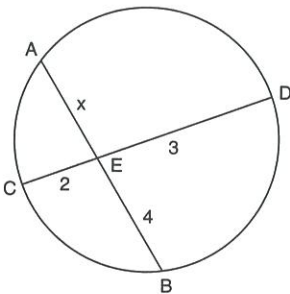
3.



$$\begin{aligned} |AB| &= |BC| = 2 \text{ br} \\ |AD| &= 1 \text{ br} \\ \Rightarrow |DE| &= x = ? \end{aligned}$$

- A) 8 B) 7 C) 6 D) 5 E) 4

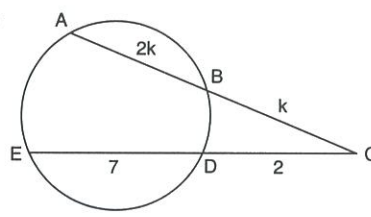
4.



$$\begin{aligned} |CE| &= 2 \text{ br} \\ |ED| &= 3 \text{ br} \\ |EB| &= 4 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) $\frac{3}{2}$ B) 2 C) $\frac{5}{2}$ D) 3 E) $\frac{7}{2}$

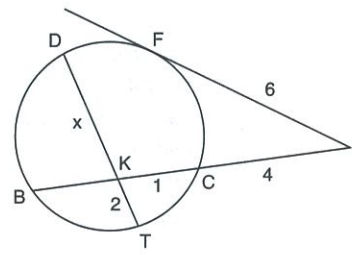
5.



$$\begin{aligned} |AB| &= 2|BC| = 2k \\ |DC| &= 2 \text{ br} \\ |ED| &= 7 \text{ br} \\ \Rightarrow k &= ? \end{aligned}$$

- A) 2 B) $\sqrt{5}$ C) $\sqrt{6}$ D) 3 E) $2\sqrt{3}$

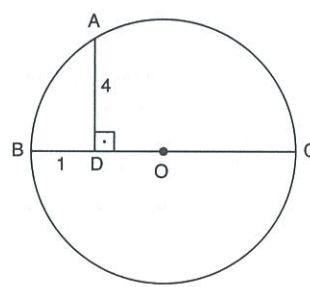
6.



$$\begin{aligned} |EF| &= 6 \text{ br} \\ |EC| &= 4 \text{ br} \\ |KC| &= 1 \text{ br} \\ |KT| &= 2 \text{ br} \\ \Rightarrow |DK| &= x = ? \end{aligned}$$

- A) 2 B) 3 C) 4 D) 5 E) 6

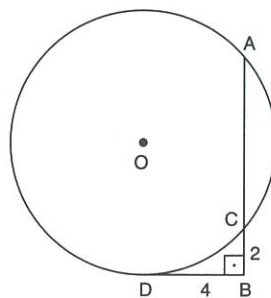
7.



O merkezli
çemberin
yarıçapı r
Radius r of a circle
with a center O
[AD] $\perp$ [BC]
|AD| = 4 br
|BD| = 1 br
 $\Rightarrow r = ?$

- A) 4 B) 6 C) $\frac{15}{2}$ D) 8 E) $\frac{17}{2}$

8.

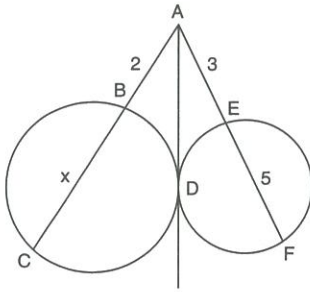


O merkezli çemberin
yarıçapı r
Radius r of a circle with
a center O
|DB| = 2|BC| = 4 br
 $\Rightarrow r = ?$

- A) 4 B) 5 C) 6 D) 8 E) 10



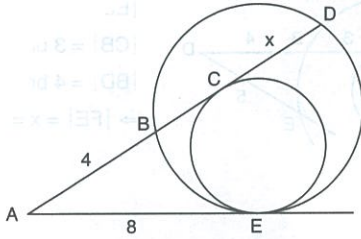
9.



$$\begin{aligned} |AE| &= 3 \text{ br} \\ |EF| &= 5 \text{ br} \\ |AB| &= 2 \text{ br} \\ \Rightarrow |BC| &= x = ? \end{aligned}$$

- A) 2 B) 4 C) 6 D) 8 E) 10

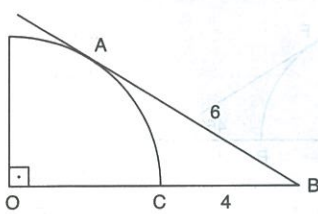
10.



$$\begin{aligned} |AB| &= 4 \text{ br} \\ |AE| &= 8 \text{ br} \\ \Rightarrow |CD| &= x = ? \end{aligned}$$

- A) 4 B) 6 C) 8 D) 10 E) 12

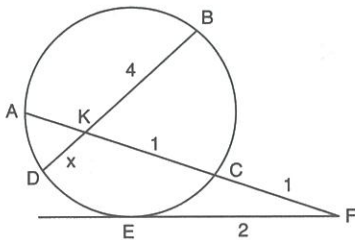
11.



O merkezli çeyrek çemberin yarıçapı r
Radius r of a quarter circle with a center O
 $|AB| = 6 \text{ br}$
 $|BC| = 4 \text{ br}$
 $\Rightarrow r = ?$

- A) $\frac{5}{4}$ B) $\frac{5}{2}$ C) 5 D) $\frac{15}{2}$ E) 10

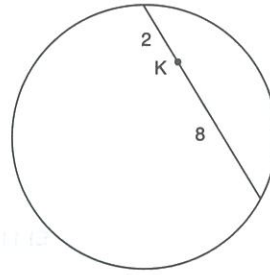
12.



$$\begin{aligned} |KC| &= |CF| = 1 \text{ br} \\ |BK| &= 2|EF| = 4 \text{ br} \\ \Rightarrow |DK| &= x = ? \end{aligned}$$

- A) $\frac{1}{2}$ B) 1 C) $\frac{3}{2}$ D) 2 E) $\frac{5}{2}$

13.

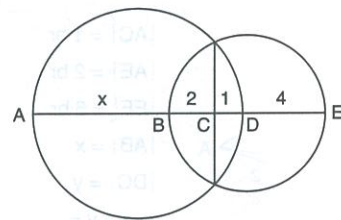


K noktasından geçen en kısa kirisin uzunluğu kaç br dir?

How many unit is the length of the shortest chord that passes through the point K?

- A) 4 B) 6 C) 8 D) 10 E) 12

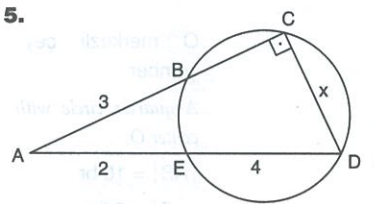
14.



$$\begin{aligned} |BC| &= 2 \text{ br} \\ |CD| &= 1 \text{ br} \\ |DE| &= 4 \text{ br} \\ \Rightarrow |AB| &= x = ? \end{aligned}$$

- A) 10 B) 8 C) 6 D) 4 E) 2

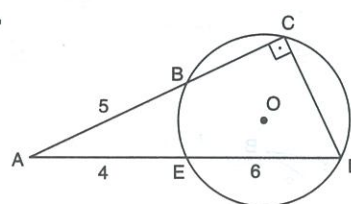
15.



$$\begin{aligned} |AC| &\perp |CD| \\ |AB| &= 3 \text{ br} \\ |AE| &= 2 \text{ br} \\ |ED| &= 4 \text{ br} \\ \Rightarrow |CD| &= x = ? \end{aligned}$$

- A) $2\sqrt{2}$ B) $2\sqrt{3}$ C) 4 D) $2\sqrt{5}$ E) 5

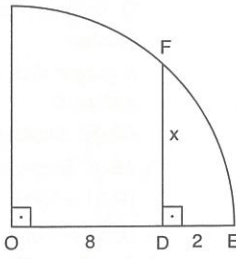
16.

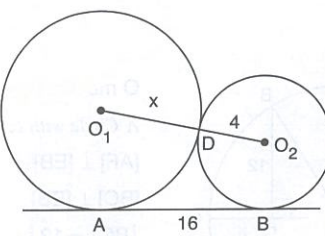


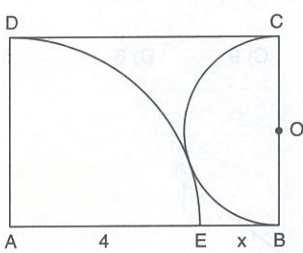
O merkezli çemberin yarıçapı r
Radius r of a circle with a center O
 $|AC| \perp |CD|$
 $|AB| = 5 \text{ br}$
 $|ED| = 6 \text{ br}$
 $|AE| = 4 \text{ br}$
 $\Rightarrow r = ?$

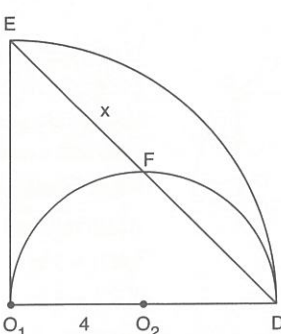
- A) $\sqrt{5}$ B) $\frac{3\sqrt{5}}{2}$ C) 5 D) $3\sqrt{5}$ E) 10

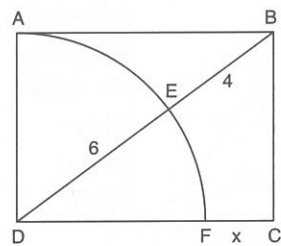


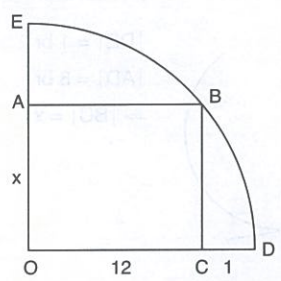
9.  O merkezli çeyrek çember
A quarter circle with a center O
 $|OD| = 8$ br
 $|DE| = 2$ br
 $[FD] \perp [OE]$
 $\Rightarrow |DF| = x = ?$
- A) 2 B) $2\sqrt{2}$ C) 4 D) 6 E) $6\sqrt{2}$

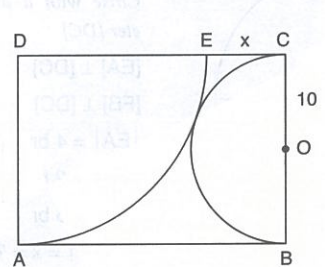
10.  O_1 ve O_2 merkez
 $|DO_2| = 4$ br
 $|AB| = 16$ br
 $\Rightarrow |DO_1| = x = ?$
- A) 16 B) 10 C) 9 D) 8 E) 7

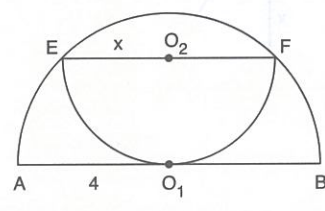
11.  A merkezli çeyrek çember
A quarter circle with a center A
O merkezli yarım çember
A semi circle with a center O
ABCD dikdörtgen
ABCD rectangle
 $|AE| = 4$ br
 $\Rightarrow |EB| = x = ?$
- A) $4\sqrt{2} - 4$ B) $2\sqrt{2}$ C) $2\sqrt{2} + 2$
D) $2\sqrt{2} - 2$ E) $4\sqrt{2} - 2$

12.  O_1 ve O_2 merkezli çemberler
Circles with O_1 and O_2 center points
 $|O_1O_2| = 4$ br
 $\Rightarrow |EF| = x = ?$
- A) $2\sqrt{2}$ B) 3 C) $3\sqrt{2}$ D) 4 E) $4\sqrt{2}$

13.  D merkezli çeyrek çember
A quarter circle with a center D
ABCD dikdörtgen
ABCD rectangle
 $|DE| = 6$ br
 $|EB| = 4$ br
 $\Rightarrow |FC| = x = ?$
- A) 1 B) 2 C) 3 D) 4 E) 5

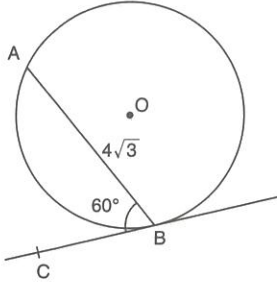
14.  ABCO dikdörtgen
ABCO rectangle
O merkezli çeyrek çember
A quarter circle with a center O
 $|OC| = 12$ br
 $|CD| = 1$ br
 $\Rightarrow |AO| = x = ?$
- A) 2 B) 3 C) 4 D) 5 E) 6

15.  ABCD dikdörtgen
ABCD rectangle
D ve O merkezli çemberler
Circles with D and O center points
 $|CO| = 10$ br
 $\Rightarrow |EC| = x = ?$
- A) $20\sqrt{2} + 2$ B) $20\sqrt{2}$ C) $10\sqrt{2} - 10$
D) $20(\sqrt{2} - 1)$ E) $20\sqrt{2} - 10$

16.  $|AO_1| = 4$ br
 O_1 ve O_2 merkezli yarım çemberler
Semi circles with O_1 and O_2 center points
 $\Rightarrow |EO_2| = x = ?$
- A) $\sqrt{2}$ B) 2 C) $2\sqrt{2}$ D) 4 E) $4\sqrt{2}$



9.



O merkezli çemberin yarıçapı r

Radius r of a circle with a center O

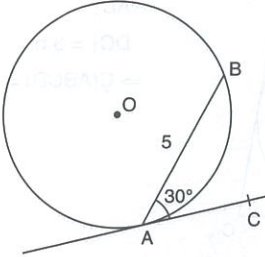
$$m(\widehat{ABC}) = 60^\circ$$

$$|AB| = 4\sqrt{3} \text{ br}$$

$$\Rightarrow r = ?$$

- A) 2 B) 4 C) $4\sqrt{3}$ D) 8 E) $8\sqrt{3}$

10.



O merkezli çemberin yarıçapı r

Radius r of a circle with a center O

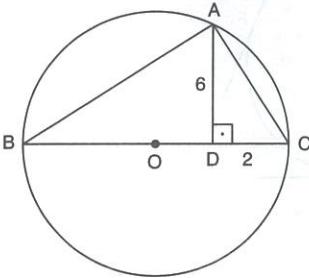
$$|AB| = 5 \text{ br}$$

$$m(\widehat{BAC}) = 30^\circ$$

$$\Rightarrow r = ?$$

- A) $\frac{5}{2}$ B) 5 C) $5\sqrt{3}$ D) 10 E) $10\sqrt{3}$

11.



O merkezli çemberin yarıçapı r

Radius r of a circle with a center O

$$[AD] \perp [BC]$$

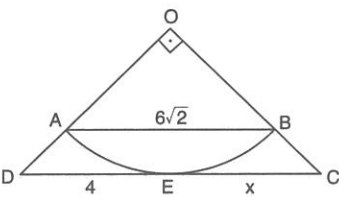
$$|AD| = 6 \text{ br}$$

$$|DC| = 2 \text{ br}$$

$$\Rightarrow r = ?$$

- A) 6 B) $6\sqrt{2}$ C) 9 D) 10 E) $10\sqrt{2}$

12.



O merkezli çeyrek çember

A quarter circle with a center O

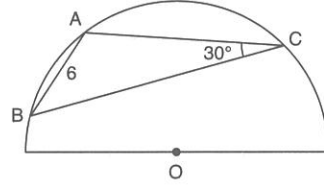
$$|DE| = 4 \text{ br}$$

$$|AB| = 6\sqrt{2} \text{ br}$$

$$\Rightarrow |EC| = x = ?$$

- A) 9 B) 8 C) 6 D) 5 E) 4

13.



O merkezli yarı çemberin yarıçapı r

Radius r of a semi circle with a center O

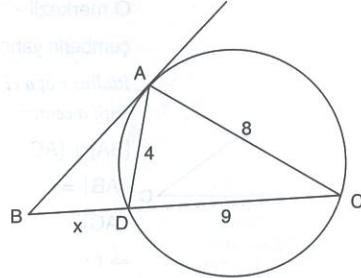
$$m(\widehat{ACB}) = 30^\circ$$

$$|AB| = 6 \text{ br}$$

$$\Rightarrow r = ?$$

- A) $12\sqrt{3}$ B) 12 C) $6\sqrt{3}$ D) 6 E) $3\sqrt{3}$

14.



$$|AD| = 4 \text{ br}$$

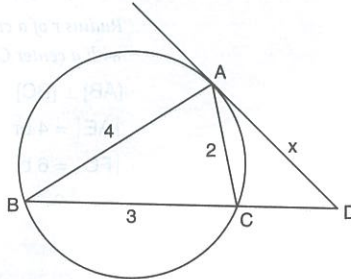
$$|AC| = 8 \text{ br}$$

$$|DC| = 9 \text{ br}$$

$$\Rightarrow |BD| = x = ?$$

- A) 2 B) 3 C) $\frac{7}{2}$ D) $\frac{13}{3}$ E) 4

15.



$$|AB| = 4 \text{ br}$$

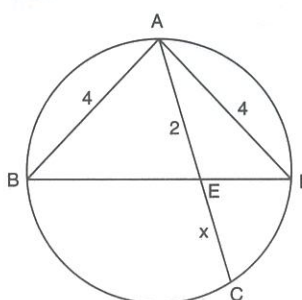
$$|BC| = 3 \text{ br}$$

$$|AC| = 2 \text{ br}$$

$$\Rightarrow |AD| = x = ?$$

- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 3

16.



$$|AB| = |AD| = 4 \text{ br}$$

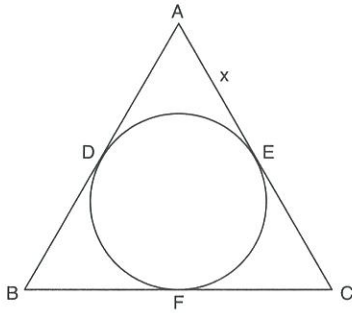
$$|AE| = 2 \text{ br}$$

$$\Rightarrow |EC| = x = ?$$

- A) 2 B) 4 C) 6 D) 8 E) 9



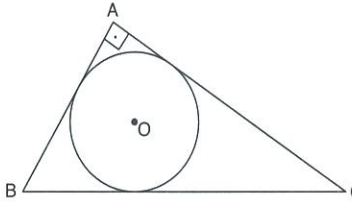
1.



$$\begin{aligned} |AB| &= 6 \text{ br} \\ |AC| &= 8 \text{ br} \\ |BC| &= 4 \text{ br} \\ \Rightarrow |AE| &= x = ? \end{aligned}$$

- A) 5 B) 4 C) 3 D) 2 E) 1

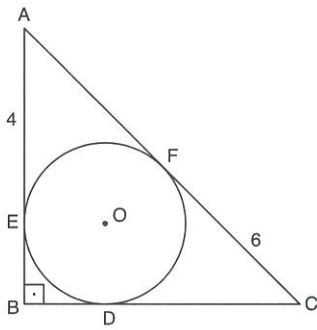
2.



O merkezli
çemberin yarıçapı r
Radius r of a circle
with a center O
[BA] $\perp$ [AC]
|AB| = 6 br
|AC| = 8 br
 $\Rightarrow r = ?$

- A) 5 B) 4 C) 3 D) 2 E) 1

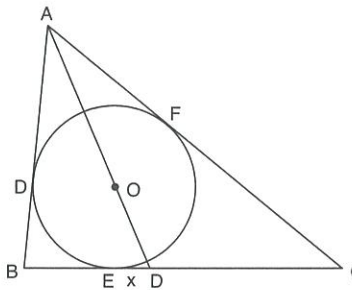
3.



O merkezli çem-
berin yarıçapı r
Radius r of a circle
with a center O
[AB] $\perp$ [BC]
|AE| = 4 br
|FC| = 6 br
 $\Rightarrow r = ?$

- A) 5 B) 4 C) 3 D) 2 E) 1

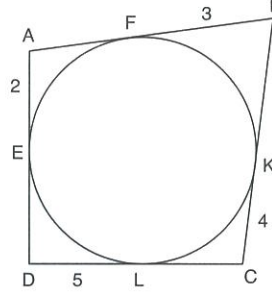
4.



O merkezli
çember
A circle with a
center O
|AB| = 8 br
|AC| = 12 br
|BC| = 10 br
 $\Rightarrow |ED| = x = ?$

- A) $\frac{2}{5}$ B) $\frac{1}{2}$ C) 1 D) $\frac{3}{2}$ E) $\frac{5}{2}$

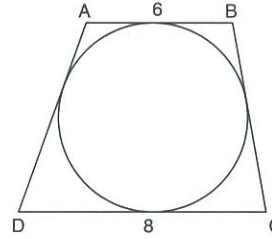
5.



$$\begin{aligned} |FB| &= 3 \text{ br} \\ |AE| &= 2 \text{ br} \\ |KC| &= 4 \text{ br} \\ |DL| &= 5 \text{ br} \\ \Rightarrow \text{Ç}(ABCD) &= ? \end{aligned}$$

- A) 14 B) 21 C) 28 D) 35 E) 42

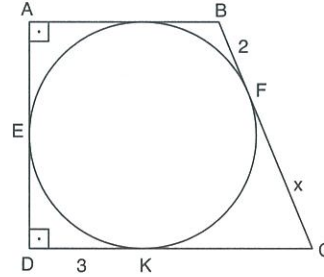
6.



$$\begin{aligned} |AB| &= 6 \text{ br} \\ |DC| &= 8 \text{ br} \\ \Rightarrow \text{Ç}(ABCD) &= ? \end{aligned}$$

- A) 14 B) 21 C) 28 D) 35 E) 42

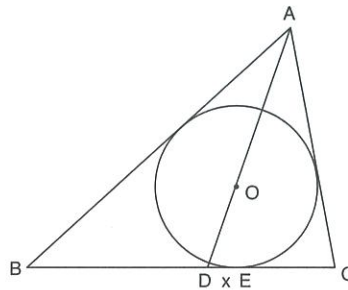
7.



ABCD dik yamuk
ABCD right trapezoid
|BF| = 2 br
|DK| = 3 br
 $\Rightarrow |FC| = x = ?$

- A) 2,5 B) 3 C) 4 D) 4,5 E) 5

8.

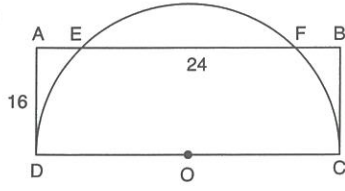


O merkezli çember
A circle with a
center O
|AB| = 9 br
|AC| = 7 br
|BC| = 8 br
 $\Rightarrow |DE| = x = ?$

- A) $\frac{1}{2}$ B) $\frac{3}{4}$ C) $\frac{4}{5}$ D) 1 E) $\frac{5}{4}$



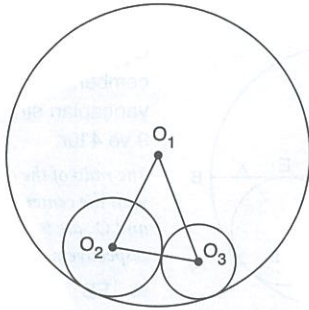
9.



ABCD dikdörtgen
ABCD rectangle
O merkezli yarım
çemberin yarıçapı r
Radius r of a semi
circle with a center O
 $|EF| = 24$ br
 $|AD| = 16$ br
 $\Rightarrow r = ?$

- A) 20 B) 16 C) 15 D) 12 E) 9

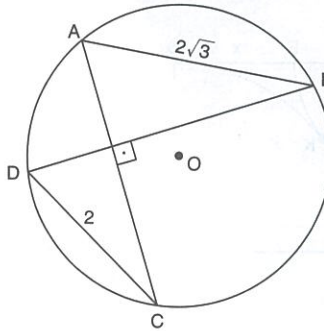
10.



O_1, O_2 ve O_3
merkezli çemberle-
rin yarıçapları
sırasıyla r_1, r_2, r_3 tür.
The radii of the circles
with the centers $O_1,$
 O_2 and O_3 are r_1, r_2, r_3
respectively.
 $\angle(O_1O_2O_3) = 24$ br
 $\Rightarrow r_1 = ?$

- A) 6 B) 9 C) 12 D) 15 E) 24

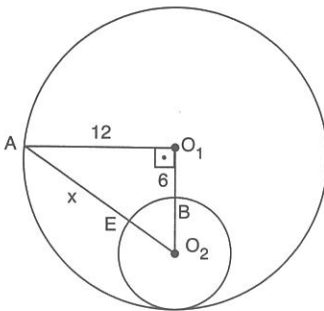
11.



O merkezli
çemberin yarıçapı r
Radius r of a circle
with a center O
 $|AB| = 2\sqrt{3}$ br
 $|DC| = 2$ br
 $\Rightarrow r = ?$

- A) 1 B) 2 C) $2\sqrt{2}$ D) $2\sqrt{3}$ E) 4

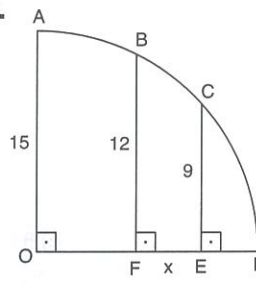
12.



O_1 ve O_2 merkezli
çemberler
Circles with the centers
 O_1 and O_2
 $|O_1B| = 6$ br
 $|O_1A| = 12$ br
 $\Rightarrow |AE| = x = ?$

- A) 3 B) 6 C) 9 D) 10 E) 12

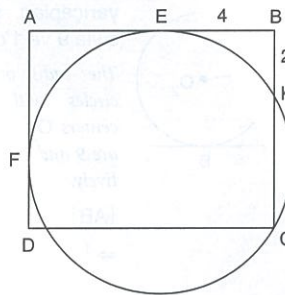
13.



O merkezli çeyrek çember
A quarter circle with a center O
 $[AO] \perp [OD]$
 $[BF] \perp [OD]$
 $[CE] \perp [OD]$
 $|AO| = 15$ br
 $|BF| = 12$ br
 $|CE| = 9$ br
 $\Rightarrow |FE| = x = ?$

- A) 1 B) 3 C) 6 D) 7 E) 9

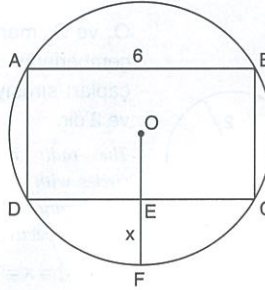
14.



ABCD dikdörtgen
ABCD rectangle
 $|EB| = 4$ br
 $|BK| = 2$ br
 $\Rightarrow A(ABCD) = ?$

- A) 81 B) 72 C) 63 D) 54 E) 48

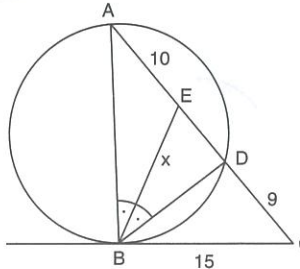
15.



O merkezli çember
A circle with a
center O
ABCD kare
ABCD square
 $|AB| = 6$ br
 $\Rightarrow |EF| = x = ?$

- A) $3\sqrt{6}$ B) $3\sqrt{2}$ C) 3
D) $3 - 3\sqrt{2}$ E) $3\sqrt{2} - 3$

16.



$[AB]$ çap
 $[AB]$ diameter
 $m(\widehat{ABE}) = m(\widehat{EBD})$
 $|AE| = 10$ br
 $|DC| = 9$ br
 $|BC| = 15$ br
 $\Rightarrow |EB| = x = ?$

- A) 3 B) 6 C) $6\sqrt{5}$ D) 12 E) $12\sqrt{5}$



1. O merkezli çember
Circle with a center O
 $|OB| = 3 \text{ br}$
 $|OC| = 5 \text{ br}$
 $\Rightarrow |AB| = x = ?$
- A) 1 B) 2 C) 3 D) 4 E) 8

2. O_1 ve O_2 merkezli çemberlerin yarıçapları sırasıyla 9 ve 1'dir.
The radii of the circles with the centers O_1 and O_2 are 9 and 1 respectively.
 $|AB| = 15 \text{ br}$
 $\Rightarrow |EF| = x = ?$
- A) 10 B) 8 C) 7 D) 6 E) 5

3. O_1 ve O_2 merkezli çemberlerin yarıçapları sırasıyla 4 ve 2'dir.
The radii of the circles with the centers O_1 and O_2 are 4 and 2 respectively.
 $\Rightarrow |AB| = x = ?$
- A) 5 B) $4\sqrt{2}$ C) 6 D) $4\sqrt{3}$ E) 8

4. O_1 ve O_2 merkezli çemberlerin yarıçapları sırasıyla 8 ve 4'tür.
The radii of the circles with the centers O_1 and O_2 are 8 and 4 respectively.
 $|AB| = 9 \text{ br}$
 $\Rightarrow |O_1O_2| = ?$
- A) 15 B) 12 C) 9 D) 8 E) 6

5. O_1BCD dikdörtgen
 O_1BCD rectangle
 O_1 ve O_2 merkezli çemberler
Circles with the centers O_1 and O_2
 $|O_1D| = 6 \text{ br}$
 $|O_2C| = 4 \text{ br}$
 $\Rightarrow |KB| = x = ?$
- A) 2 B) 3 C) 4 D) 5 E) 6

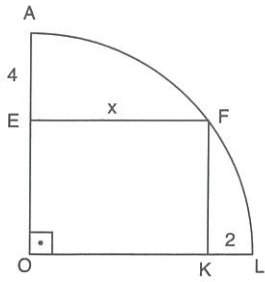
6. O_1 ve O_2 merkezli çemberlerin yarıçapları sırasıyla 9 ve 4'tür.
The radii of the circles with the centers O_1 and O_2 are 9 and 4 respectively.
 $\Rightarrow |EB| = x = ?$
- A) 7 B) 6 C) 5 D) 4 E) 3

7. A ve C merkezli çeyrek çemberler
quarter circles with the centers A and C
 $ABCD$ dikdörtgen
 $ABCD$ rectangle
 $|AK| = 2 \text{ br}$
 $|KB| = 1 \text{ br}$
 $\Rightarrow |ED| = x = ?$
- A) 1 B) 2 C) 3 D) 4 E) 5

8. O merkezli çeyrek çemberin yarıçapı r
Radius r of a quarter circle with a center O
 $|BA| = |AO|$
 $|BA| = 2\sqrt{3} \text{ br}$
 $\Rightarrow r = ?$
- A) $4\sqrt{3}$ B) 6 C) 4 D) $2\sqrt{3}$ E) 2



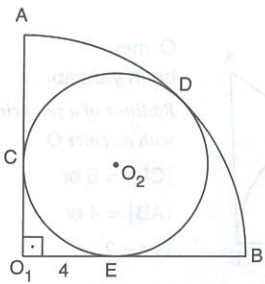
9.



O merkezli çember
Circle with a center O
EFKO dikdörtgen
EFKO rectangle
 $|AE| = 4$ br
 $|KL| = 2$ br
 $\Rightarrow |EF| = x = ?$

- A) 6 B) 7 C) 8 D) 9 E) 10

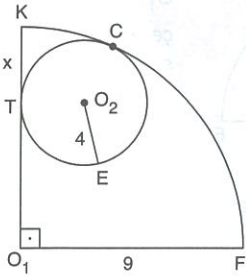
10.



O_1 ve O_2 merkezli
çemberlerin yarıçapları
sırasıyla r_1 ve r_2 dir.
The radii of the circles with
the centers O_1 and O_2 are
 r_1 and r_2 respectively.
 $|O_1E| = 4$ br
 $\Rightarrow r_2 = ?$

- A) 2 B) $2\sqrt{3}$ C) 4 D) $4\sqrt{3}$ E) 8

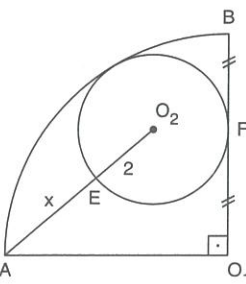
11.



O_1 ve O_2 merkezli
çemberler
Circles with the centers
 O_1 and O_2
 $|O_2E| = 4$ br
 $|O_1F| = 9$ br
 $\Rightarrow |TK| = x = ?$

- A) 2 B) 4 C) 6 D) 7 E) 8

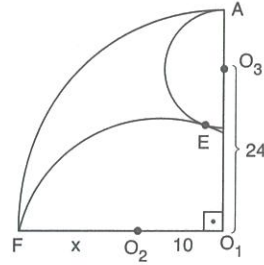
12.



O_1 ve O_2 merkezli
çemberler
Circles with the centers
 O_1 and O_2
 $|BF| = |FO_1|$
 $|O_2E| = 2$ br
 $\Rightarrow |EA| = x = ?$

- A) $\frac{2\sqrt{41}}{3} - 2$ B) $2\sqrt{41} - 4$ C) $\sqrt{41} - 4$
D) 4 E) 8

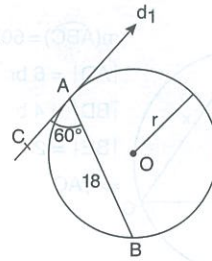
13.



O_1, O_2, O_3 merkezli
çemberler
Circles with the centers
 O_1, O_2 and O_3
 $|O_1O_3| = 24$ br
 $|O_1O_2| = 10$ br
 $\Rightarrow |O_2F| = x = ?$

- A) 6 B) 10 C) 14 D) 16 E) 20

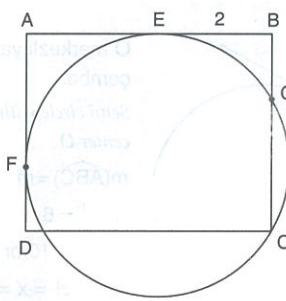
14.



$m(\widehat{CAB}) = 60^\circ$
O merkezli çember
A circle with a center O
 $|AB| = 18$ br
 d_1 , A noktasında teğet
 d_1 is tangent at point A
 $\Rightarrow r = ?$

- A) $6\sqrt{3}$ B) $4\sqrt{3}$ C) $2\sqrt{3}$ D) 4 E) 6

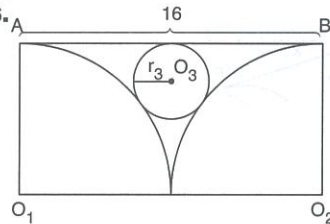
15.



ABCD dikdörtgen
ABCD rectangle
 $|BC| = 4$ br
 $|EB| = 2$ br
 $\Rightarrow A(ABCD) = ?$

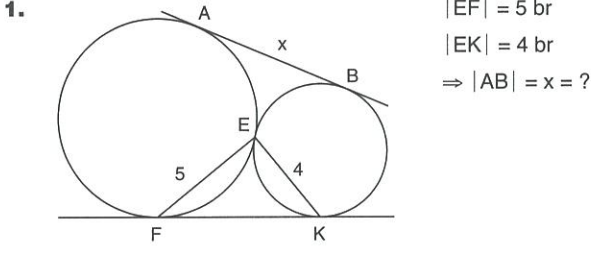
- A) 36 B) 24 C) 18 D) 9 E) 4,5

16.

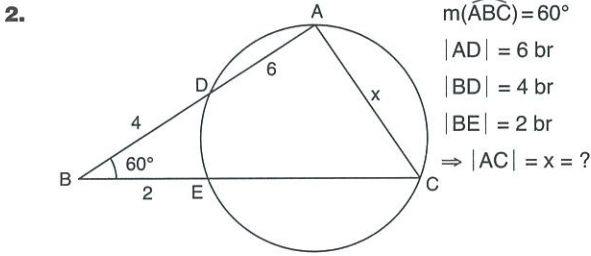


O_1, O_2 ve O_3
merkezli çemberler
Circles with the centers
 O_1, O_2 and O_3
ABO2O1 dikdörtgen
ABO2O1 rectangle
 $|AB| = 16$ br
 $\Rightarrow r_3 = ?$

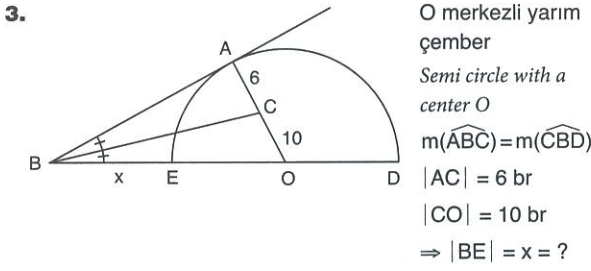
- A) 1 B) 2 C) 3 D) 4 E) 5



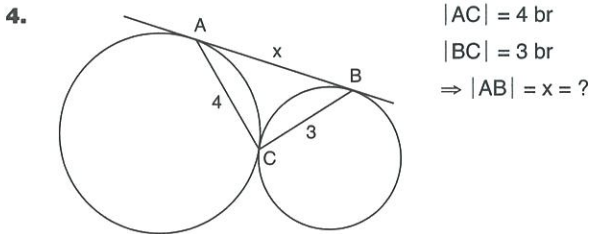
- A) 1 B) 3 C) 5 D) $\sqrt{41}$ E) 9



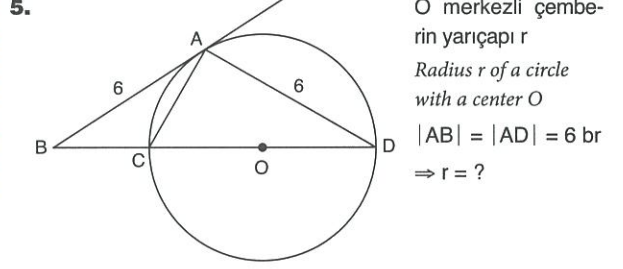
- A) 10 B) $10\sqrt{3}$ C) $10\sqrt{2}$ D) 20 E) $20\sqrt{3}$



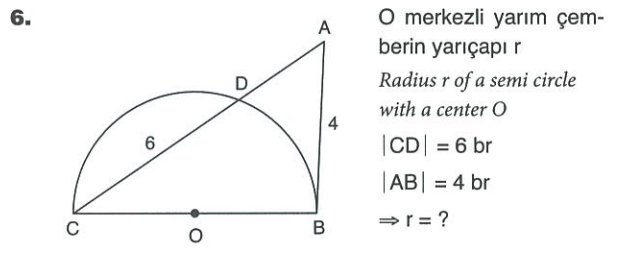
- A) 2 B) 4 C) 6 D) 8 E) 10



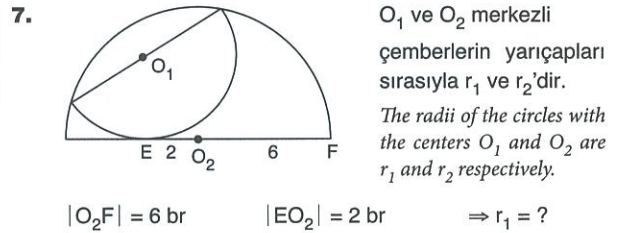
- A) 2 B) $2\sqrt{2}$ C) 3 D) $3\sqrt{2}$ E) 5



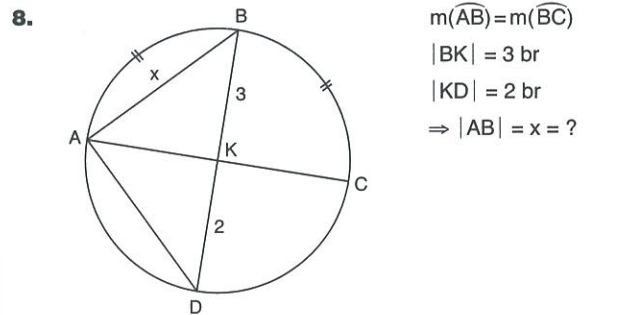
- A) 2 B) $2\sqrt{3}$ C) 3 D) 6 E) $4\sqrt{3}$



- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) 4 D) 6 E) $6\sqrt{3}$

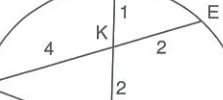


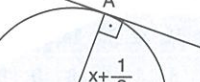
- A) 3 B) 4 C) $2\sqrt{5}$ D) $3\sqrt{3}$ E) $4\sqrt{3}$



- A) $\frac{3\sqrt{15}}{2}$ B) $\sqrt{15}$ C) 3 D) $\sqrt{6}$ E) $\frac{\sqrt{6}}{2}$



9. 
- A) 12 B) 10 C) 8 D) 6 E) 4

10. 
- O merkezli
çember
Circle with a
center O
- $|AB| = 4\sqrt{3}$ br
 $|BC| = 6$ br
 $|AO| = x + \frac{1}{2}$
 $\Rightarrow |OD| = x = ?$
- A) $\frac{3}{4}$ B) 2 C) $\frac{5}{2}$ D) 3 E) $\frac{7}{2}$

- 11.
-
- $m(\widehat{CBD}) = m(\widehat{DBE})$ $|CD| = 2$ br $|DE| = 3$ br
- $\Rightarrow |AB| = x = ?$
- A) $\frac{5}{3}$ B) $\frac{5}{2}$ C) $\frac{10}{3}$ D) $4\sqrt{2}$ E) 6

- 12.**
-
- O_1, O_2, O_3 merkezli
çemberler
Circles with the centers
 O_1, O_2 and O_3
 $|O_3B| = 9$ br
 $m(\widehat{CE}) = m(\widehat{EO_2})$
 $\Rightarrow |AO_2| = x = ?$
- A) 12 B) 15 C) 24 D) 27 E) 54

- 13.**

O merkezli yarımlar
çember
Semi circle with a
center O
[CB] $\perp$ [BE]
[BE] $\perp$ [ED]
|AC| = 6 br
|BF| = 4 br
 $\Rightarrow A(BCDE) = ?$

A) 64 B) 48 C) 40 D) 38 E) 36

14.

O merkezli çeyrek
çember
A quarter circle with a
center O
[AO] $\perp$ [BO]
|AC| = $6\sqrt{2}$ br
|AO| = $5\sqrt{2}$ br
 $\Rightarrow |BC| = x = ?$

A) 1 B) 2 C) $2\sqrt{2}$ D) 4 E) $4\sqrt{2}$

15. 
- $m(\widehat{BAC}) = m(\widehat{CAD})$
 $[AC] \perp [BD]$
 $|AE| = 2|EC| = 4$ br
 $\Rightarrow |BC| = x = ?$
- A) 6 B) 4 C) $2\sqrt{3}$ D) $2\sqrt{2}$ E) 2

16. *O* merkezli çember
Circle with a center *O*
 $[AD] \perp [BC]$
 $2|BD| = |DC| = 8$ br
 $\Rightarrow |AF| = x = ?$
-
- A) $12\sqrt{5}$ B) $8\sqrt{5}$ C) $4\sqrt{5}$ D) $\frac{12\sqrt{5}}{5}$ E) $\sqrt{5}$



ÇEMBERDE UZUNLUK LENGTH IN CIRCLE

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	E	D	E	B	A	C	C	D	A	D	D	C	B	C	B

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	A	B	A	C	A	E	B	E	C	B	A	C	B	D	B

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	E	A	B	E	B	B	C	D	A	A	E	B	D	D	C

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	C	B	C	C	D	E	B	B	B	D	A	D	B	C	C

TEST 5

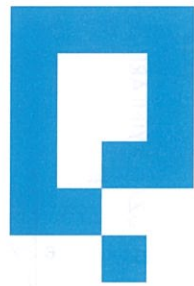
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	D	C	C	C	D	A	A	C	B	E	B	B	E	C

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	B	A	E	B	B	C	C	C	C	A	E	A	C	B

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	B	E	B	B	B	B	A	A	E	E	C	B	C	D

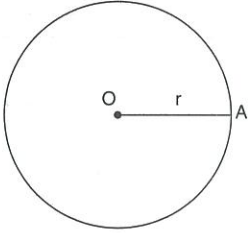


DAIREDE ALAN

AREA IN CIRCULAR REGION

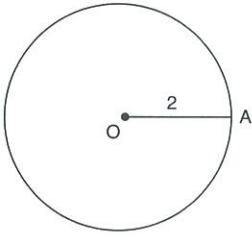


ÖZELLİK|Property 1



Çemberin Çevresi = $2\pi r$
Circumference of a circle = $2\pi r$

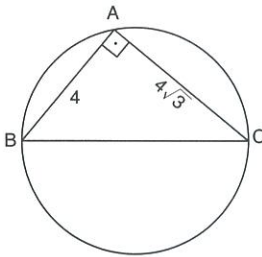
1.



⇒ O merkezli
çemberin çevresi = ?
Circumference of a circle
with a center O = ?

4π

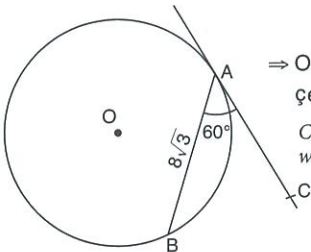
2.



⇒ Çemberin Çevresi = ?
Circumference of a circle = ?

8π

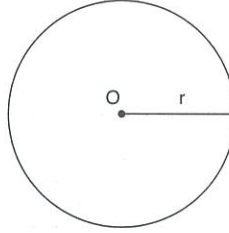
3.



⇒ O merkezli
çemberin çevresi = ?
Circumference of a circle
with a center O = ?

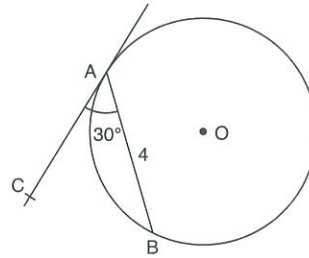
16π

ÖZELLİK|Property 2



Dairenin Alanı = πr^2
Area of a circular region = πr^2

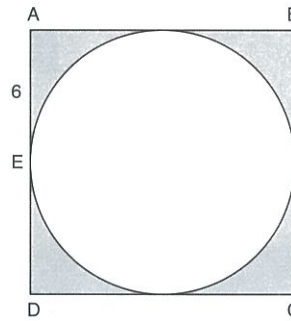
1.



⇒ Dairenin Alanı = ?
Area of a circular region = ?

16π

2.

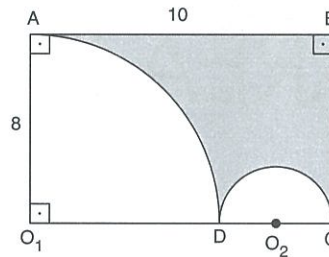


ABCD kare
ABCD square

⇒ Taralı Alan = ?
Shaded area = ?

144 - 36π

3.

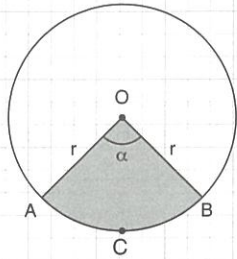


⇒ Taralı Alan = ?
Shaded area = ?

80 - $\frac{33}{2}\pi$



ÖZELLİK|Property 3

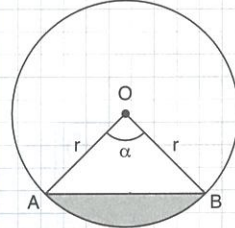


$$\text{Taralı Alan} = \pi r^2 \cdot \frac{\alpha}{360^\circ}$$

Shaded area

$$|\widehat{ACB}| = 2\pi r \cdot \frac{\alpha}{360^\circ}$$

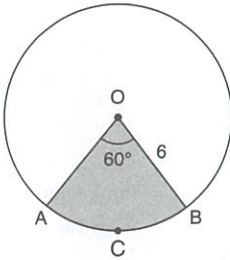
ÖZELLİK|Property 4



$$\text{Taralı Alan} = \pi r^2 \cdot \frac{\alpha}{360} - \frac{1}{2} \cdot r^2 \cdot \sin \alpha$$

Shaded area

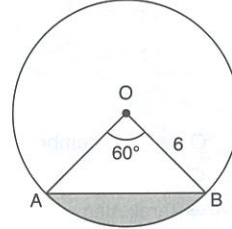
1.



O merkezli çember
Circles with a center O
⇒ Taralı Alan = ?
Shaded area = ?
⇒ $|\widehat{ACB}| = ?$

$$6\pi, 2\pi$$

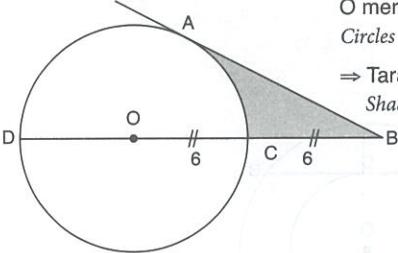
1.



O merkezli çember
Circles with a center O
⇒ Taralı Alan = ?
Shaded area = ?

$$6\pi - 9\sqrt{3}$$

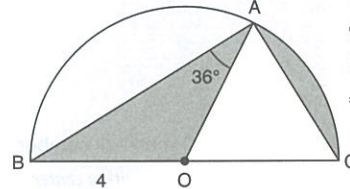
2.



O merkezli çember
Circles with a center O
⇒ Taralı Alan = ?
Shaded area = ?

$$18\sqrt{3} - 6\pi$$

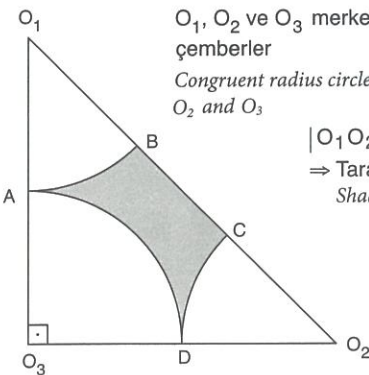
2.



O merkezli çember
Circles with a center O
⇒ Taralı Alan = ?
Shaded area = ?

$$\frac{16}{5}\pi$$

3.



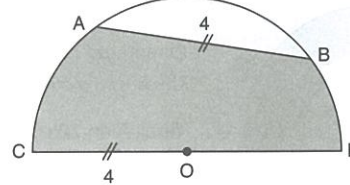
O₁, O₂ ve O₃ merkezli eşit yarıçaplı çemberler
Congruent radius circle with centers of O₁, O₂ and O₃

$$|O_1 O_2| = 8\sqrt{2} \text{ br}$$

⇒ Taralı Alan = ?
Shaded area = ?

$$32 - 8\pi$$

3.

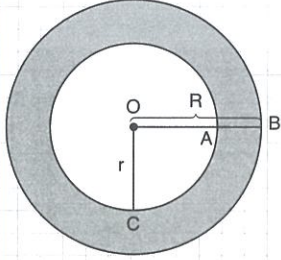


O merkezli çember
Circles with a center O
⇒ Taralı Alan = ?
Shaded area = ?

$$\frac{16\pi}{3} + 4\sqrt{3}$$



ÖZELLİK|Property 5

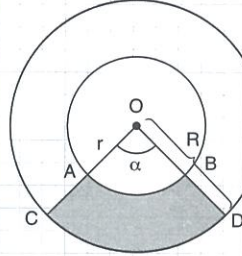


O merkezli çember
Circle with a center O

$$\text{Taralı Alan} = \pi(R^2 - r^2)$$

Shaded area

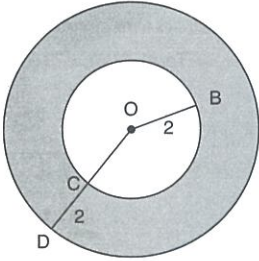
ÖZELLİK|Property 6



$$\text{Taralı Alan} = \pi(R^2 - r^2) \frac{\alpha}{360^\circ}$$

Shaded area

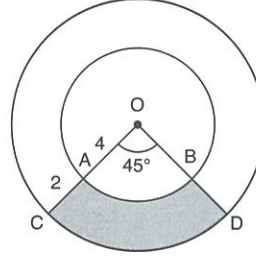
1.



O merkezli çember
Circle with a center O
 $\Rightarrow$ Taralı Alan = ?
Shaded area = ?

$$12\pi$$

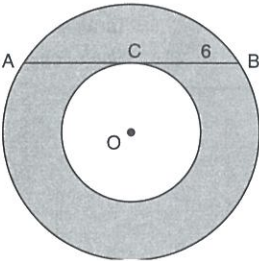
1.



$\Rightarrow$ Taralı Alan = ?
Shaded area = ?

$$\frac{5\pi}{2}$$

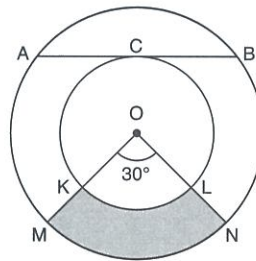
2.



O merkezli çember
Circle with a center O
 $\Rightarrow$ Taralı Alan = ?
Shaded area = ?

$$36\pi$$

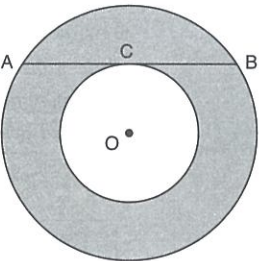
2.



$|AB| = 12$ br
 $\Rightarrow$ Taralı Alan = ?
Shaded area = ?

$$3\pi$$

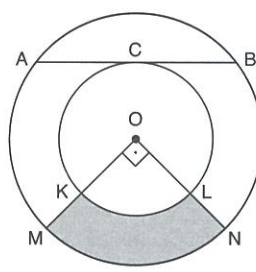
3.



O merkezli çember
Circle with a center O
Taralı Alan $72\pi br^2$
Shaded area $72\pi br^2$
 $\Rightarrow |AB| = ?$

$$12\sqrt{2}$$

3.

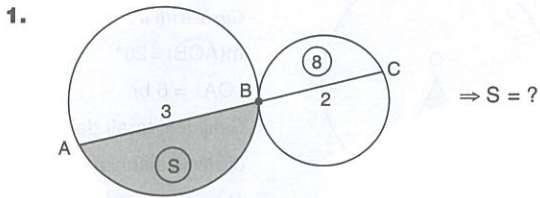
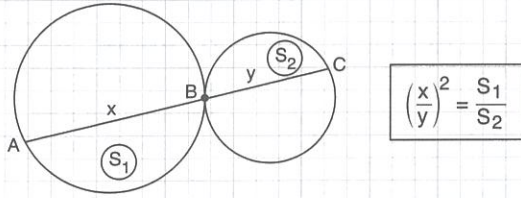


Taralı Alan $45\pi br^2$
Shaded area $45\pi br^2$
 $\Rightarrow |AB| = ?$

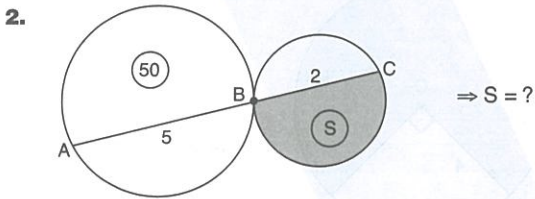
$$12\sqrt{5}$$



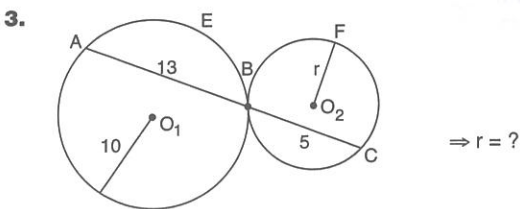
ÖZELLİK|Property 7



18

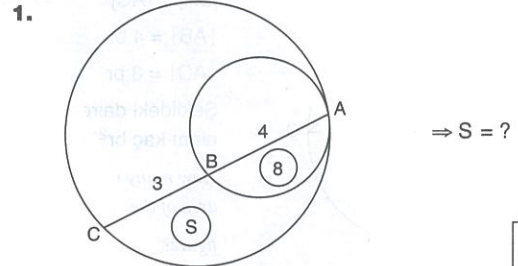
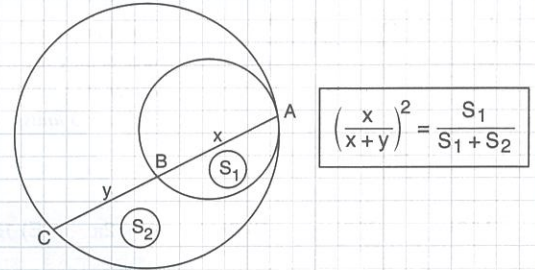


8

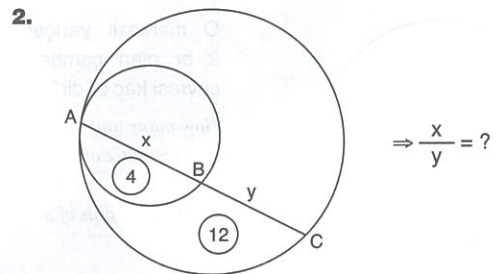


$\frac{50}{13}$

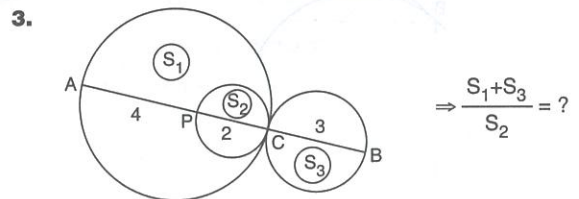
ÖZELLİK|Property 8



$\frac{33}{2}$



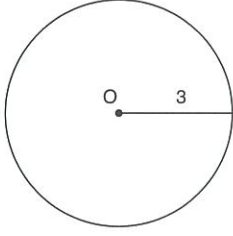
1



$\frac{41}{4}$



1.



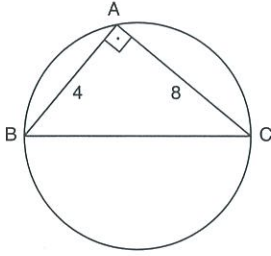
- A) 3π B) 6π C) 9π D) 12π E) 15π

O merkezli yarıçapı 3 br olan dairenin alanı kaç br^2 'dir?

How many unit^2 is the area of the circle with a center of O, having an radius of 3 units?

PUZA YAYINLARI

2.



- A) 10π B) 12π C) 15π D) 20π E) 25π

$[BA] \perp [AC]$

$|AB| = 4 \text{ br}$

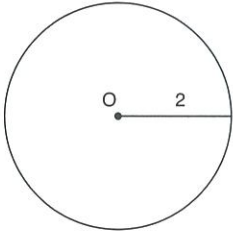
$|AC| = 8 \text{ br}$

Şekildeki dairenin alanı kaç br^2 'dir?

How many unit^2 is the area of the circle in the figure?

PUZA YAYINLARI

3.

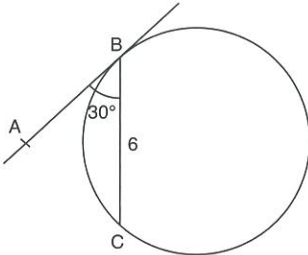


- A) 2π B) 4π C) 6π D) 8π E) 10π

O merkezli yarıçapı 2 br olan çemberin çevresi kaç br'dir?

How many unit is the circumference of the circle with a center O, having an radius of 2 units?

4.



- A) 3π B) 6π C) 8π D) 12π E) 16π

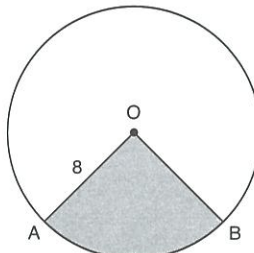
$m(\widehat{ABC}) = 30^\circ$

$|BC| = 6 \text{ br}$

Şekildeki çemberin çevresi kaç br'dir?

How many unit is the circumference of the circle in figure?

8.



- A) 4π B) 6π C) 8π D) 12π E) 14π

O merkezli çemberin yarıçapı 8 br

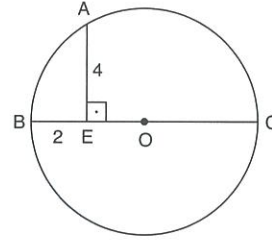
A circle with a center O, has a radius of 8 units:

$|\widehat{ACB}| = 2\pi$

Şekildeki taralı daire diliminin alanı kaç br^2 'dir?

How many unit^2 is the shaded slice of the circle in figure?

5.



- A) 6π B) 8π C) 10π D) 12π E) 14π

$[AE] \perp [BC]$

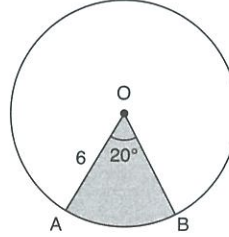
$|AE| = 4 \text{ br}$

$|BE| = 2 \text{ br}$

O merkezli çemberin çevresi kaç br'dir?

How many unit is the circumference of the O circle?

6.



- A) π B) 2π C) 4π D) 5π E) 6π

O merkezli çember

Circle with a center O

$m(\widehat{AOB}) = 20^\circ$

$|OA| = 6 \text{ br}$

Şekildeki taralı daire

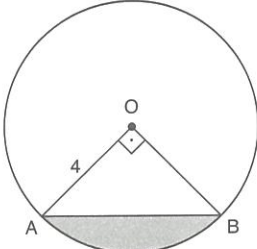
diliminin alanı kaç br^2 'dir?

How many unit^2 is the shaded slice of the circle in the figure?

PUZA YAYINLARI



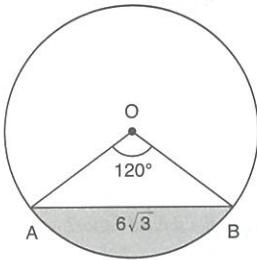
9.



O merkezli çemberin yarıçapı 4 br
A circle with a center O, has a radius of 4 units
[AO] $\perp$ [OB]
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $4\pi - 8$ B) $4\pi - 4$ C) $4\pi + 4$
D) 8π E) 12π

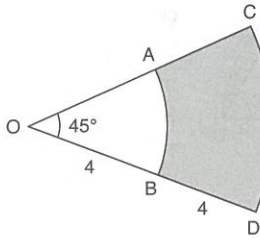
10.



O merkezli çember
Circle with a center O
 $m(\widehat{AOB}) = 120^\circ$
|AB| = $6\sqrt{3}$ br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $6\pi - 9\sqrt{3}$ B) $12\pi - 9\sqrt{3}$ C) $6\pi + 3\sqrt{3}$
D) 9π E) 12π

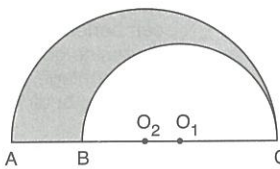
11.



O merkezli çember yayları
Arc of circumference with a center O
 $m(\widehat{COD}) = 45^\circ$
|OB| = |BD| = 4 br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) 4π B) 6π C) 8π D) 10π E) 12π

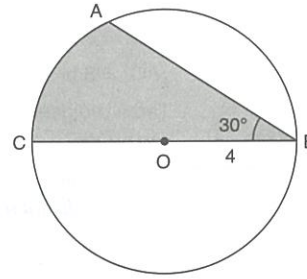
12.



O₁ ve O₂ merkezli yarım çemberler
Semi-circles with O₁ and O₂ center points
 $2|AB| = |BC| = 8$ br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) 5π B) 8π C) 10π D) 16π E) 20π

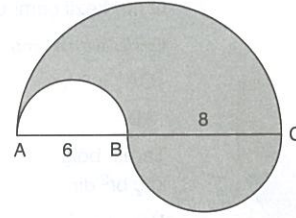
13.



O merkezli çemberin yarıçapı 4 br
A circle with a center O, has a radius of 4 units
 $m(\widehat{ABC}) = 30^\circ$
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $8\pi - 4\sqrt{3}$ B) $\frac{40\pi}{3} - 4\sqrt{3}$ C) $\frac{40\pi}{3} + 2\sqrt{3}$
D) $16\pi - 2\sqrt{3}$ E) $\frac{8\pi}{3} + 4\sqrt{3}$

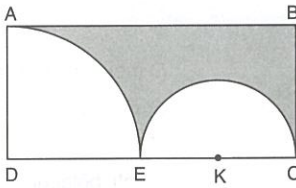
14.



Şekildeki gibi üç yarım daire iç içedir.
Three semi-circles are nested as in figure
|AB| = 6 br
|BC| = 8 br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) 12π B) 16π C) 18π D) 20π E) 28π

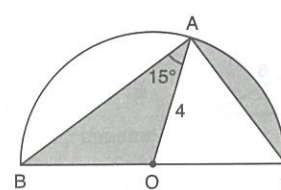
15.



ABCD dikdörtgen, D ve K merkezli çemberler
A rectangle of ABCD, circles with the centers of D and K
|DE| = 4 br
|EC| = 6 br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $24 - 7\pi$ B) $40 - \frac{17\pi}{2}$ C) $20 - 4\pi$
D) $40 - 4\pi$ E) $20 + 4\pi$

16.

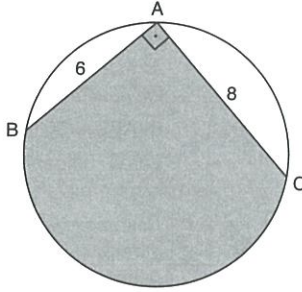


O merkezli yarım çember
Semi-circle with a center O
|AO| = 4 br
 $m(\widehat{BAO}) = 15^\circ$
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) π B) $\frac{4}{3}\pi$ C) $\frac{3\pi}{2}$ D) 2π E) $\frac{7\pi}{3}$



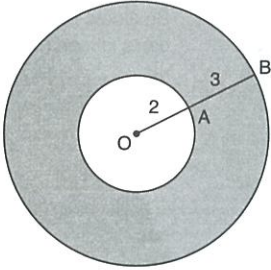
1.



$[BA] \perp [AC]$
 $|AB| = 6 \text{ br}$
 $|AC| = 8 \text{ br}$
 Taralı bölgenin alanı kaç br^2 'dir?
 How many unit^2 is the area of the shaded sector?

- A) 10 B) 24 C) 25π
 D) $\frac{25\pi}{2} + 24$ E) $25\pi + 24$

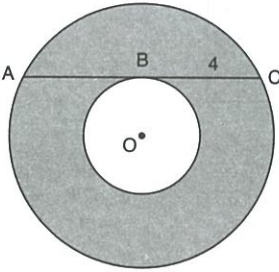
2.



O merkezli çemberler
 Circles with a center O
 $|OA| = 2 \text{ br}$
 $|AB| = 3 \text{ br}$
 Taralı bölgenin alanı kaç br^2 'dir?
 How many unit^2 is the area of the shaded sector?

- A) π B) 4π C) 9π D) 21π E) 25π

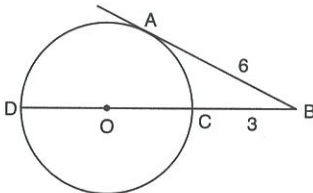
3.



O merkezli çemberler
 Circles with a center O
 $|BC| = 4 \text{ br}$
 Taralı bölgenin alanı kaç br^2 'dir?
 How many unit^2 is the area of the shaded sector?

- A) 4π B) 8π C) 16π D) 32π E) 64π

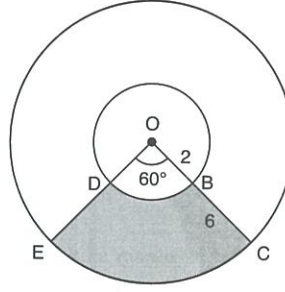
4.



O merkezli çember
 Circles with a center O
 $|AB| = 2|BC| = 6 \text{ br}$
 Çemberin çevresi kaç br 'dir?
 How many unit is the circumference of the circle?

- A) 144π B) 81π C) 36π D) $\frac{81\pi}{4}$ E) 9π

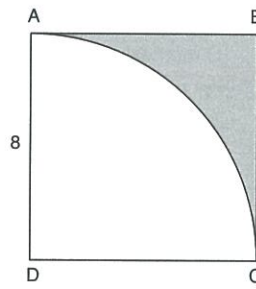
5.



O merkezli çemberler
 Circles with a center O
 $3|OB| = |BC| = 6 \text{ br}$
 $m(\widehat{EOC}) = 60^\circ$
 Taralı bölgenin alanı kaç br^2 'dir?
 How many unit^2 is the area of the shaded sector?

- A) 10π B) $\frac{17\pi}{2}$ C) 8π D) $\frac{15\pi}{2}$ E) 6π

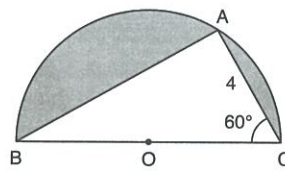
6.



D merkezli çeyrek çember
 A quarter circle with a center D
 ABCD kare
 ABCD square
 $|AD| = 8 \text{ br}$
 Taralı bölgenin alanı kaç br^2 'dir?
 How many unit^2 is the area of the shaded sector?

- A) $64 - 16\pi$ B) $16\pi - 32$ C) $32 - 8\pi$
 D) $16\pi + 64$ E) $64\pi + 16$

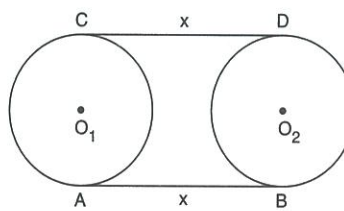
7.



O merkezli yarım çember
 Semi-circle with a center O
 $m(\widehat{ACB}) = 60^\circ$
 $|AC| = 4 \text{ br}$
 Taralı bölgenin alanı kaç br^2 'dir?
 How many unit^2 is the area of the shaded sector?

- A) $8\pi - 8\sqrt{3}$ B) $8\pi - 4\sqrt{3}$ C) 4π
 D) $4\pi + 4$ E) 8π

8.

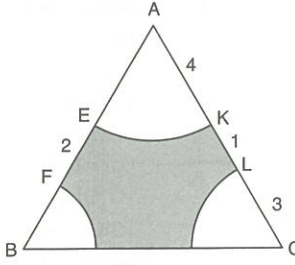


O_1 ve O_2 merkezli yarıçapları 3 br olan çemberlerin çevresine gerilmiş ipin uzunluğu 30 br ise x kaç br 'dir?
 $(\pi = 3)$
 If the length of a thread which is surrounded on circles with a radius of 3 units, having centers of O_1, O_2 is 30 units, then how many unit is x?

- A) 4 B) 5 C) 6 D) 7 E) 8



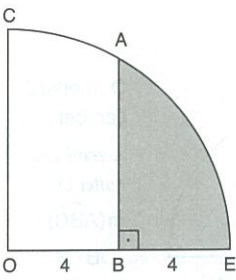
9.



ABC eşkenar üçgen
ABC equilateral triangle
A, B, C merkezli daire dilimleri
Slices of circle with the centers of A, B, C.
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

- A) $16\sqrt{3} - \frac{29\pi}{6}$ B) $8\sqrt{3} - 4\pi$ C) $16\sqrt{3} - \frac{21\pi}{2}$
D) $2\sqrt{3}$ E) $16\sqrt{3}$

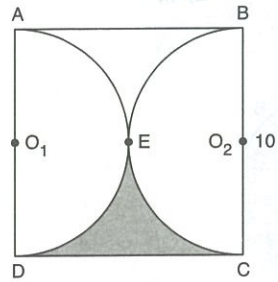
10.



O merkezli çeyrek çember
A quarter circle with a center O
[AB] $\perp$ [OE]
|OB| = |BE| = 4 br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

- A) $\frac{7\pi}{3} - 8$ B) $\frac{4\pi}{3} - 4$ C) $\frac{4\pi}{3} + 8\sqrt{3}$
D) $\frac{8\pi}{3} + 8$ E) $\frac{32\pi}{3} - 8\sqrt{3}$

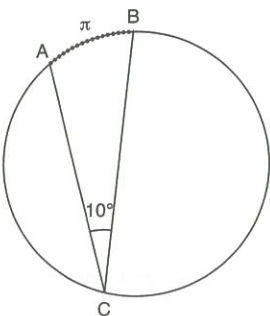
11.



O_1 ve O_2 merkezli yarım çemberler
Semi-circles with O_1 and O_2 center points
ABCD kare
ABCD square
|BC| = 10 br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

- A) 100 B) $50 - 5\pi$ C) 25
D) $100 - 25\pi$ E) $50 - \frac{25\pi}{2}$

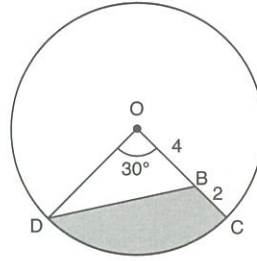
12.



$|AB| = \pi$
 $m(\widehat{ACB}) = 10^\circ$
Şekildeki dairenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the circle in the figure?

- A) 3 B) 9π C) 9 D) 36π E) 81π

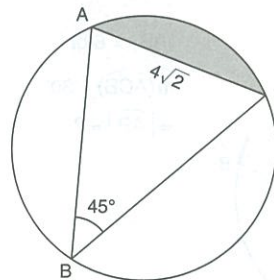
13.



O merkezli çember
Circles with a center O
|OB| = 2|BC| = 4 br
 $m(\widehat{DOC}) = 30^\circ$
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

- A) $3\pi - 6$ B) $3\pi - 2$ C) $6\pi - 2$ D) 3π E) 6π

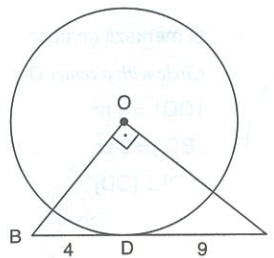
14.



$m(\widehat{ABC}) = 45^\circ$
|AC| = $4\sqrt{2}$ br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

- A) $4\pi - 8$ B) $4\pi - 4$ C) $2\pi + 4$
D) $4\pi + 4$ E) $8\pi - 4$

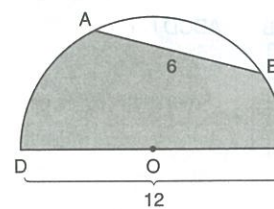
15.



O merkezli çember
Circles with a center O
[BO] $\perp$ [OC]
|BD| = 4 br
|DC| = 9 br
Şekildeki dairenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the circle in figure?

- A) 12π B) 16π C) 20π D) 25π E) 36π

16.

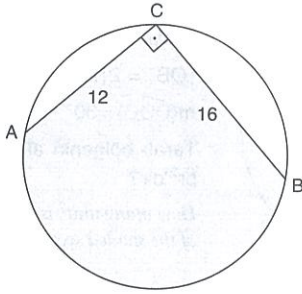


O merkezli yarım çember
Semi-circle with a center O
|AB| = 6 br
|DC| = 12 br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

- A) $6\pi - 9\sqrt{3}$ B) $4\pi + 9\sqrt{3}$ C) $6\pi + 4\sqrt{3}$
D) $12\pi - 9\sqrt{3}$ E) $12\pi + 9\sqrt{3}$



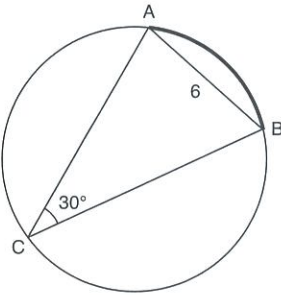
1.



$[AC] \perp [CB]$
 $|AC| = 12 \text{ br}$
 $|BC| = 16 \text{ br}$
 $\Rightarrow \text{Taralı Alan} = ?$

- A) $40\pi + 90$ B) $40\pi + 96$ C) $20\pi - 96$
 D) $50\pi + 96$ E) $28\pi - 80$

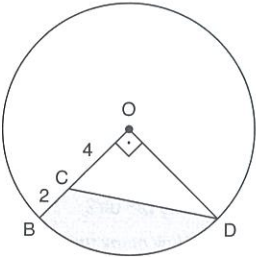
2.



$|AB| = 6 \text{ br}$
 $m(\widehat{ACB}) = 30^\circ$
 $\Rightarrow |\widehat{AB}| = ?$

- A) π B) 2π C) $\frac{5\pi}{2}$ D) 4π E) 5π

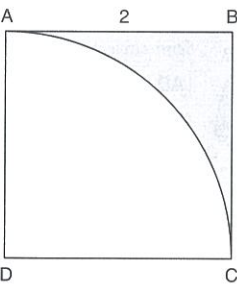
3.



O merkezli çember
 Circle with a center O
 $|OC| = 4 \text{ br}$
 $|BC| = 2 \text{ br}$
 $[BO] \perp [OD]$
 $\Rightarrow \text{Taralı Alan} = ?$
 Shaded Area = ?

- A) $6\pi + 6$ B) $9\pi + 12$ C) $9\pi - 12$
 D) $8\pi - 12$ E) $6\pi - 6$

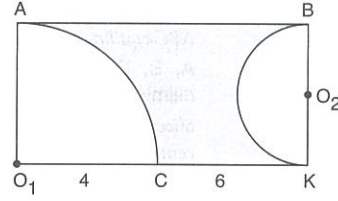
4.



ABCD kare
 ABCD square
 D merkezli çeyrek çember
 A quarter circle with a center D
 $|AB| = 2 \text{ br}$
 $\Rightarrow \text{Taralı Alan} = ?$
 Shaded Area = ?

- A) $2 - \pi$ B) $2 + \pi$ C) $\pi - 2$
 D) $4 - \pi$ E) $4 + \pi$

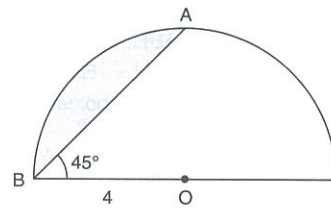
5.



$ABKO_1$ dikdörtgen
 $ABKO_1$ rectangle
 O_1 ve O_2 merkezli
 çemberler
 Circles with O_1 and
 O_2 center points
 $|O_1C| = 4 \text{ br}$
 $|CK| = 6 \text{ br}$
 $\Rightarrow \text{Taralı Alan} = ?$
 Shaded Area = ?

- A) $40 - 6\pi$ B) $20 - 4\pi$ C) $40 - 5\pi$
 D) $20 + 4\pi$ E) $80 - 6\pi$

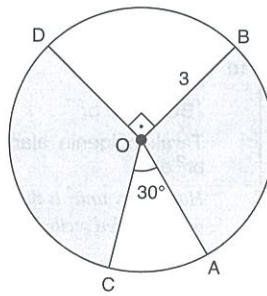
6.



O merkezli yarım çember
 A semi circle with a
 center O
 $m(\widehat{ABC}) = 45^\circ$
 $|OB| = 4 \text{ br}$
 $\Rightarrow \text{Taralı Alan} = ?$
 Shaded Area = ?

- A) $2\pi + 4$ B) $2\pi - 4$ C) $4\pi + 4$
 D) $4\pi - 4$ E) $4\pi - 8$

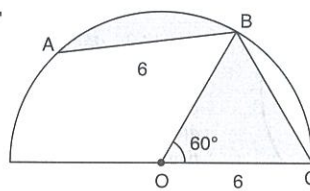
7.



O merkezli çember
 A circle with a center O
 $m(\widehat{COA}) = 30^\circ$
 $[DO] \perp [OB]$
 $|OB| = 3 \text{ br}$
 $\Rightarrow \text{Taralı Alan} = ?$
 Shaded Area = ?

- A) 2π B) 4π C) 6π D) 8π E) 16π

8.

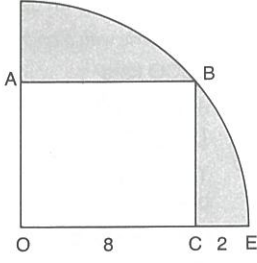


O merkezli yarım çember
 A semi circle with a center O
 $|AB| = |OC| = 6 \text{ br}$
 $m(\widehat{BOC}) = 60^\circ$
 $\Rightarrow \text{Taralı Alan} = ?$
 Shaded Area = ?

- A) π B) 2π C) $6\pi - 6\sqrt{3}$
 D) 6π E) $6\pi + 6\sqrt{3}$



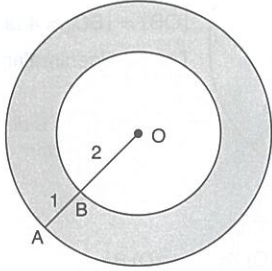
9.



ABCO dikdörtgen
ABCO rectangle
O merkezli çeyrek çember
A quarter circle with a center O
 $|OC| = 8$ br
 $|CE| = 2$ br
 $\Rightarrow$ Taralı Alan = ?

- A) $25\pi - 48$ B) $50\pi - 24$ C) $50\pi + 24$
D) $25\pi - 12$ E) $25\pi + 12$

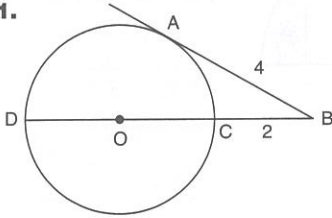
10.



O merkezli çemberler
Circles with a center O
 $|AB| = 1$ br
 $|BO| = 2$ br
 $\Rightarrow$ Taralı Alan = ?
Shaded Area = ?

- A) 2π B) 3π C) 4π D) 5π E) 6π

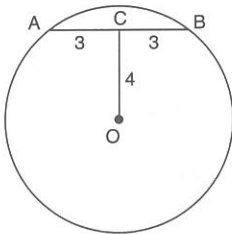
11.



$|AB| = 4$ br
 $|CB| = 2$ br
 $\Rightarrow$ O merkezli dairenin alanı = ?
Area of a circular region with a center O = ?

- A) π B) 4π C) 9π D) 16π E) 25π

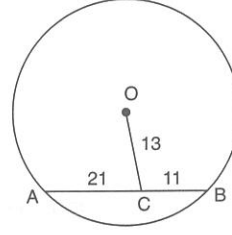
12.



$|AC| = |CB| = 3$ br
 $|CO| = 4$ br
 $\Rightarrow$ O merkezli dairenin alanı = ?
Area of a circular region with a center O = ?

- A) π B) 4π C) 9π D) 16π E) 25π

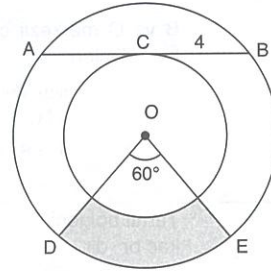
13.



$|OC| = 13$ br
 $|AC| = 21$ br
 $|CB| = 11$ br
 $\Rightarrow$ O merkezli dairenin alanı = ?
Area of a circular region with a center O = ?

- A) 36π B) 64π C) 100π D) 164π E) 400π

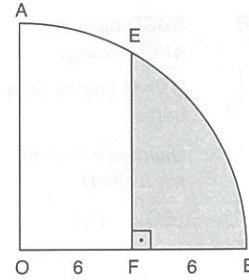
14.



O merkezli çemberler
Circles with a center O
 $|CB| = 4$ br
 $m(\widehat{DOE}) = 60^\circ$
 $\Rightarrow$ Taralı Alan = ?
Shaded Area = ?

- A) $\frac{\pi}{3}$ B) 2π C) $\frac{8\pi}{3}$ D) 4π E) 5π

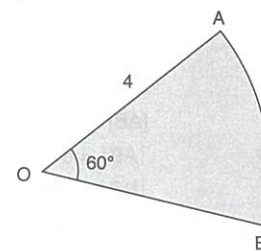
15.



O merkezli çeyrek çember
A quarter circle with a center O
 $|OF| = |BF| = 6$ br
 $[EF] \perp [OB]$
 $\Rightarrow$ Taralı Alan = ?
Shaded Area = ?

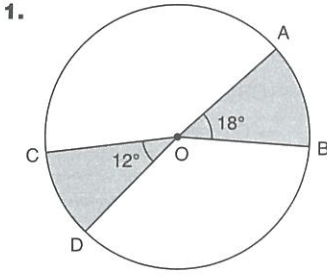
- A) $24\pi - \sqrt{3}$ B) $24\pi - 18\sqrt{3}$ C) $12\pi - 18\sqrt{3}$
D) $12\pi - 9\sqrt{3}$ E) $36\pi - 18\sqrt{3}$

16.



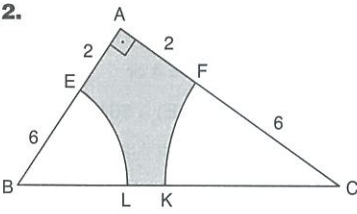
O merkezli çember
Circle with a center O
 $|OA| = 4$ br
 $m(\widehat{AOB}) = 60^\circ$
 $\Rightarrow$ Taralı Alan = ?
Shaded Area = ?

- A) 2π B) 3π C) $\frac{8\pi}{3}$ D) $\frac{15\pi}{2}$ E) 10π



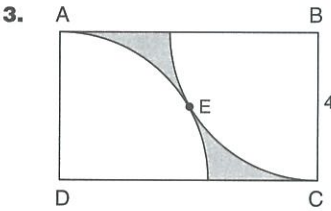
1. O merkezli çemberin yarıçapı 6 br
A circle with a center O, has a radius of 6 units
 $m(\widehat{AOB}) = 18^\circ$
 $m(\widehat{COD}) = 12^\circ$
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

A) π B) 2π C) 3π D) 4π E) 6π



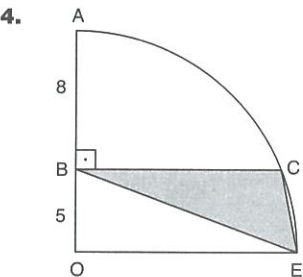
2. B ve C merkezli çember dilimleri
Slice of circle with the centers of B and C
 $|FC| = |EB| = 6$ br
 $|AE| = |AF| = 2$ br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

A) 23π B) 16π C) $32 - 9\pi$
D) $9\pi - 16$ E) $16\pi - 32$



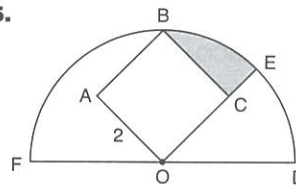
3. ABCD dikdörtgen
ABCD rectangle
B ve D çeyrek çemberler
Quarter circles with centers B and D
 $|BC| = 4$ br
Taralı bölgenin alanı kaç br^2 dir?
How many $unit^2$ is the area of the shaded sector?

A) $8\pi - 16\sqrt{3}$ B) $8\pi - 8\sqrt{3}$ C) $8\sqrt{3} - 4\pi$
D) $16\pi - 16\sqrt{3}$ E) $16\sqrt{3} - 8\pi$



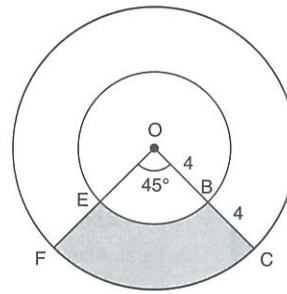
4. O merkezli çeyrek çember
A quarter circle with a center O
 $[AB] \perp [BC]$
 $|AB| = 8$ br
 $|BO| = 5$ br
 $\Rightarrow A(BCE) = ?$

A) 12 B) 15 C) 20 D) 24 E) 30



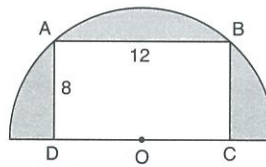
5. O merkezli yarım çember
Semi-circle with a center O
ABCO kare
ABCD square
 $|AO| = 2$ br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

A) $\pi - 2$ B) π C) $\pi + 2$ D) $2\pi - 2$ E) 2π



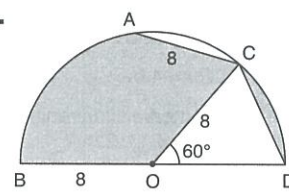
6. O merkezli çemberler
Circles with a center O
 $m(\widehat{FOC}) = 45^\circ$
 $|OB| = |BC| = 4$ br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

A) 4π B) 5π C) 6π D) 8π E) 10π



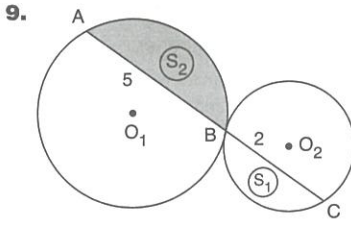
7. O merkezli yarım çember
Semi-circle with a center O
ABCD dikdörtgen
ABCD rectangle
 $|AB| = 12$ br
 $|AD| = 8$ br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

A) $50\pi + 96$ B) $25\pi + 96$ C) $100\pi - 96$
D) $25\pi - 16$ E) $50\pi - 96$



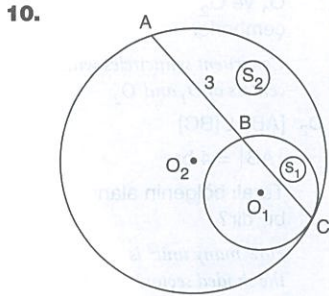
8. O merkezli yarım çember
Semi-circle with a center O
 $|AC| = |OC| = |BO| = 8$ br
 $m(\widehat{COD}) = 60^\circ$
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?

A) $\frac{32\pi}{3}$ B) 12π C) $\frac{64\pi}{3}$ D) 24π E) 32π



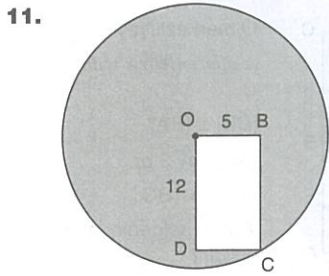
O_1 ve O_2 merkezli çemberler dıştan teğettir.
Circles with O_1 and O_2 centers are externally tangent
 $|AB| = 5$ br
 $|BC| = 2$ br
 $S_1 = 8$ br²
 $\Rightarrow S_2 = ?$

- A) 50 B) 40 C) 25 D) 20 E) 15



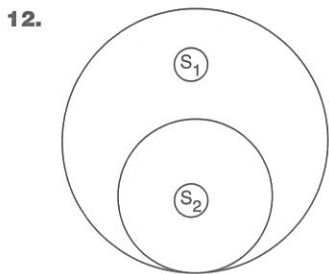
O_1 ve O_2 merkezli çemberler içten teğettir.
Circles with O_1 and O_2 centers are internally tangent
 $|AB| = 3$ br
 $|BC| = 1$ br
 $S_1 = 4$ br²
 $\Rightarrow S_2 = ?$

- A) 64 B) 60 C) 32 D) 28 E) 12



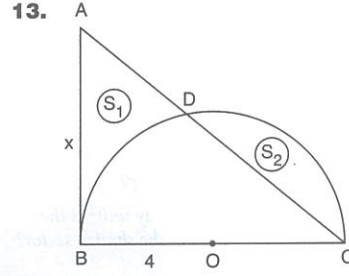
O merkezli çember
A circles with a center O
OBCD dikdörtgen
OBCD rectangle
 $|OB| = 5$ br
 $|OD| = 12$ br
Tarlalı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) 169π B) $169\pi - 30$ C) $169\pi - 60$
D) 69π E) $26\pi - 60$



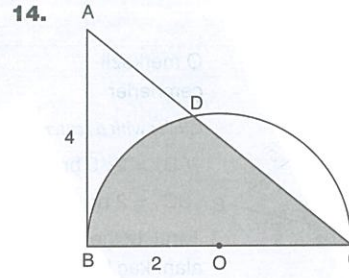
Çemberlerin çevreleri oranı $\frac{1}{2}$
The ratio of the circumferences of the circles is $\frac{1}{2}$
 $S_1 = 9$ br²
 $\Rightarrow S_2 = ?$

- A) 3 B) 4 C) 6 D) 8 E) 9



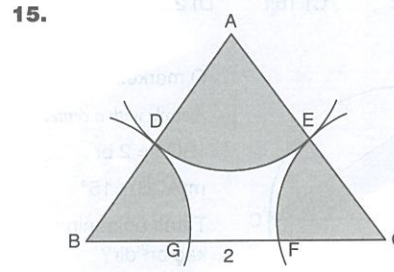
O merkezli yarım çemberin yarıçapı 4 br
A Semi-circle with a center O, has a radius of 4 units
 $S_1 = S_2$
 $\Rightarrow |AB| = x = ?$

- A) π B) 2π C) 3π D) 4π E) 5π



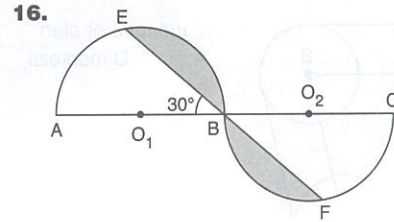
O merkezli yarım çemberin yarıçapı 2 br
A Semi-circle with a center O, has a radius of 2 units
 $|AB| = 4$ br
Tarlalı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $\pi - 2$ B) π C) $2\pi - 2$ D) $\pi + 2$ E) $\pi + 4$



Yarıçapları aynı olan A, B, C merkezli çemberler
Circles with the centers A, B and C with the same radii
 $\angle(ABC) = 14$ br
 $|GF| = 2$ br
Tarlalı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $15 - 4\pi$ B) $4\pi - 3\sqrt{7}$ C) 4π
D) 2π E) π

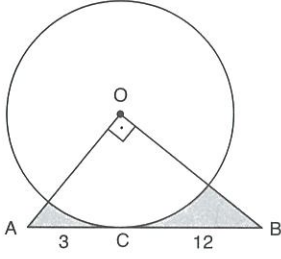


O_1 ve O_2 merkezli yarım çemberler
Semi-circles with O_1 and O_2 center points
 $|AB| = 2|BC| = 8$ br
 $m(\widehat{EBA}) = 30^\circ$
Tarlalı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $\pi - 2$ B) $5\pi - 10$ C) $\frac{20\pi}{3} - 5\sqrt{3}$
D) $\frac{20\pi}{3} - 6\sqrt{3}$ E) 10π



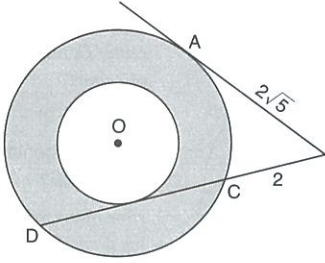
1.



O merkezli çember
A circle with a center O
[AO] $\perp$ [OB]
4 |AC| = |CB| = 12 br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) 36π B) $90 - 18\pi$ C) 36
D) $45 - 9\pi$ E) $36\pi - 45$

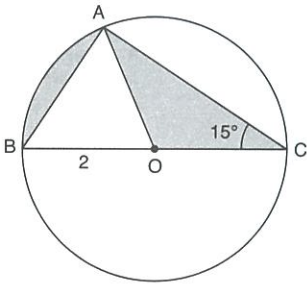
2.



O merkezli çemberler
Circles with a center O
|AB| = $2\sqrt{5}$ br
|BC| = 2 br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) 4π B) 9π C) 16π D) 25π E) 36π

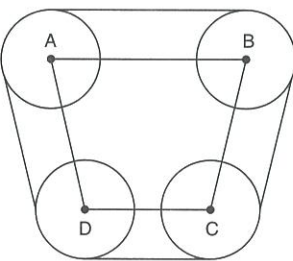
3.



O merkezli çember
A circle with a center O
|BO| = 2 br
 $m(\widehat{ACB}) = 15^\circ$
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $\frac{\pi}{3}$ B) $\frac{5\pi}{3}$ C) 3π D) 4π E) 5π

4.

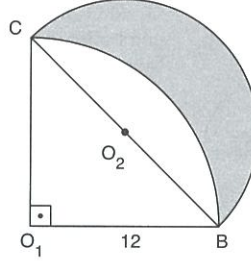


Yarıçapı 2 br olan A, B, C, D merkezli eş çemberler
Congruent circles with the centers A, B and C with a radius of 2 units
 $\widehat{C(ABCD)} = 22\pi$
Çemberlerin çevresine gerilmiş ipin uzunluğu kaç br'dir?

How many unit is the length of the thread tightened around the circumferences of the circles?

- A) 24π B) 26π C) 28π D) 30π E) 32π

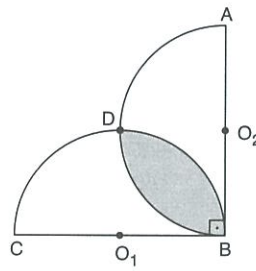
5.



O₁ ve O₂ merkezli çemberler
Circles with O₁ and O₂ center points
[CO₁] $\perp$ [O₁B]
|O₁B| = 12 br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $72 - 27\pi$ B) $72 - 25\pi$ C) $16\pi - 16$
D) 72 E) 25π

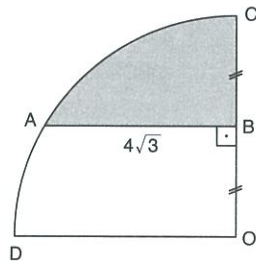
6.



O₁ ve O₂ merkezli eş yarım çemberler
Congruent semicircles with centers of O₁ and O₂
[AB] $\perp$ [BC]
|AB| = 4 br
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $\pi - 4$ B) $\pi - 2$ C) π
D) $2\pi - 4$ E) $2\pi - 2$

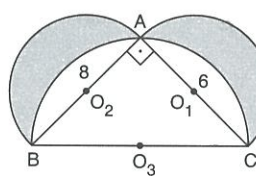
7.



O merkezli çeyrek çember
A quarter circle with a center O
[CB] $\perp$ [BA]
|AB| = $4\sqrt{3}$ br
|CB| = |BO|
Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) $\frac{32\pi}{3} - 8\sqrt{3}$ B) $8\pi - 4\sqrt{3}$ C) $\frac{16\pi}{3} - 4\sqrt{3}$
D) $8\pi - 8\sqrt{3}$ E) $4\pi + 4\sqrt{3}$

8.



O₁, O₂ ve O₃ merkezli çemberler
Circles with centers of O₁, O₂ and O₃
[BA] $\perp$ [AC]
|AB| = 8 br
|AC| = 6 br

Taralı bölgenin alanı kaç br²'dir?
How many unit² is the area of the shaded sector?

- A) 25π B) 24π C) 22π D) 24 E) 12



9. C ve F merkezli çemberler
Circles with C and F center points
ABCD dikdörtgen
ABCD rectangle
 $|BC| = 4 \text{ br}$

Taralı bölgenin alanı kaç br^2 'dir?

How many unit² is the area of the shaded sector?

- A) 16 B) $18\pi - 4$ C) $32 - 8\pi$
D) $8\pi - 16$ E) $16 - 4\pi$

10. O1 ve O2 merkezli çemberler
Circles with O1 and O2 center points
 $|DO_2| = |O_2A| = |AO_1| = 3 \text{ br}$

Taralı bölgenin alanı kaç br^2 'dir?

How many unit² is the area of the shaded sector?

- A) 12π B) 8π C) $\frac{15\pi}{4}$ D) $\frac{9\pi}{4}$ E) 2π

11. $[AD] \perp [CB]$
 $|AB| = 8 \text{ br}$
 $|CD| = 6 \text{ br}$
Taralı bölgenin alanı kaç br^2 'dir?
How many unit² is the area of the shaded sector?

- A) 24 B) $25\pi - 24$ C) $100\pi - 24$
D) $25\pi + 48$ E) $\frac{25\pi}{2} - 24$

12. O merkezli çeyrek çember
A quarter circle with a center O
 $S_1 = S_2$
 $|AB| = 2 \text{ br}$
 $\Rightarrow |OC| = x = ?$

- A) $\frac{2}{\pi - 2}$ B) $\frac{4}{\pi - 2}$ C) $2\pi - 4$
D) $\pi + 2$ E) $4\pi + 8$

13. O1 ve C merkezli çemberler
Circles with O1 and C center points
ABCD kare
ABCD square
 $|DC| = 4 \text{ br}$
 $\Rightarrow S_1 - S_2 = ?$

- A) $6\pi - 18$ B) $8\pi - 16$ C) $6\pi - 16$
D) $6\pi - 24$ E) $8\pi - 18$

14. O1, O2, O3 ve O4 merkezli çemberler
Circles with O1, O2, O3 and O4 center points
ABCD kare
ABCD square
 $|AB| = 4 \text{ br}$
Taralı bölgenin alanı kaç br^2 'dir?
How many unit² is the area of the shaded sector?

- A) $2\pi - 5$ B) $\pi - 2$ C) $\pi - 1$
D) $2\pi - 4$ E) $8\pi - 16$

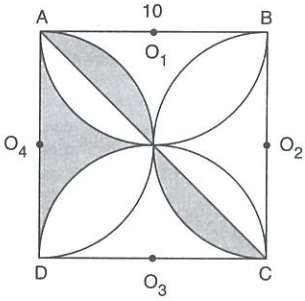
15. O1 ve O2 merkezli yarım çemberler
Semi-circles with O1 and O2 center points
ABCD kare
ABCD square
 $|AB| = 8 \text{ br}$
Taralı bölgenin alanı kaç br^2 'dir?
How many unit² is the area of the shaded sector?

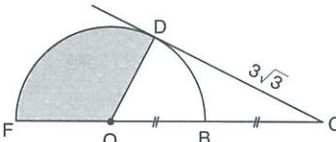
- A) $48 - 8\pi$ B) $80 - 24\pi$ C) $16\pi - 16$
D) $24\pi - 16$ E) $48 + 8\pi$

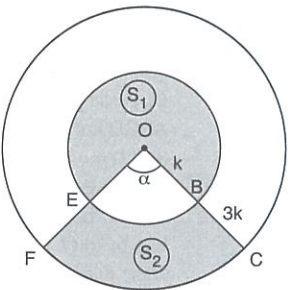
16. $[AD] \perp [BC]$
 $|AB| = 8 \text{ br}$
 $|AC| = 15 \text{ br}$
 $|AD| = 6 \text{ br}$
Şekildeki dairenin alanı kaç br^2 'dir?
How many unit² is the area of the circle in the figure?

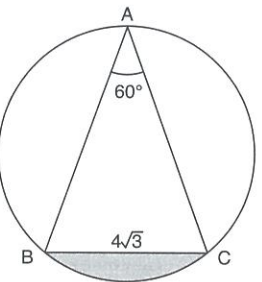
- A) 64π B) $\frac{289\pi}{4}$ C) 81π D) 100π E) 200π

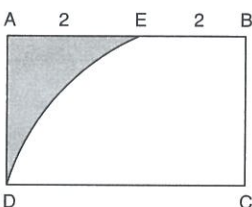


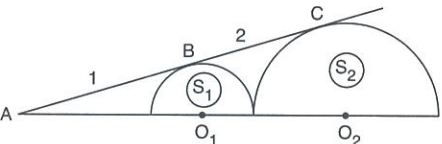
1.  O_1, O_2, O_3 ve O_4 merkezli çemberler
Circles with O_1, O_2, O_3 and O_4 center points
ABCD kare
ABCD square
 $|AB| = 10$ br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?
- A) 25 B) 50 C) 25π
D) $25\pi - 10$ E) $50\pi - 10$

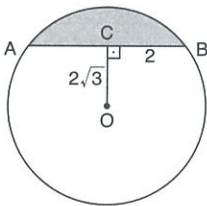
2.  O merkezli yarım çember
Semi-circle with a center O
 $|OB| = |BC|$
 $|DC| = 3\sqrt{3}$ br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?
- A) 2π B) 3π C) 6π D) 9π E) 12π

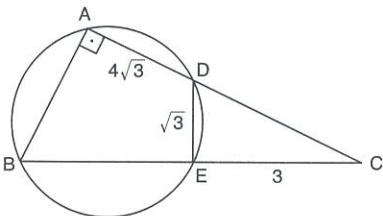
3.  O merkezli çemberler
Circles with a center O
 $S_1 = S_2$
 $3|OB| = |BC|$
 $\Rightarrow m(\widehat{FOC}) = \alpha = ?$
- A) 22,5 B) 30 C) 40 D) 45 E) 60

4.  $m(\widehat{BAC}) = 60^\circ$
 $|BC| = 4\sqrt{3}$ br
Taralı bölgenin alanı kaç br^2 dir?
How many $unit^2$ is the area of the shaded sector?
- A) $4\sqrt{3}$ B) $16\pi - 4\sqrt{3}$ C) $\frac{16\pi}{3} - 4\sqrt{3}$
D) $16\pi - 4$ E) 4π

5.  C merkezli çember dilimi
Slice of a circle with a center C
ABCD dikdörtgen
ABCD rectangle
 $|AE| = |EB| = 2$ br
Taralı bölgenin alanı kaç br^2 'dir?
How many $unit^2$ is the area of the shaded sector?
- A) $6\sqrt{3} - \frac{8\pi}{3}$ B) $6\sqrt{3} - 4\pi$ C) $9\sqrt{3} - 4\pi$
D) $9\sqrt{3} + 4\pi$ E) $12\sqrt{3} - \frac{4\pi}{3}$

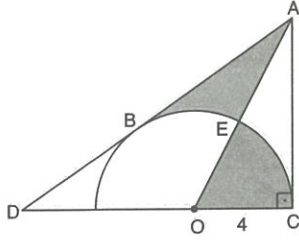
6.  $|AB| = 1$ br
 $|BC| = 2$ br
 O_1 ve O_2 merkezli yarım çemberler
Semi-circles with O_1 and O_2 center points
 $\Rightarrow \frac{S_2}{S_1} = ?$
- A) 2 B) $\frac{5}{2}$ C) 3 D) $\frac{9}{2}$ E) 9

7.  O merkezli çember
Circles with a center O
 $[OC] \perp [AB]$
 $|CB| = 2$ br
 $|OC| = 2\sqrt{3}$ br
Taralı bölgenin alanı kaç br^2 dir?
How many $unit^2$ is the area of the shaded sector?
- A) $\frac{8\pi}{3} - 4\sqrt{3}$ B) $8\pi - 4\sqrt{3}$ C) $4\pi - 2\sqrt{3}$
D) 4π E) 2π

8.  $[BA] \perp [AC]$
 $|AD| = 4\sqrt{3}$ br
 $|DE| = \sqrt{3}$ br
 $|EC| = 3$ br
Şekildeki dairenin alanı kaç br^2 dir?
How many $unit^2$ is the area of circle the in figure?
- A) 21π B) 24π C) 36π D) 64π E) 144π



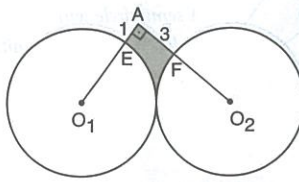
9.



O merkezli yarım çember
Semi-circle with a center O
 $|AB| = 6 \text{ br}$
 $|OC| = 4 \text{ br}$
Taralı bölgenin alanı kaç br^2 'dir?
How many unit^2 is the area of the shaded sector?

- A) $8\pi + 6$ B) $4\pi + 6$ C) 24
D) 12 E) $24 - \frac{25\pi}{2}$

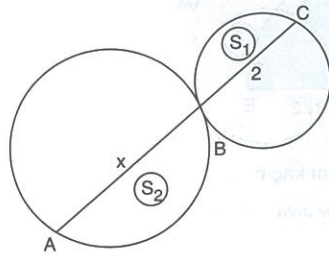
10.



O_1 ve O_2 merkezli eş çemberler
Congruent circles with centers of O_1 and O_2
 $|EA| = 1 \text{ br}$
 $|AF| = 3 \text{ br}$
Taralı bölgenin alanı kaç br^2 'dir?
How many unit^2 is the area of the shaded sector?

- A) 15π B) $96 - 25\pi$ C) $96 - \frac{25\pi}{4}$
D) $24 - \frac{25\pi}{4}$ E) $24 - 15\pi$

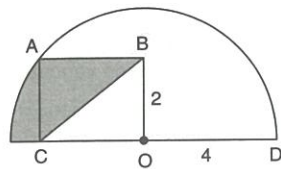
11.



$S_1 = 10 \text{ br}^2$
 $S_2 = 20 \text{ br}^2$
 $|BC| = 2 \text{ br}$
 $\Rightarrow |AB| = x = ?$

- A) 1 B) $\sqrt{2}$ C) 2 D) $2\sqrt{2}$ E) 4

12.



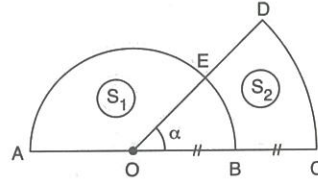
O merkezli yarım çember
Semi-circle with a center O
ABOC dikdörtgen
ABOC rectangle
 $|BO| = 2 \text{ br}$
 $|OD| = 4 \text{ br}$

Taralı bölgenin alanı kaç br^2 'dir?

How many unit^2 is the area of the shaded sector?

- A) $\frac{\pi}{3}$ B) $\frac{4\pi}{3}$ C) 3π D) 6π E) 8π

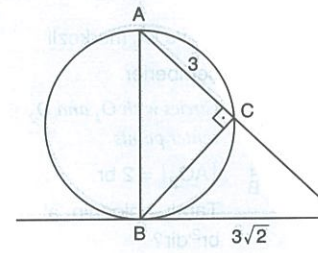
13.



O merkezli çemberler
Circles with a center O
 $S_1 = S_2$
 $|OB| = |BC|$
 $\Rightarrow m(\widehat{BOC}) = \alpha = ?$

- A) 30 B) 36 C) 45 D) 60 E) 67,5

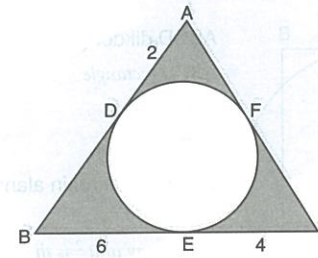
14.



$[AC] \perp [CB]$
 $|AC| = 3 \text{ br}$
 $|BD| = 3\sqrt{2} \text{ br}$
Şekildeki dairenin alanı kaç br^2 'dir?
How many unit^2 is the area of the circle in figure?

- A) 3π B) $\frac{9}{2}\pi$ C) 6π D) 9π E) 18π

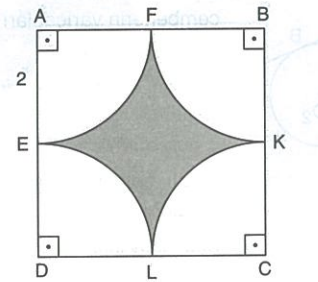
15.



$|AD| = 2 \text{ br}$
 $|BE| = 6 \text{ br}$
 $|EC| = 4 \text{ br}$
Taralı bölgenin alanı kaç br^2 'dir?
How many unit^2 is the area of the shaded sector?

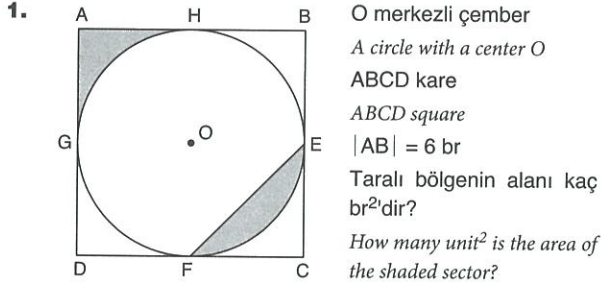
- A) 12 B) 24 C) $24 - 4\pi$
D) $12 - 4\pi$ E) $48 - 4\pi$

16.

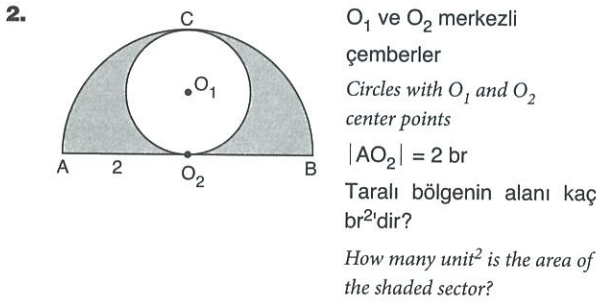


A, B, C ve D merkezli eş çemberler
Congruent circles with centers of A, B, C and D
 $|AE| = 2 \text{ br}$
Taralı bölgenin alanı kaç br^2 'dir?
How many unit^2 is the area of the shaded sector?

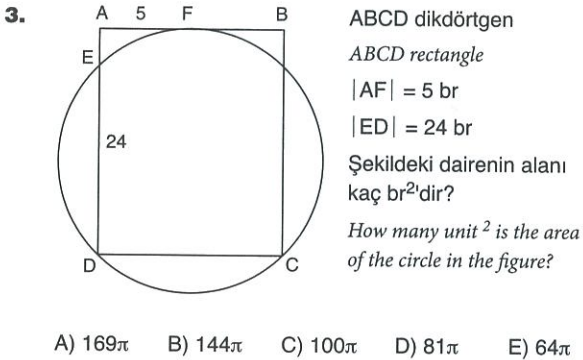
- A) $16 - 4\pi$ B) $16 - \pi$ C) $8 - 4\pi$
D) $8 - 2\pi$ E) 4π



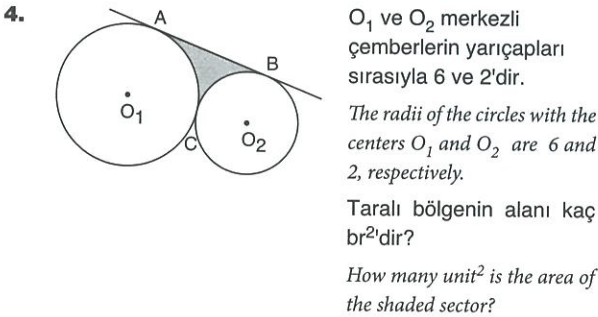
- A) $\frac{3}{2}$ B) π C) $\frac{9}{2}$ D) 9 E) 3π



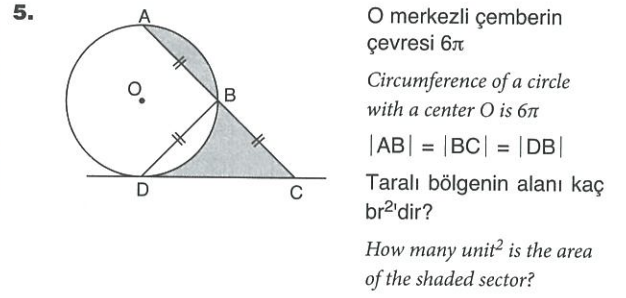
- A) π B) 2π C) 3π D) 4π E) 5π



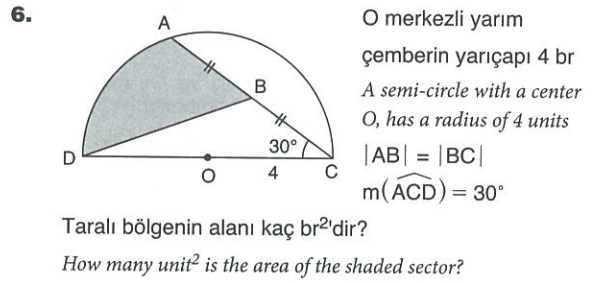
- A) 169π B) 144π C) 100π D) 81π E) 64π



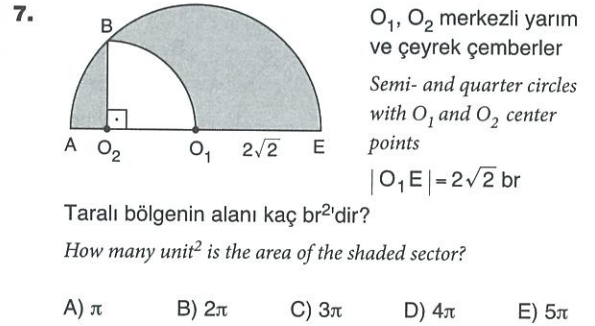
- A) $8\sqrt{3} - \frac{11\pi}{3}$ B) $16\sqrt{3} - 8\pi$ C) $9\pi - 8\sqrt{3}$
D) $16\sqrt{3} - \frac{22\pi}{3}$ E) 8π



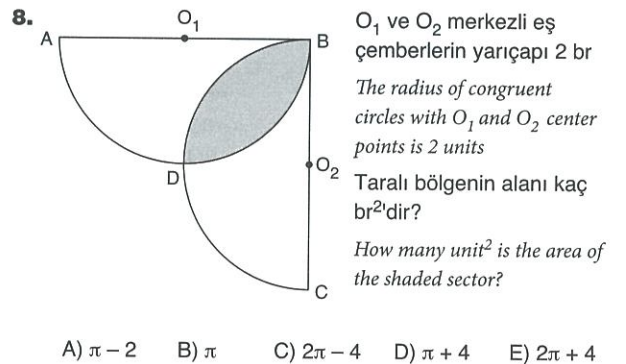
- A) 3 B) $3\pi + 2$ C) 9 D) $9 + \pi$ E) $16 + 2\pi$



- A) 4 B) 9 C) 16 D) $\frac{\pi}{4}$ E) $\frac{8\pi}{3}$



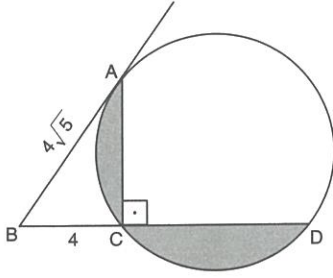
- A) π B) 2π C) 3π D) 4π E) 5π



- A) $\pi - 2$ B) π C) $2\pi - 4$ D) $\pi + 4$ E) $2\pi + 4$



9.



$[AC] \perp [BD]$

$|AB| = 4\sqrt{5}$ br

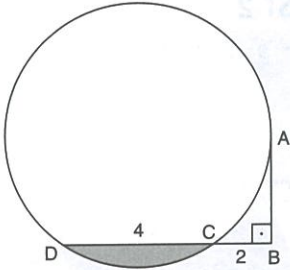
$|BC| = 4$ br

Taralı bölgenin alanı kaç br^2 dir?

How many $unit^2$ is the area of the shaded sector?

- A) $64 - 18\pi$ B) $20\pi - 32$ C) $40\pi - 32$
D) $40\pi - 64$ E) $16\pi + 32$

10.



$[AB] \perp [DB]$

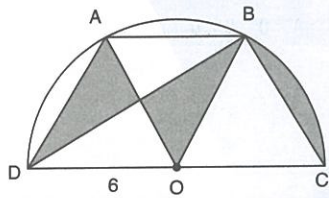
$2|BC| = |DC| = 4$ br

Taralı bölgenin alanı kaç br^2 dir?

How many $unit^2$ is the area of the shaded sector?

- A) $\frac{4\pi}{3} - 2\sqrt{3}$ B) 4 C) 6
D) $4\sqrt{3}$ E) $\frac{8\pi}{3} - 4\sqrt{3}$

11.



O merkezli yarım çember

Semi-circle with a center O

ABOD paralelkenar

ABOD parallelogram

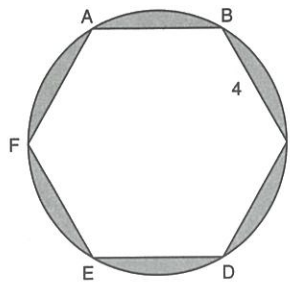
$|OD| = 6$ br

Taralı bölgenin alanı kaç br^2 dir?

How many $unit^2$ is the area of the shaded sector?

- A) 4π B) 6π C) 9π D) 12π E) 15π

12.



ABCDEF düzgün altıgen

ABCD regular hexagon

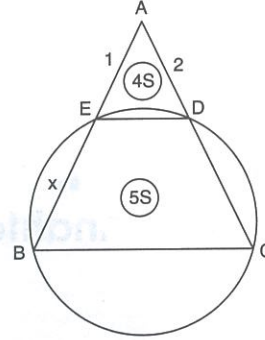
$|BC| = 4$ br

Taralı bölgenin alanı kaç br^2 dir?

How many $unit^2$ is the area of the shaded sector?

- A) $16\pi - 2\sqrt{3}$ B) $16\pi - 4\sqrt{3}$ C) $8\pi + 4\sqrt{3}$
D) $8\pi - 2\sqrt{3}$ E) $16\pi - 24\sqrt{3}$

13.



$A(AED) = 4S$

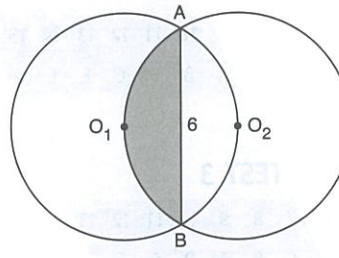
$A(EDCB) = 5S$

$|AD| = 2|AE| = 2$ br

$\Rightarrow |EB| = x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

14.



O_1 ve O_2 merkezli eş çemberler

Congruent circles with centers of O_1 and O_2

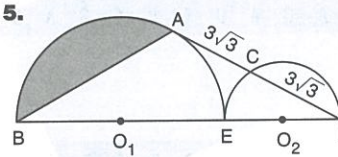
$|AB| = 6$ br

Taralı bölgenin alanı kaç br^2 dir?

How many $unit^2$ is the area of the shaded sector?

- A) $4\pi + 3\sqrt{3}$ B) $2\pi + 3\sqrt{3}$ C) $9\pi - 18$
D) $4\pi - 3\sqrt{3}$ E) $4\pi - 6\sqrt{3}$

15.



O_1 ve O_2 merkezli yarım çemberler

Semi-circles with O_1 and O_2 center points

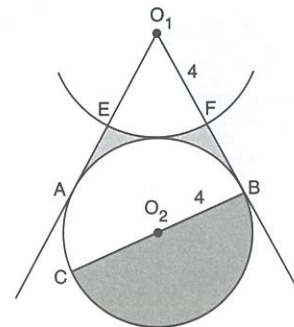
$|AC| = |CD| = 3\sqrt{3}$ br

Taralı bölgenin alanı kaç br^2 dir?

How many $unit^2$ is the area of the shaded sector?

- A) $12\pi - 9\sqrt{3}$ B) 9π C) $12\pi - 18\sqrt{3}$
D) 6π E) $4\pi - 4\sqrt{3}$

16.



O_1 ve O_2 merkezli 4 br yarıçaplı eş çemberler

Congruent circles with O_1 and O_2 center points with a radius of 4 units

Taralı bölgenin alanı kaç br^2 dir?

How many $unit^2$ is the area of the shaded sector?

- A) $3\sqrt{3}$ B) $4\sqrt{3}$ C) $8\sqrt{3}$ D) $12\sqrt{3}$ E) $16\sqrt{3}$



DAİREDE ALAN

Yanıt Anahtarı

AREAS IN CIRCULAR REGION

Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	B	D	C	B	D	C	A	B	B	C	E	E	B	B

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	D	C	E	A	A	A	C	A	E	E	E	A	A	E	E

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	B	C	D	A	E	C	D	A	D	C	E	E	C	B	C

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	E	E	A	C	E	C	A	B	C	A	B	D	D	C

TEST 5

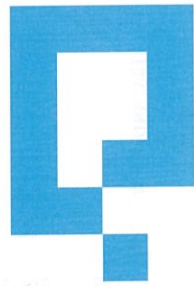
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	A	B	D	D	A	D	A	D	E	B	C	E	A	D

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	B	A	C	A	E	A	A	D	D	D	B	C	B	C	A

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	A	A	D	C	E	C	C	D	E	B	E	B	D	A	E

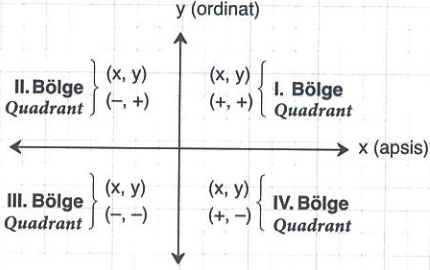


ANALİTİK GEOMETRİ

ANALYTIC GEOMETRY-LINE



ÖZELLİK|Property 1



1. $A(a^2, -b^3 \cdot a^4)$ noktası koordinat düzleminde I. bölgede ise $B(-b, -a^2)$ noktası koordinat düzleminde kaçınıcı bölgededir?

If the point $A(a^2, -b^3 \cdot a^4)$ is in the I.st quadrant at the coordinate system, then which quadrant is the point $B(-b, -a^2)$ at the coordinate system?

IV

2. $A(a - 4, a \cdot b)$ noktası koordinat düzleminde IV. Bölgede ise $B(b - a, a^2 \cdot b)$ noktası koordinat düzleminde kaçınıcı bölgededir?

If the point $A(a - 4, a \cdot b)$ is in the IV.th quadrant at the coordinate system, then which quadrant is the point $B(b - a, a^2 \cdot b)$ at the coordinate system?

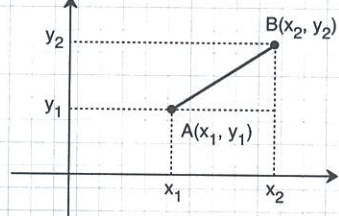
III

3. $A(4a - 24, a - 12)$ noktası koordinat düzleminde IV. Bölgede olduğuna göre, a 'nın tanım aralığı nedir?

In case the point $A(4a-24, a-12)$ is in I.st quadrant at the coordinate system, what is the definition range of a ?

$$6 < a < 12$$

ÖZELLİK|Property 2



$$|AB| = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

1. $A(-7, 3), B(-2, -9)$

$$\Rightarrow |AB| = ?$$

13

2. $A(x, 3), B(2, -5), |AB| = 10$ br

$$\Rightarrow \sum x = ?$$

4

3. $A(3, 2), B(x, 1), C(-2, -2)$
 $|AB| = |BC| \Rightarrow x = ?$

$$-\frac{3}{10}$$



ÖZELLİK|Property 3

$$|AC| = |BC| \Rightarrow C\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

1. $A(2, 4)$ $C(x, y)$ $B(-3, -5)$
 $\Rightarrow C(x, y) = ?$

$$\left(-\frac{1}{2}, -\frac{1}{2}\right)$$

2. $A(4, -6)$
 $B(3, -1)$ E $C(5, -3)$
 $\Rightarrow |AE| = ?$

4

3. $A(2, 4)$
 $B(0, 0)$ D $C(-4, 0)$
 $\Rightarrow |AD| = ?$

$$4\sqrt{2}$$

ÖZELLİK|Property 4

$$B \in [AC]$$

$$\frac{|BA|}{|BC|} = k$$

$$x_0 = \frac{x_1 + kx_2}{1 + k}$$

$$y_0 = \frac{y_1 + ky_2}{1 + k}$$

1. $A(-1, 5)$ $B(x, y)$ $C(7, 1)$
 k $3k$
 $\Rightarrow B(x, y) = ?$

$$(1, 4)$$

2. $D(x, y)$ $C(5, -5)$ E $A(2, 3)$
 k $2k$
 $B(4, -1)$
 $\Rightarrow D(x, y) = ?$

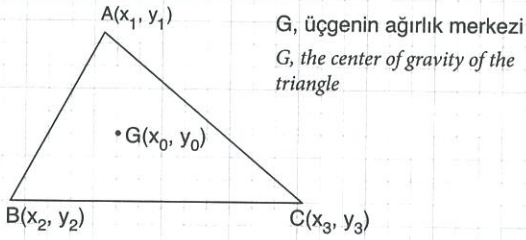
$$(6, -8)$$

3. $A(0, -2)$ $B(-3, 4)$
 $C \notin [AB]$
 $C \in AB$
 $\frac{|AC|}{|BC|} = \frac{1}{4}$
 $\Rightarrow C(x, y) = ?$

$$(1, -4)$$



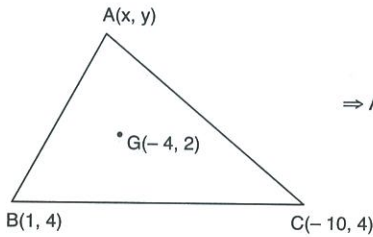
ÖZELLİK|Property 5



$$x_0 = \frac{x_1 + x_2 + x_3}{3}$$

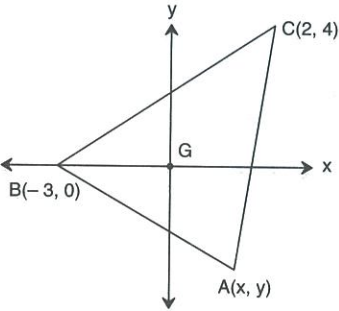
$$y_0 = \frac{y_1 + y_2 + y_3}{3}$$

1.



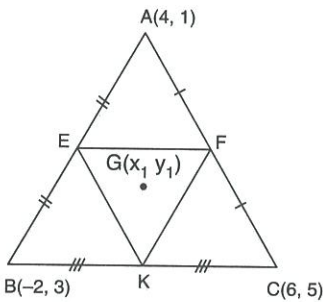
$$(-3, -2)$$

2.



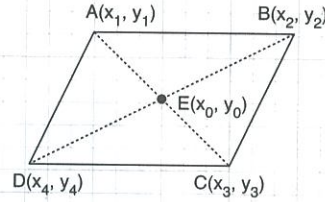
$$(1, -4)$$

3.



$$\left(\frac{8}{3}, 3\right)$$

ÖZELLİK|Property 6



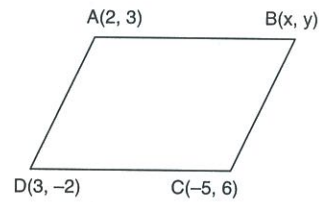
$$x_0 = \frac{x_1 + x_3}{2} = \frac{x_2 + x_4}{2}$$

$$y_0 = \frac{y_1 + y_3}{2} = \frac{y_2 + y_4}{2}$$

$$x_1 + x_3 = x_2 + x_4$$

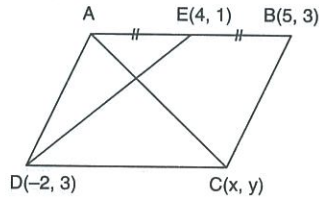
$$y_1 + y_3 = y_2 + y_4$$

1.



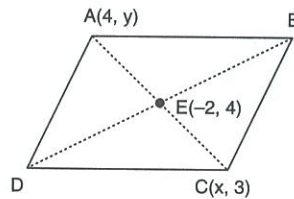
$$(-6, 11)$$

2.



$$(0, 7)$$

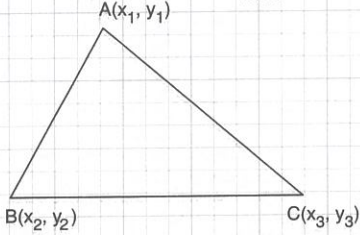
3.



$$-3$$



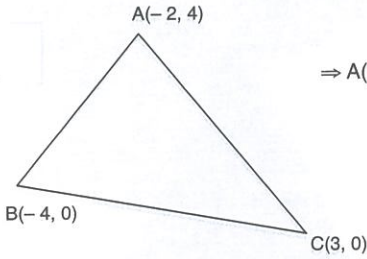
ÖZELLİK|Property 7

Alan
Area

$$A(ABC) = \frac{1}{2} \begin{vmatrix} x_1 & y_1 \\ x_2 & y_2 \\ x_3 & y_3 \end{vmatrix}$$

$$= \frac{1}{2} |x_1 y_2 + x_2 y_3 + x_3 y_1 - y_1 x_2 - y_2 x_3 - y_3 x_1|$$

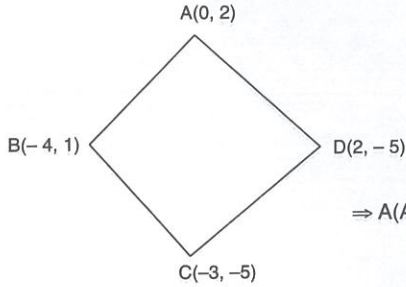
1.



$$\Rightarrow A(ABC) = ?$$

14

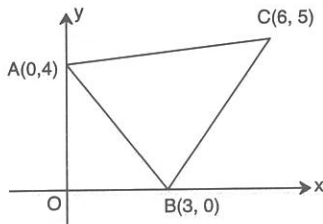
2.



$$\Rightarrow A(ABCD) = ?$$

30

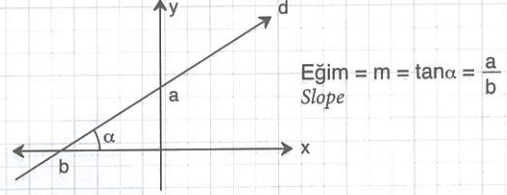
3.



$$\Rightarrow A(ABC) = ?$$

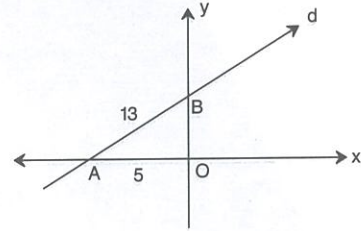
 $\frac{27}{2}$

ÖZELLİK|Property 8

Eğim
Slope

Doğrunun x eksenine pozitif yöndeki yaptığı açının tanjantı
The tangential of an angle between the x axis and a positive direction

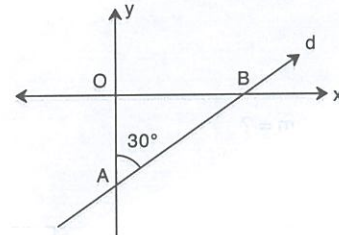
1.



$$\Rightarrow m = ?$$

 $\frac{12}{5}$

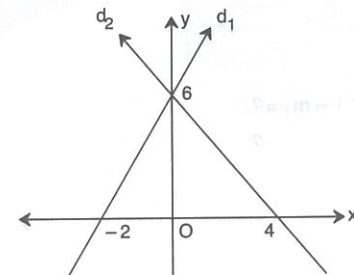
2.



$$\Rightarrow m = ?$$

 $\sqrt{3}$

3.



$$\Rightarrow (m_1, m_2) = ?$$

 $(3, -\frac{3}{2})$



ÖZELLİK|Property 9

Eğim
Slope

$$d: ax + by + c = 0$$

$$\Rightarrow y = -\frac{a}{b}x - \frac{c}{b}$$

$$m = -\frac{a}{b}$$

$$1. \quad \left. \begin{array}{l} d_1: y = 2x - 4 \\ d_2: y = 7x - 1 \end{array} \right\} \Rightarrow m_1 = ?$$

$$\Rightarrow m_2 = ?$$

2, 7

$$2. \quad 2y - 5 = 3x \Rightarrow m = ?$$

 $\frac{3}{2}$

$$3. \quad \left. \begin{array}{l} d_1: 3x - y + 2 = 0 \\ d_2: 2x + 4y - 1 = 0 \end{array} \right\} \Rightarrow m_1 = ?$$

$$\Rightarrow m_2 = ?$$

 $3, -\frac{1}{2}$

ÖZELLİK|Property 10

Eğim
Slope

$$A(x_1, y_1) \quad B(x_2, y_2)$$

$$m_{AB} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$1. \quad A(1, 3), \quad B(-2, -7) \Rightarrow m_{AB} = ?$$

 $\frac{10}{3}$

$$2. \quad A(2, k), \quad B(3, 5) \quad m_{AB} = 4 \Rightarrow k = ?$$

1

$$3. \quad \begin{array}{l} A(2, 5) \\ B(4, 9) \\ C(-1, a) \end{array} \Rightarrow a = ?$$

A, B ve C doğrusal noktalar
A, B and C points are linear

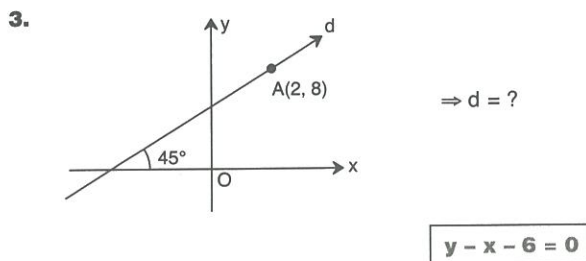
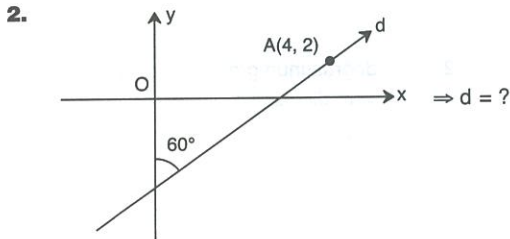
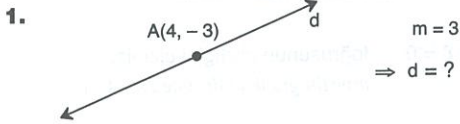
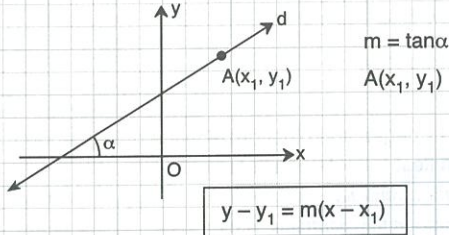
-1



ÖZELLİK|Property 11

- Bir noktası ve eğimi bilinen doğru denklemi

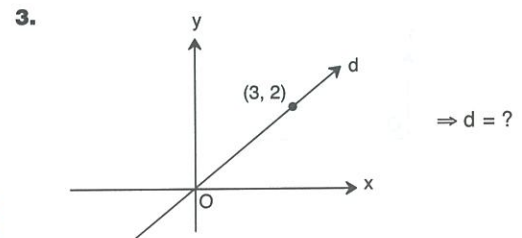
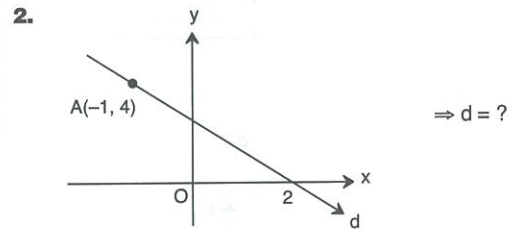
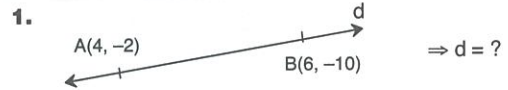
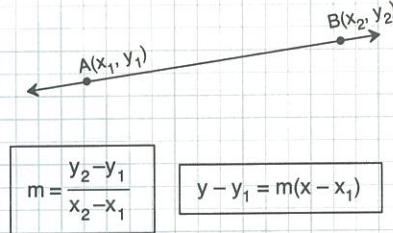
The equation of a line of which a point and its slope is known



ÖZELLİK|Property 12

- İki noktası bilinen doğru denklemi

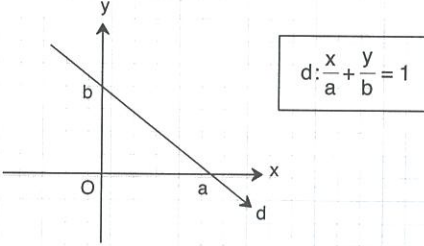
The equation of a line of which two points are known





ÖZELLİK|Property 13

- Eksenleri kestiği noktaları bilinen doğru denklemi
The equation of a line of which points intersect the axis are known



ÖZELLİK|Property 14

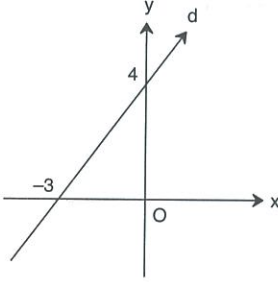
- Denklemleri verilen doğrunun grafiğinin çizimi
Drawing of the graph of a line of which equation is given

d: $ax + by + c = 0$ denklemi
Its equation d: $ax + by + c = 0$

$x = 0$ için y değeri
For $x=0$, y value

$y = 0$ için x değeri koordinat düzleminde d doğrusunun eksenleri kestiği noktaların koordinatlarıdır.
For $y=0$, the x value have the coordinates of the point where d line intersects at the coordinate plane

1.

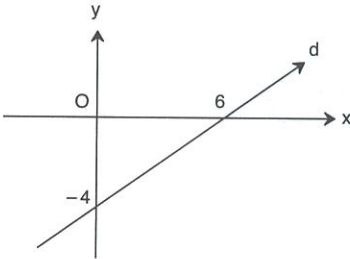


$$\Rightarrow d = ?$$

$$4x - 3y + 12 = 0$$

1. $2x - 4y + 8 = 0$ doğrusunun grafiğini çiziniz.
draw the graph of the line $2x - 4y + 8 = 0$

2.

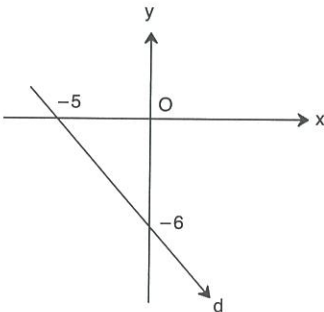


$$\Rightarrow d = ?$$

$$2x - 3y - 12 = 0$$

2. $y = 4x - 12$ doğrusunun grafiğini çiziniz.
draw the graph of the line $y = 4x - 12$

3.



$$\Rightarrow d = ?$$

$$6x + 5y + 30 = 0$$

3. $2y + 5x + 10 = 0$ doğrusunun grafiğini çiziniz.
draw the graph of the line $2y + 5x + 10 = 0$



ÖZELLİK|Property 15

- Doğrular paralel $d_1 \parallel d_2$

Lines are parallel to each other

$$\longrightarrow d_1 : a_1x + b_1y + c_1 = 0$$

$$\longrightarrow d_2 : a_2x + b_2y + c_2 = 0$$

- Doğrular paralel ise eğimleri eşittir.

If the lines are parallel to each other, then their slopes are the same

$$m_1 = m_2 \quad -\frac{a_1}{b_1} = -\frac{a_2}{b_2} \Rightarrow \boxed{\frac{a_1}{b_1} = \frac{a_2}{b_2}}$$

1. $d_1 : 2x + 3y + 5 = 0$

$d_2 : x - ay - 4 = 0$

$d_1 \parallel d_2 \Rightarrow a = ?$

$$\boxed{-\frac{3}{2}}$$

2. $d_1 : 2x - y + 6 = 0$

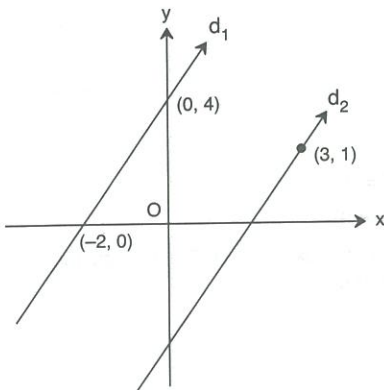
$A(1, 2)$

d_2

$d_1 \parallel d_2 \Rightarrow d_2 = ?$

$$\boxed{y = 2x}$$

3.



$d_1 \parallel d_2$
 $\Rightarrow d_2 = ?$

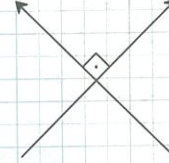
$$\boxed{y - 2x + 5 = 0}$$

ÖZELLİK|Property 16

- Doğrular dik kesişiyor ise

If the lines intersect each other at right angle

$$d_1 : a_1x + b_1y + c_1 = 0 \quad d_2 : a_2x + b_2y + c_2 = 0$$



$d_1 \perp d_2$

$m_1 \cdot m_2 = -1$

$\left(-\frac{a_1}{b_1}\right) \cdot \left(-\frac{a_2}{b_2}\right) = -1$

$$\boxed{\frac{a_1}{b_1} \cdot \frac{a_2}{b_2} = -1}$$

- Doğrular birbirine dik ise eğimleri çarpımı -1'dir.

If the lines are perpendicular to each other, then the multiplication of their slopes is -1.

1. $d_1 : 2x + 4y + 3 = 0$

$d_2 : ax - 6y + 4 = 0$

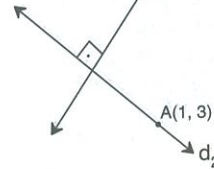
$d_1 \perp d_2$

$\Rightarrow a = ?$

$$\boxed{12}$$

2.

$d_1 : 3y + 3x - 5 = 0$

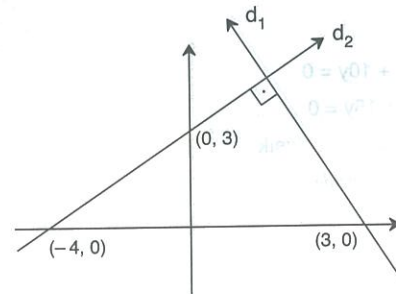


$d_1 \perp d_2$

$\Rightarrow d_2 = ?$

$$\boxed{y - x - 2 = 0}$$

3.



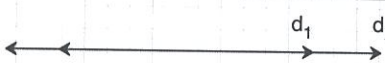
$\Rightarrow d_1 = ?$

$$\boxed{3y + 4x - 12 = 0}$$



ÖZELLİK|Property 17

- Doğrular çakışık ise
If the lines are coincident

$$\begin{aligned} d_1 : a_1x + b_1y + c_1 &= 0 \\ d_2 : a_2x + b_2y + c_2 &= 0 \end{aligned} \Rightarrow \frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$$


1. $d_1 : 2x + 3y - 12 = 0$
 $d_2 : 4x + ay + b = 0$
 d_1 ve d_2 doğruları çakışık
 d_1 and d_2 lines coincident

$$\Rightarrow a + b = ?$$

- 18

2. $d_1 : ax - 3y + 4 = 0$
 $d_2 : 12x - ay + b = 0$
 d_1 ve d_2 doğruları çakışık
 d_1 and d_2 lines coincident

$$\Rightarrow b = ?$$

8

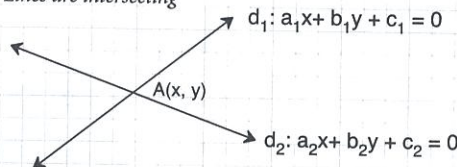
3. $d_1 : (a - 1)x + 10y = 0$
 $d_2 : (a + 1)x + 15y = 0$
 d_1 ve d_2 doğruları çakışık
 d_1 and d_2 lines coincident

$$\Rightarrow a = ?$$

5

ÖZELLİK|Property 18

- Doğrular kesişiyor ise
Lines are intersecting

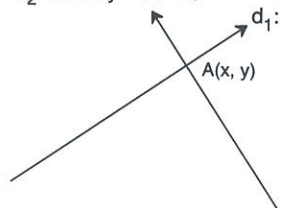
$$\begin{aligned} d_1 : a_1x + b_1y + c_1 &= 0 \\ d_2 : a_2x + b_2y + c_2 &= 0 \end{aligned}$$


- Doğrular kesişiyorsa ortak çözüm yapıp kesim noktası bulunur.

If the lines intersect, a common solution is applied and the breakpoint / intersecting node is found

1. $d_1 : 2x - 3y + 5 = 0$
 $d_2 : x + y - 10 = 0$
Doğruların kesim noktasını bulunuz.
Find the intersecting points of the lines.

(5, 5)

2. $d_2 : 3x + 4y - 10 = 0$
 $d_1 : x - 2y + 4 = 0$
- 
- $\Rightarrow A(x, y) = ?$

 $(\frac{2}{5}, \frac{11}{5})$

3. $d_1 : x - y - 1 = 0$
 $d_2 : x + 3y - 9 = 0$

Doğruların kesim noktası ve $(-2, 1)$ noktasından geçen doğru denklemini nedir?

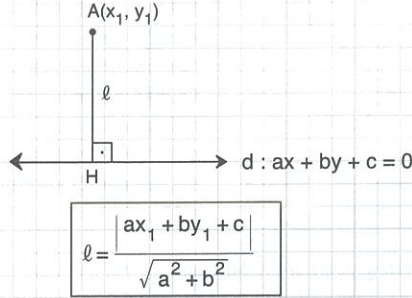
What is the intersecting point of the lines and the equation of the line passes through the point $(-2, 1)$?

 $5y - x - 7 = 0$

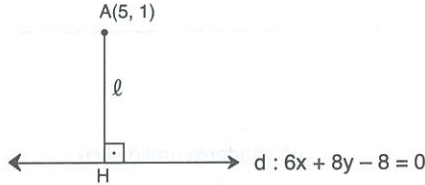


ÖZELLİK|Property 19

- Noktanın doğruya olan uzaklığı
The distance of the point to the line is



1.



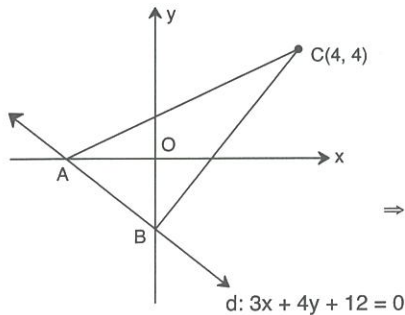
3

2.

- $A(-2, 4)$ noktasının
 $5x - 12y + 20 = 0$ doğrusuna olan uzaklığı kaç birimdir?
Of the point $A(-2, 4)$
the distance of the point to the line $5x - 12y + 20 = 0$ is.

 $\frac{38}{13}$

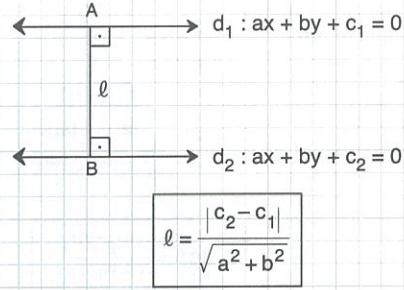
3.



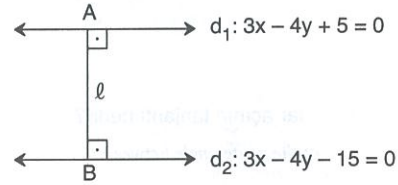
20

ÖZELLİK|Property 20

- Doğrunun doğruya olan uzaklığı $(d_1 \parallel d_2)$
The distance of the line of the line is

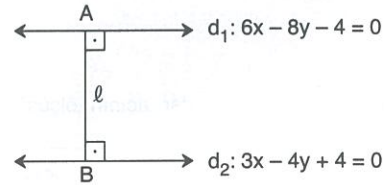


1.

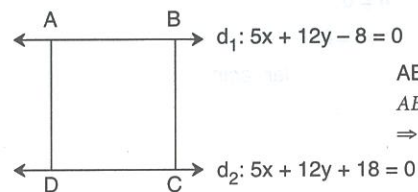


4

2.


 $\frac{6}{5}$

3.



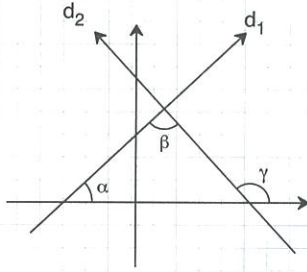
4



ÖZELLİK|Property 21

- Doğrular arasındaki açının tanjantı

The tangential of the angle between the lines



$$\begin{aligned}\alpha + \beta &= \gamma \\ \beta &= \gamma - \alpha \\ \tan \beta &= \tan(\gamma - \alpha) \\ \tan \beta &= \frac{\tan \gamma - \tan \alpha}{1 + \tan \gamma \cdot \tan \alpha}\end{aligned}$$

$$\tan \beta = \frac{m_2 - m_1}{1 + m_2 \cdot m_1}$$

1. $d_1 : 2x - y + 1 = 0$

$d_2 : 2y + 6x + 5 = 0$

Doğruları arasındaki dar açının tanjantı nedir?

What is the tangential of the acute angle between the line?

1

2. $d_1 : y = -x$

$d_2 : y = \sqrt{3}x - 18$

d_1 ve d_2 doğruları arasındaki dar açının ölçüsü kaç derecedir?

How many degree is the measurement of the acute angle between the d_1 and d_2 lines?

75

3. $d_1 : nx + y - 4 = 0$

$d_2 : -\sqrt{3}x + y - 4 = 0$

Doğruları arasındaki dar açının ölçüsü 15° olduğuna göre,

While the measurement of the acute angle between the lines is 15°

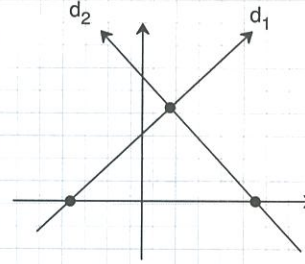
$\Rightarrow n = ?$

-1

ÖZELLİK|Property 22

- Eşitsizlik grafikleri

Graphs of inequality



Doğruların kesim noktası ve eksenleri kestiği noktalar bulunarak grafik çizilir. Oluşan bölgelerden noktalar alınarak eşitsizliğin sağlanıp sağlanmadığı kontrol edilir.

By finding intersecting point of the lines and the points where the axis intersected the graph is drawn, and by sampling the points at the sectors formed it is cross checked whether the inequality is proven or not.

1. $d_1 : -3 \leq x + y$

$d_2 : 2x - y + 2 \geq 0$

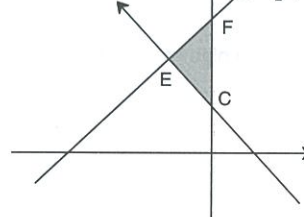
Doğrularının oluşturduğu ifadenin grafiğini çiziniz.

Draw the graph of the expression formed by the lines.

2.

$d_1 : x + y - 4 = 0$

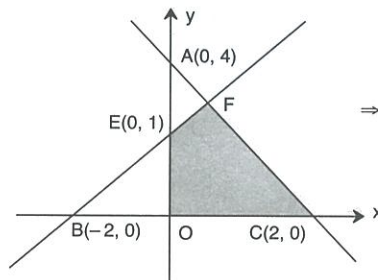
$d_2 : y - x - 8 = 0$



$\Rightarrow A(EFC) = ?$

4

3.



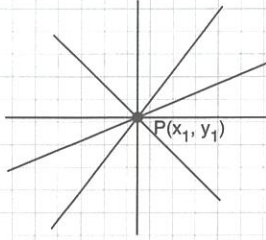
$\Rightarrow A(EOCF) = ?$

$\frac{11}{5}$



ÖZELLİK|Property 23

Doğru Demeti
Line Bundle



$$\begin{aligned} ax + by + c + k(dx + ey + f) &= 0 \\ ax + by + c &= 0 \\ dx + ey + f &= 0 \end{aligned}$$

1. $k \in \mathbb{R}$
 $(1 + 2k)x - (2 - 3k)y + 6 - 2k = 0$
 Doğrularının geçtiği noktanın koordinatları nedir?
 What is the coordinates of the point where the line intersects?

$$(-2, 2)$$

2. $a \in \mathbb{R}$
 $(a - 1)x + 2ay - 4 = 0$
 Doğrularının geçtiği noktanın koordinatları nedir?
 What is the coordinates of the point where the line intersects?

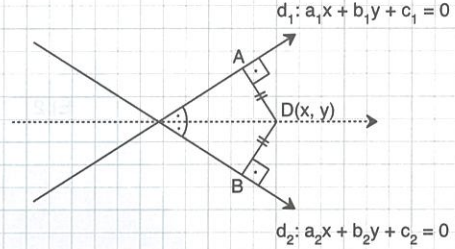
$$(-4, 2)$$

3. $k \in \mathbb{R}$
 $(k - 2)y + x - 2k = 0$
 Doğrularının kesim noktası ve orijinden geçen doğru denklemi nedir?
 What is the intersecting point of the lines and the equation of the line passes through the origin?

$$2y - x = 0$$

ÖZELLİK|Property 24

Açıortay Denklemi
Equation of Angle Bisector.



$$\frac{a_1x + b_1y + c_1}{\sqrt{a_1^2 + b_1^2}} = \pm \frac{a_2x + b_2y + c_2}{\sqrt{a_2^2 + b_2^2}}$$

1. Denklemler:
 Equations:
 $3x - 4y + 2 = 0$ ve
 $3x + 4y + 4 = 0$ olan doğruların oluşturduğu açıortay denklemlerinden biri nedir?
 What is one of the angle bisector equations formed by lines such as?

$$4y + 1 = 0$$

2. Denklemler:
 Equations:
 $2x - y - 4 = 0$ ve
 $2y + x - 2 = 0$ olan doğruların oluşturduğu açıortay denklemlerinden biri nedir?
 What is one of the angle bisector equations formed by lines such as?

$$y + 3x - 6 = 0$$

3. Denklemler:
 Equations:
 $3x - 4y + 5 = 0$ ve
 $6y + 8x + 4 = 0$ olan doğruların oluşturduğu açıortay denklemlerinden biri nedir?
 What is one of the angle bisector equations formed by lines such as?

$$7y + x - 3 = 0$$



1. Analitik düzlemde II. bölgede bulunan $A(m-3, 4)$ noktasının eksenlere uzaklıkları toplamı 6 br

At the analytic plane, for a point $A(m-3, 4)$ in the II.nd sector, a total distance to the axis is 6 units

$$\Rightarrow m = ?$$

- A) -2 B) -1 C) 0 D) 1 E) 2

2. $n \in \mathbb{Z}$

$T(n-4, 2n-2)$ noktaları analitik düzlemde II. bölgededir.

$T(n-4, 2n-2)$ points are in the II.nd sector at the analytic plain

$$\Rightarrow \sum n = ?$$

- A) 9 B) 7 C) 5 D) 3 E) 1

3. $A(m-3, 4)$ noktası Oy eksenine $B(-2, n+5)$ noktası Ox eksenine üzerinde

$A(m-3, 4)$ point is at the Oy axis, $B(-2, n+5)$ point is at the Ox axis

$$\Rightarrow m+n = ?$$

- A) -2 B) -1 C) 0 D) 2 E) 8

4. Analitik düzlemde $A(k-2, k+6)$ noktasının II. Bölgede olması için k hangi aralıkta olmalıdır?

In order to be the $A(k-2, k+6)$ point at the II.nd. Sector in the analytical plain, in which range has to be the k value?

- A) $k > 2$ B) $k < -6$ C) $-6 < k < 2$
D) $-2 < k < 6$ E) $-8 < k < 8$

5. $A(2, 4)$ $C(x, y)$ $B(-2, 6)$ $|AC| = |CB|$
 $\Rightarrow C(x, y) = ?$

- A) (0, 5) B) (2, 10) C) (0, 1)
D) (4, 2) E) (4, 5)

6. $A(3, 5)$ $B(5, -1)$ $C(x, y)$ $|AB| = |BC|$
 $\Rightarrow C(x, y) = ?$

- A) (8, 4) B) (7, -7) C) (2, 4)
D) (4, 2) E) (14, -14)

7. $A(1, 4)$ $C(x, y)$ $B(4, 1)$ $|AC| = |CB|$
 $\Rightarrow C(x, y) = ?$

- A) $\left(\frac{1}{2}, \frac{1}{2}\right)$ B) (2, 4) C) $\left(\frac{5}{2}, \frac{5}{2}\right)$
D) (5, 5) E) (10, 10)

8. $A(2x+1, x+1)$ $C(1, 3)$ $B(x-2, x+3)$ $|AC| = |CB|$
 $\Rightarrow x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5



9. $A(2, 3)$ $B(7, -9)$ $\Rightarrow |AB| = ?$

- A) 15 B) 13 C) $\sqrt{79}$ D) $\sqrt{61}$ E) 7

10. $A(5, -2)$ $B(2, -1)$ $\Rightarrow |AB| = ?$

- A) 5 B) 4 C) $\sqrt{10}$ D) 3 E) 2

11. $A(1, -2)$ $B(x, 6)$ $|AB| = 10$
 $\Rightarrow \sum x = ?$

- A) 2 B) 4 C) 6 D) 7 E) 8

12. $A(2, 1)$ $B(-3, 2)$ $C(1, 4)$ D on BC such that $|BD| = |DC|$
 $\Rightarrow |AD| = x = ?$

- A) 5 B) $\sqrt{17}$ C) $\sqrt{13}$ D) 3 E) 2

13. $A(3, m)$ $B(4, 2)$ $C(-1, 3)$
 $|AB| = |AC|$ $\Rightarrow m = ?$

- A) 2 B) 4 C) 6 D) 8 E) 10

14. $A(2, -2)$ $B(m, 4)$ $C(0, 3)$
 $|AB| = |BC|$ $\Rightarrow m = ?$

- A) 12 B) $\frac{39}{4}$ C) $\frac{27}{5}$ D) $\frac{1}{5}$ E) -1

15. $A(3, 4)$ $B(5, 2)$ $C(0, 2)$ D on AB such that $|AD| = |DB|$
 $\Rightarrow |CD| = x = ?$

- A) $\sqrt{23}$ B) $2\sqrt{5}$ C) $\sqrt{17}$ D) 4 E) $\sqrt{10}$

16. $A(x, y)$ $B(-3, 5)$ $C(-1, b)$ $D(4, 6)$ $E(-6, 4)$
 $|DC| = |CE|$
 $|AB| = |BC|$
 $\Rightarrow |AC| = ?$

- A) 3 B) 4 C) 5 D) 6 E) 8



1. $A(-2, 4)$ $B(3, 1)$ $C(x, y)$ $2|AB| = |BC|$
 $\Rightarrow C(x, y) = ?$

 A) $(-2, 4)$ B) $(-4, 8)$ C) $(6, 8)$
 D) $(13, -5)$ E) $(8, -2)$

2. $A(0, -2)$ $B(x, y)$ $C(5, -12)$ $3|AB| = 2|BC|$
 $\Rightarrow B(x, y) = ?$

 A) $(4, -4)$ B) $(2, -4)$ C) $(4, -6)$
 D) $(1, -6)$ E) $(2, -6)$

3. $C \notin [AB]$ $C \in AB$ $A(2, 3), B(4, -2)$
 $\frac{|AC|}{|BC|} = \frac{3}{2}$ $\Rightarrow C(x, y) = ?$
 A) $(8, -12)$ B) $(6, -12)$ C) $(6, -7)$
 D) $(8, -7)$ E) $(4, -7)$

4. $C \notin [AB]$ $C \in AB$ $A(4, 2), B(7, -4)$
 $\frac{|AC|}{|BC|} = \frac{2}{5}$ $\Rightarrow C(x, y) = ?$
 A) $(2, 6)$ B) $(2, 4)$ C) $(4, -4)$
 D) $(6, -4)$ E) $(-4, 4)$

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5. $C \in [AB]$ $A(-4, 5), B(-1, 14)$
 $\frac{|AC|}{|BC|} = 2$ $\Rightarrow C(x, y) = ?$
 A) $(-2, 11)$ B) $(-3, 11)$ C) $(-2, 6)$
 D) $(-3, 6)$ E) $(6, -3)$

6. $A(-2, 4)$ $B(0, 6)$ $C(5, 1)$ $D(x, y)$
 E
 $3|EB| = 2|EC|$
 $3|AE| = |ED|$
 $\Rightarrow D(x, y) = ?$

 A) $(6, 4)$ B) $(6, 6)$ C) $(14, 6)$
 D) $(14, 4)$ E) $(8, 6)$

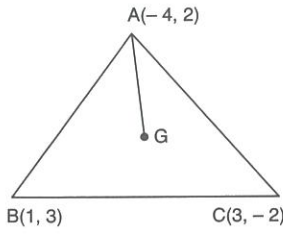
7. $A(x, y)$ $B(-4, 3)$ $C(5, 3)$ $E(3, 5)$
 D
 $2|DB| = |AD|$
 $|DE| = |EC|$
 $\Rightarrow A(x, y) = ?$

 A) $(7, 11)$ B) $(7, 15)$ C) $(11, 11)$
 D) $(11, 15)$ E) $(7, 7)$

8. $C \notin [AB]$ $C \in AB$ $A(3, 4), B(8, -1)$
 $\frac{|AC|}{|BC|} = \frac{2}{3}$ $\Rightarrow C(x, y) = ?$
 A) $(5, 2)$ B) $(5, 5)$ C) $(2, 5)$
 D) $(-7, 10)$ E) $(-7, 14)$



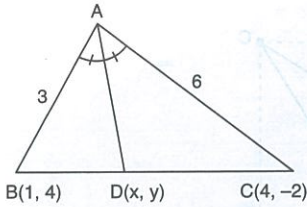
9.



G, ABC üçgeninin
ağırlık merkezi
G, the center of gravity of
ABC triangle
 $\Rightarrow |AG| = ?$

- A) $\sqrt{39}$ B) 5 C) $\sqrt{17}$ D) 4 E) $\sqrt{10}$

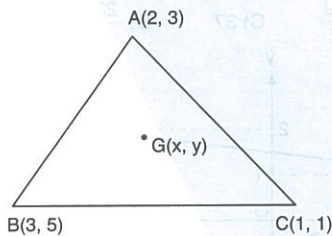
10.



$m(\widehat{BAD}) = m(\widehat{DAC})$
 $2|AB| = |AC| = 6$ br
 $\Rightarrow D(x, y) = ?$

- A) (2, 0) B) (3, 0) C) (4, 1)
D) (2, 2) E) (2, -2)

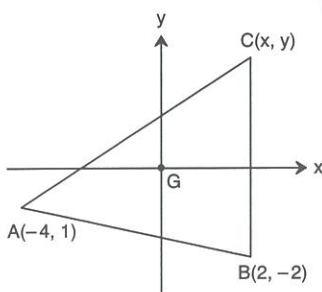
11.



G, ABC üçgeninin
ağırlık merkezi
G, the center of
gravity of ABC
triangle
 $\Rightarrow G(x, y) = ?$

- A) (2, 4) B) (1, 3) C) $(2, \frac{9}{2})$
D) $(3, \frac{5}{3})$ E) (2, 3)

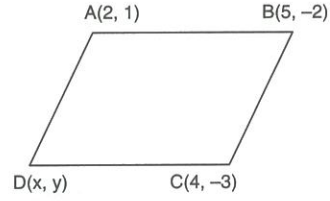
12.



G, ABC üçgeninin
ağırlık merkezi
G, the center of
gravity of ABC
triangle
 $\Rightarrow C(x, y) = ?$

- A) (1, 1) B) (2, 1) C) (1, 2)
D) (2, 3) E) (2, 2)

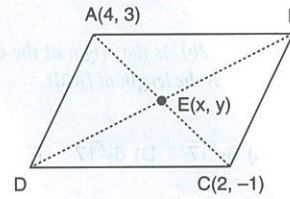
13.



ABCD
paralelkenar
ABCD parallelogram
 $\Rightarrow D(x, y) = ?$

- A) (1, 0) B) (-1, 2) C) (0, 2)
D) (-2, 0) E) (2, 1)

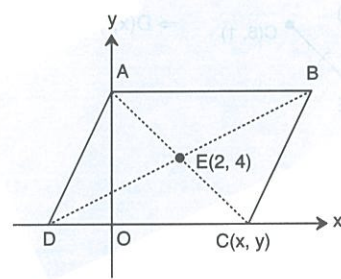
14.



ABCD paralelkenar
ABCD parallelogram
 $\Rightarrow E(x, y) = ?$

- A) (3, 0) B) (3, 1) C) (1, 0)
D) (2, 2) E) (3, -1)

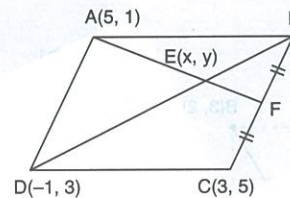
15.



ABCD
paralelkenar
ABCD parallelogram
 $\Rightarrow C(x, y) = ?$

- A) (3, 0) B) (4, 0) C) (6, 0)
D) (8, 0) E) (10, 0)

16.



ABCD paralelkenar
ABCD parallelogram
 $|BF| = |FC|$
 $\Rightarrow E(x, y) = ?$

- A) (2, 3) B) $(\frac{17}{3}, 3)$ C) $(\frac{8}{3}, 3)$
D) $(\frac{17}{3}, 2)$ E) $(\frac{8}{3}, 2)$



1. $A(-6, 7)$ $B(-1, a)$ $|AB| = 13$ br
 $\Rightarrow \sum a = ?$
 A) 14 B) 12 C) 8 D) 7 E) 5

2. $A(2a + 3b, 1)$, $B(4, a + 2b)$
 $[AB]$ nin orta noktası orjin olduğuna göre, $|AB|$ uzunluğu kaç br dir?
Since $A(2a + 3b, 1)$ and $B(4, a + 2b)$ is the origin at the center point of AB , then how many unit is the length of $[AB]$?

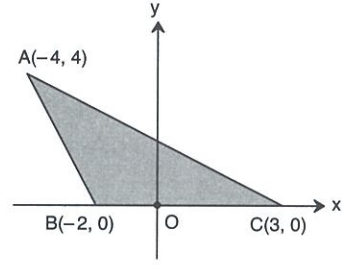
A) $\sqrt{17}$ B) $2\sqrt{17}$ C) $3\sqrt{17}$ D) $6\sqrt{17}$ E) $5\sqrt{17}$

3. $A(-2, 4)$ $B(0, 2)$ $C(6, 1)$
 $|AB| = |BE|$
 $|CE| = |EF| = |FD|$
 $\Rightarrow D(x, y) = ?$
 A) $(-8, -2)$ B) $(-6, -1)$ C) $(-8, 0)$
 D) $(-6, 0)$ E) $(-6, -2)$

4. $A(0, 1)$ $B(3, 2)$
 $|AD| = |DB|$
 $\Rightarrow D(x, y) = ?$

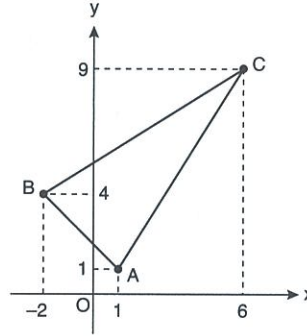
A) $(-2, 0)$ B) $(-1, 0)$ C) $(0, 0)$ D) $(1, 0)$ E) $(2, 0)$

5. $A(-4, 4)$ $B(-2, 0)$ $C(3, 0)$
 $\Rightarrow A(ABC) = ?$



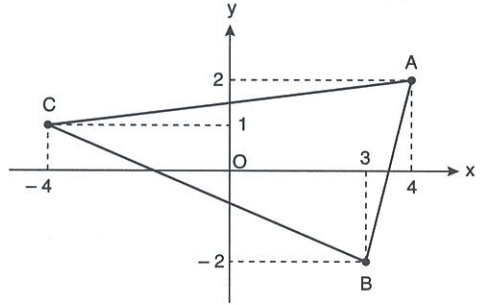
A) 20 B) 16 C) 12 D) 10 E) 4

6. $A(1, 1)$ $B(-2, 4)$ $C(6, 9)$
 $\Rightarrow A(ABC) = ?$



A) 39 B) $\frac{39}{2}$ C) 37 D) $\frac{23}{2}$ E) 41

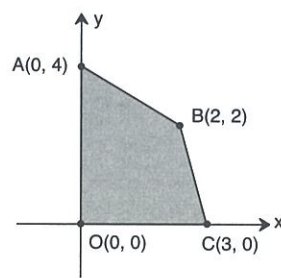
7.



$\Rightarrow A(ABC) = ?$

A) $\frac{21}{2}$ B) 27 C) 29 D) 31 E) $\frac{31}{2}$

8.

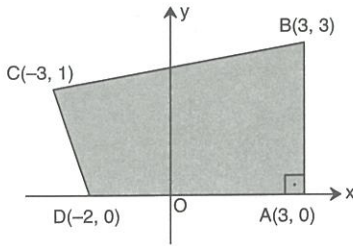


$\Rightarrow A(ABCO) = ?$

A) 15 B) 12 C) 9 D) 7 E) 6

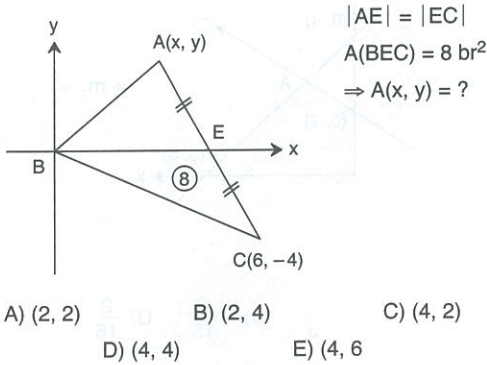


9. $\Rightarrow A(ABCD) = ?$

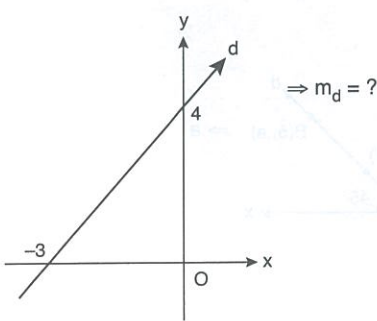


- A) 12 B) $\frac{23}{2}$ C) 10 D) $\frac{19}{2}$ E) 8

- 10.

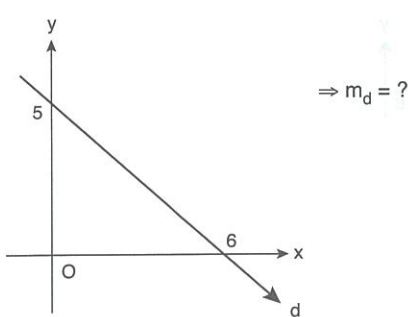


- 11.



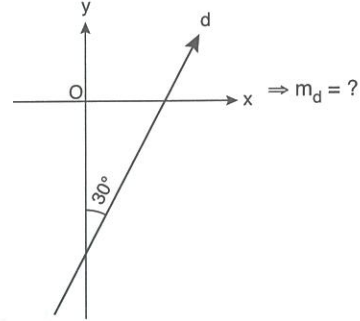
- A) $\frac{4}{3}$ B) $-\frac{4}{3}$ C) $\frac{3}{4}$ D) $-\frac{3}{4}$ E) $\frac{3}{5}$

- 12.



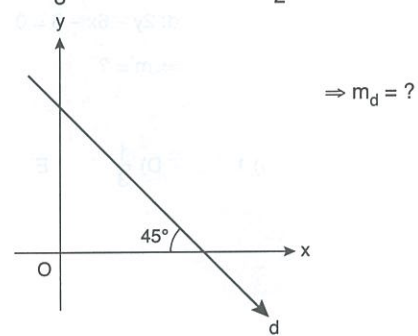
- A) $\frac{6}{5}$ B) $-\frac{6}{5}$ C) $\frac{5}{6}$ D) $-\frac{5}{6}$ E) 6

- 13.



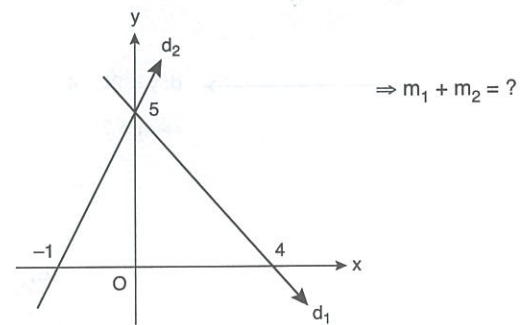
- A) $\frac{\sqrt{3}}{3}$ B) $\sqrt{3}$ C) $\frac{1}{2}$ D) 2 E) 1

- 14.



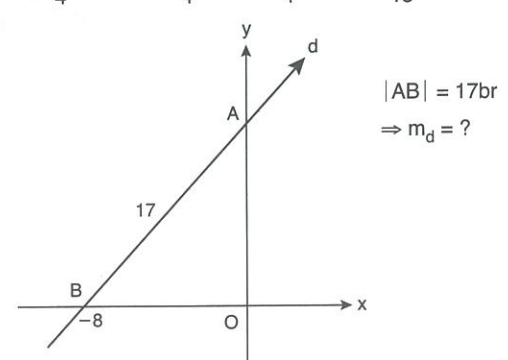
- A) 1 B) $\sqrt{2}$ C) $-\frac{\sqrt{2}}{2}$ D) $\frac{1}{2}$ E) -1

- 15.



- A) $\frac{25}{4}$ B) $-\frac{15}{4}$ C) $\frac{15}{4}$ D) $\frac{4}{15}$ E) $-\frac{4}{15}$

- 16.



- A) $\frac{8}{15}$ B) $\frac{17}{8}$ C) $\frac{15}{8}$ D) $\frac{8}{17}$ E) $-\frac{15}{8}$



1. $\longleftrightarrow$ d: $2x - 4y + 5 = 0$
 $\Rightarrow m = ?$

- A) -2 B) $-\frac{1}{2}$ C) 1 D) $\frac{1}{2}$ E) 2

2. $\longleftrightarrow$ d: $2y - 6x - 5 = 0$
 $\Rightarrow m = ?$

- A) -3 B) $-\frac{1}{3}$ C) 1 D) $\frac{1}{3}$ E) 3

3. $\longleftrightarrow$ d: $y = 2x - 4$
 $\Rightarrow m = ?$

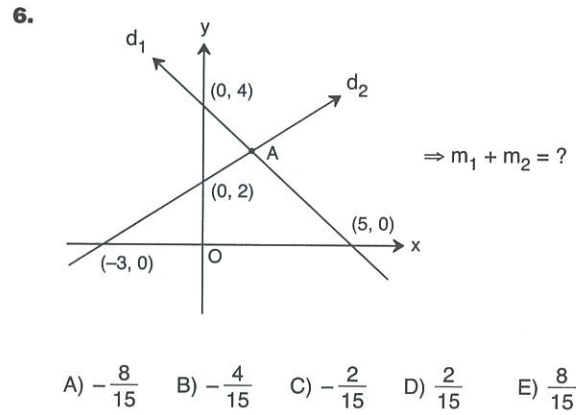
- A) -2 B) $-\frac{1}{2}$ C) 1 D) $\frac{1}{2}$ E) 2

4. $\longleftrightarrow$ A(2, 3) B(-4, 1) $\Rightarrow m_{AB} = ?$

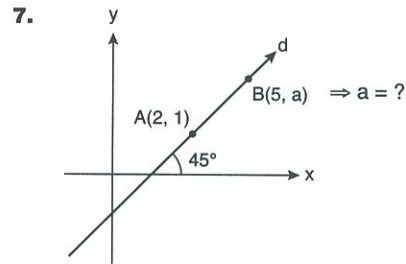
- A) -3 B) $-\frac{1}{3}$ C) 1 D) $\frac{1}{3}$ E) 3

5. $\longleftrightarrow$ A(2, 1) B(3, a) $m_{AB} = 5$
 $\Rightarrow a = ?$

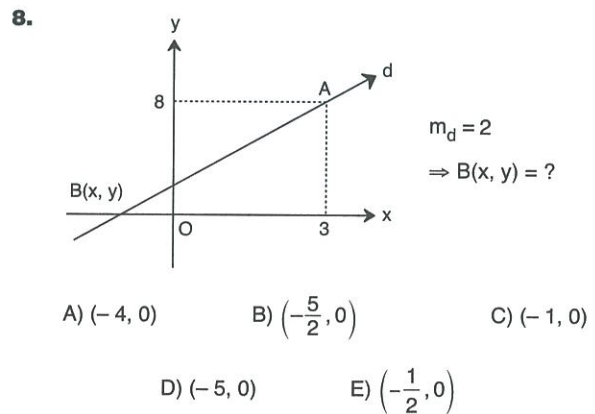
- A) 8 B) 6 C) 5 D) 4 E) 3



- A) $-\frac{8}{15}$ B) $-\frac{4}{15}$ C) $-\frac{2}{15}$ D) $\frac{2}{15}$ E) $\frac{8}{15}$



- A) 5 B) 4 C) 3 D) 2 E) 1



- A) (-4, 0) B) $(-\frac{5}{2}, 0)$ C) (-1, 0)
 D) (-5, 0) E) $(-\frac{1}{2}, 0)$



9.

A(1, 2)



$m_d = 2$

$d: ax + by + c = 0$

$\Rightarrow d = ?$

A) $y = 2x$

C) $y = 2x + 6$

B) $y = 2x - 4$

D) $x - 2y + 6 = 0$

E) $6x - 2y - 5 = 0$

10.

A(-2, 3)



$m_d = 4$

$d: ax + by + c = 0$

$\Rightarrow d = ?$

A) $y + 2x - 5 = 0$

C) $y - 3x - 9 = 0$

B) $y - 3x + 4 = 0$

D) $y - 3x + 3 = 0$

E) $y - 4x - 11 = 0$

11. A(3, -2)

B(1, -4)



$d: ax + by + c = 0$

$\Rightarrow d = ?$

A) $y + x - 4 = 0$

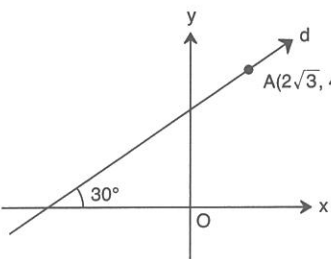
C) $y - x + 5 = 0$

B) $x - y - 6 = 0$

D) $2x - y + 6 = 0$

E) $y - x - 1 = 0$

12.



$d: ax + by + c = 0$

$\Rightarrow d = ?$

A) $y\sqrt{3} - x + 2\sqrt{3} = 0$

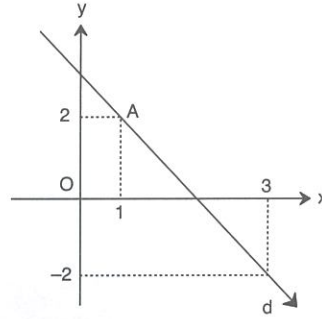
C) $y - \sqrt{3}x = 0$

B) $y\sqrt{3} - x - 2\sqrt{3} = 0$

D) $\sqrt{3}x + y = 0$

E) $\sqrt{3}x - y + 4 = 0$

13.



$d: ax + by + c = 0$

$\Rightarrow d = ?$

A) $y + 2x = 0$

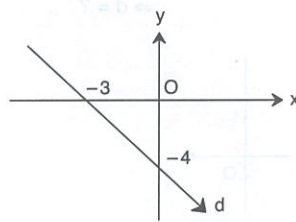
C) $2y - x - 2 = 0$

B) $y + 2x - 4 = 0$

D) $y + 2x + 4 = 0$

E) $2x - y - 6 = 0$

14.



$d: ax + by + c = 0$

$\Rightarrow d = ?$

A) $4x - 3y + 12 = 0$

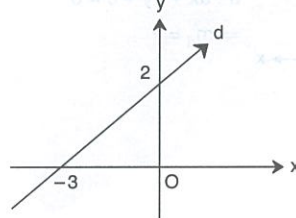
C) $4x + 3y + 12 = 0$

B) $3x + 4y - 12 = 0$

D) $4x + 3y + 24 = 0$

E) $3x + 4y + 24 = 0$

15.



$d: ax + by + c = 0$

$\Rightarrow d = ?$

A) $3y - 2x + 12 = 0$

C) $2x + 3y - 6 = 0$

B) $2x - 3y - 6 = 0$

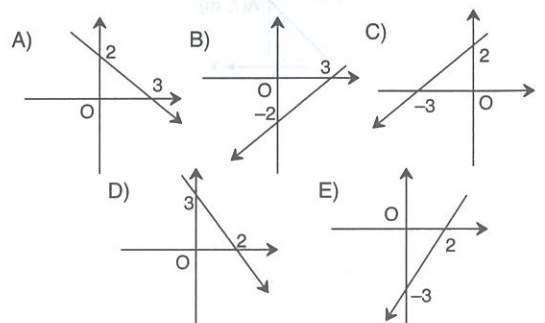
D) $3x + 2y - 6 = 0$

E) $2x - 3y + 6 = 0$

16.

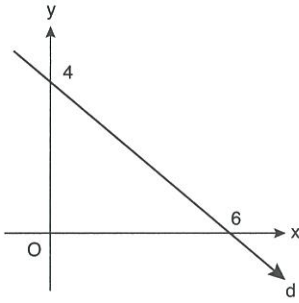
$d: 2x - 3y + 6 = 0$ doğrusunun grafiği aşağıdakilerden hangisidir?

Which is the graph of $d: 2x - 3y + 6 = 0$ line amongst the followings ones?





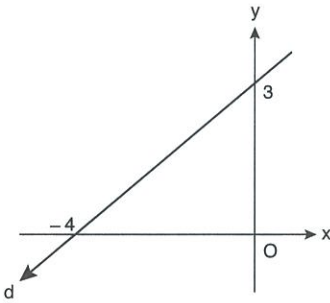
1.



$$d : ax + by + c = 0 \\ \Rightarrow d = ?$$

- A) $2x + y = 6$ B) $x + 3y = 12$ C) $2x + 3y = 12$
D) $2x + 3y = 6$ E) $3x + 2y = 12$

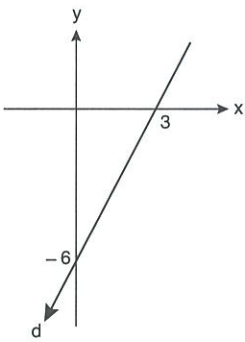
2.



$$d : ax + by + c = 0 \\ \Rightarrow d = ?$$

- A) $3x + 4y = 12$ B) $-3x + 4y = 12$ C) $4x + 3y = 12$
D) $4x - 3y = 12$ E) $-3x - 4y = 12$

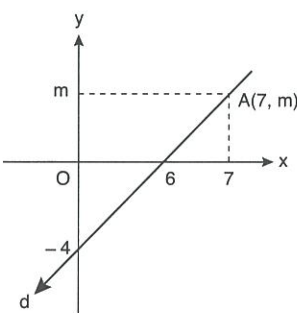
3.



$$d : ax + by + c = 0 \\ \Rightarrow m_d = ?$$

- A) 2 B) 5 C) 7 D) -7 E) -5

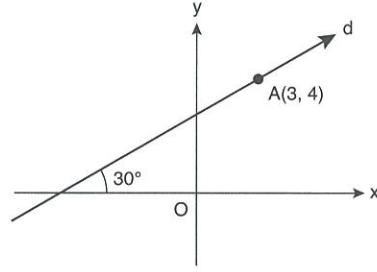
4.



$$\Rightarrow m = ?$$

- A) $\frac{2}{5}$ B) $\frac{3}{2}$ C) $-\frac{2}{3}$ D) $\frac{2}{3}$ E) $\frac{3}{4}$

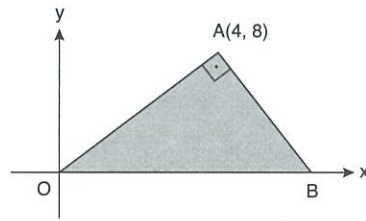
5.



$$d : ax + by + c = 0 \\ \Rightarrow d = ?$$

- A) $\sqrt{3}x + y + 3 = 0$ B) $\sqrt{3}y - x - 4\sqrt{3} = 0$
C) $\sqrt{3}y - x - 4\sqrt{3} = 3$ D) $\sqrt{3}y - x - 4\sqrt{3} = -3$
E) $\sqrt{3}y + \sqrt{3}x + 4\sqrt{3} - 3 = 0$

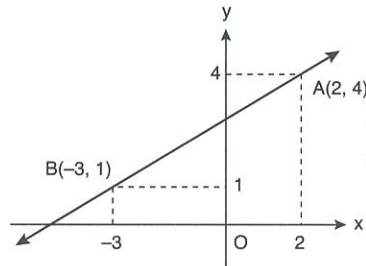
6.



$$\Rightarrow A(OAB) = ?$$

- A) 20 B) 40 C) 80 D) 100 E) 160

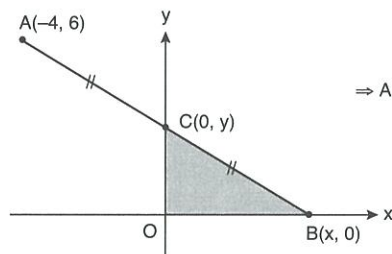
7.



$$d : ax + by + c = 0 \\ \Rightarrow d = ?$$

- A) $5y + 3x - 14 = 0$ B) $3y + 5x - 14 = 0$
C) $3y - 5x - 14 = 0$ D) $5y - 3x - 14 = 0$
E) $-5y - 3x - 14 = 0$

8.

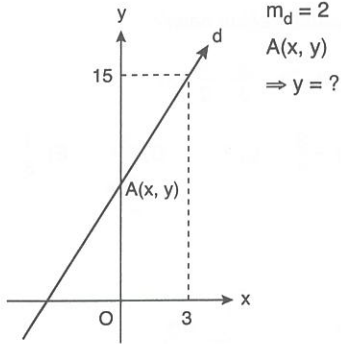


$$\Rightarrow A(OAB) = ?$$

- A) 4 B) 6 C) 16 D) 12 E) 18

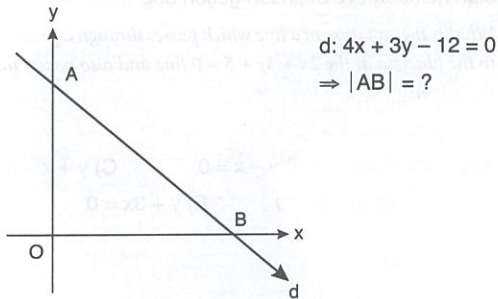


9.



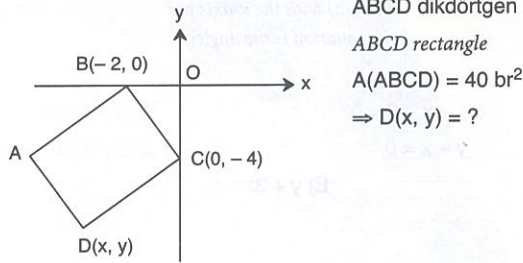
- A) 4 B) 6 C) 8 D) 9 E) 10

10.



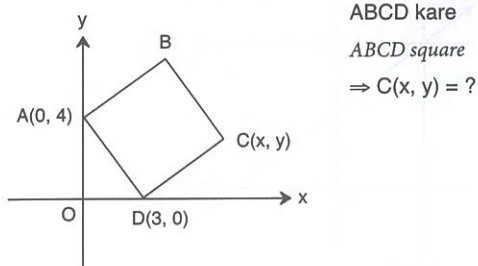
- A) 3 B) 4 C) 5 D) 6 E) 10

11.



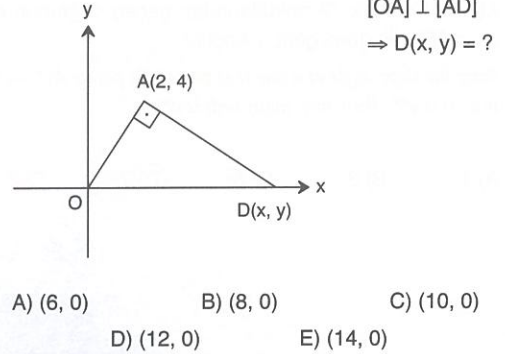
- A) (8, 8) B) (-2, -6) C) (-6, -8)
 D) (-4, -8) E) (-8, -8)

12.

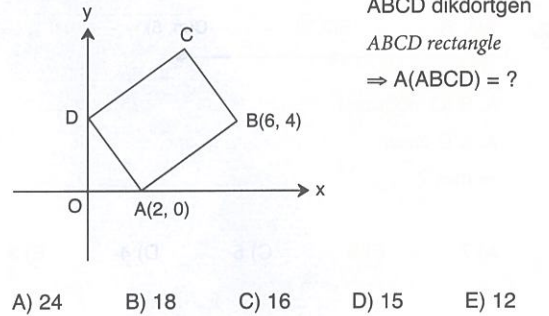


- A) (5, 3) B) (4, 8) C) (7, 3)
 D) (6, 4) E) (7, 8)

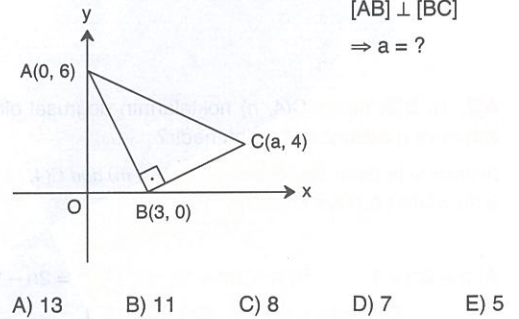
13.



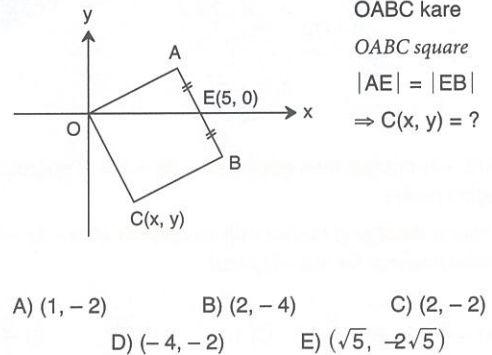
14.



15.



16.





1. $A(3, -1)$ ve $B(k, 3)$ noktalarından geçen doğrunun eğim açısı 45° olduğuna göre, k kaçtır?

Since the slope angle of a line that passes the points $A(3, -1)$ and $B(k, 3)$ is 45° , then, how many unit is k ?

- A) 1 B) 3 C) 5 D) 7 E) 8

2. $A(1, 2)$ $B(3, 3)$ $C(m, 5)$

A, B, C doğrusal

A, B, C linear

$\Rightarrow m = ?$

- A) 7 B) 6 C) 5 D) 4 E) 3

3. $A(2, 1)$, $B(3, m)$ ve $C(4, n)$ noktalarının doğrusal olması için m ve n arasındaki bağıntı nedir?

In order to be linear the points $A(2, 1)$, $B(3, m)$ and $C(4, n)$ what is the relation between m and n ?

- A) $n = 2m - 1$ B) $n = 2m + 1$ C) $m = 2n - 1$
D) $n = m + 1$ E) $m = 2n + 1$

4. $A(2, -1)$ noktasından geçen $ax - 3y + 2 = 0$ doğrusunun eğimi nedir?

What is the slope of the line with an equation of $ax - 3y + 2 = 0$ which intersects the $A(2, -1)$ point?

- A) $-\frac{5}{8}$ B) $-\frac{5}{6}$ C) 1 D) $\frac{3}{2}$ E) $\frac{5}{2}$

5. $\frac{2x}{3} - \frac{y}{2} = 3$ doğrusunun eğimi nedir?

What is the slope of the line $\frac{2x}{3} - \frac{y}{2} = 3$?

- A) $-\frac{4}{3}$ B) $-\frac{3}{4}$ C) 1 D) $\frac{3}{4}$ E) $\frac{4}{3}$

6. $2x + 3y + 5 = 0$ doğrusu üzerinde apsisi ordinatına eşit olan noktadan ve orijinden geçen doğru denklemi nedir?

What is the equation of a line which passes through a point, equals to the abscissa at the $2x + 3y + 5 = 0$ line and also passes through the origin?

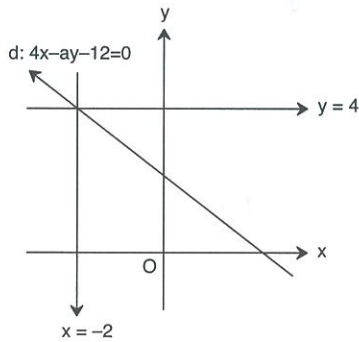
- A) $y - x + 2 = 0$ B) $y - x = 0$ C) $y + x = 0$
D) $y - 2x = 0$ E) $y + 3x = 0$

7. $A(a, 2)$ ve $B(1, -a)$ noktalarından geçen ve x eksenine pozitif yönde 135° açı yapan doğru denklemi nedir?

$A(a, 2)$ and $B(1, -a)$ with the x -axis positive direction through the points 135° the equation is the angle?

- A) $y + x - 3 = 0$ B) $y - x = 0$
C) $y + x = 0$ D) $2y + 2x - 3 = 0$
E) $y + 3x = 0$

- 8.



$\Rightarrow m_d = ?$

- A) $\frac{3}{5}$ B) $-\frac{3}{5}$ C) -1 D) $-\frac{4}{5}$ E) $-\frac{7}{4}$



9. $d_1: 2x - 4y + 5 = 0$ $d_1 \parallel d_2$
 $d_2: 3x + ay - 4 = 0$ $\Rightarrow a = ?$

A) -6 B) -3 C) -1 D) 1 E) 3

10. $d_1: 2x - y + 3 = 0$ doğrusuna paralel olan ve (3, 1) noktasından geçen doğru denklemi nedir?

What is the equation of a line that is parallel to $d_1: 2x - y + 3 = 0$ line and intersects the point (3, 1)?

A) $2x + y - 5 = 0$ B) $2x - y - 5 = 0$
 C) $2x - y + 10 = 0$ D) $2x - y - 10 = 0$
 E) $4x - 2y - 5 = 0$

11. Pozitif yönde x eksenine ile 45° açı yapan d_1 doğrusuna paralel olan ve (0, -2) noktasından geçen denklemi nedir?

What is the equation of a line that makes a 45° angle to the x axis at the positive direction, that is parallel to d_1 line and intersects the (0, -2) point?

A) $x - y + 4 = 0$ B) $y - x - 3 = 0$
 C) $x - y - 2 = 0$ D) $2x - y - 2 = 0$
 E) $x - 2y - 4 = 0$

12. $d_1: x + ay - 4 = 0$ $d_1 \perp d_2$
 $d_2: 3x - 2y + 3 = 0$ $\Rightarrow a = ?$

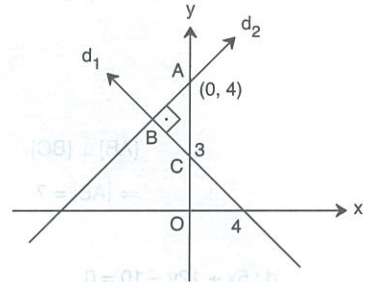
A) $\frac{3}{2}$ B) 1 C) $\frac{2}{3}$ D) $-\frac{2}{3}$ E) $-\frac{3}{2}$

13. $d_1: 3x - y + 4 = 0$ doğrusuna dik olan ve (3, 0) noktasından geçen doğru denklemi nedir?

What is the equation of a line that is perpendicular to the $d_1: 3x - y + 4 = 0$ line and intersects the point (3, 0)?

A) $y = 2x - 9$ B) $y = x - 3$ C) $y = 2x - 3$
 D) $y = 3x + 1$ E) $3y + x - 3 = 0$

14.



$[AB] \perp [BC]$

$\Rightarrow d_2 = ?$

A) $2y - 3x - 1 = 0$ B) $y - 2x - 6 = 0$
 C) $x - y + 1 = 0$ D) $x - y + 2 = 0$
 E) $3y - 4x - 12 = 0$

15. $d_1: 2x - y + 5 = 0$

$$d_2: 3x + 2y + 4 = 0$$

d_1 ve d_2 doğrularının kesim noktasını bulunuz?

Find the intersecting point of d_1 and d_2 lines?

A) (-2, 1) B) (2, 1) C) (-2, -1)
 D) (1, -2) E) (-1, 2)

16. $d_1: x + 2y - 6 = 0$

$$d_2: 2x - 3y + 2 = 0$$

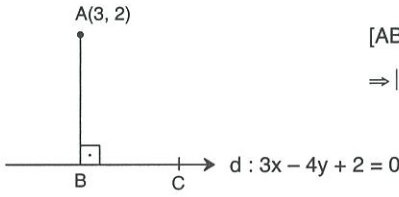
$$d_3: ax + 4y - 12 = 0$$

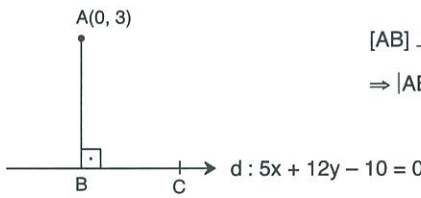
Doğruları sabit bir noktadan geçtiğine göre d_3 doğrusunun eğimi nedir?

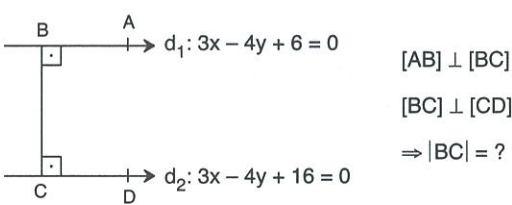
While the d_1 , d_2 and d_3 lines pass through a constant point, what is the slope of the d_3 line?

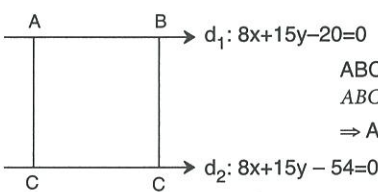
A) $-\frac{1}{4}$ B) $-\frac{1}{2}$ C) 1 D) $\frac{1}{2}$ E) $\frac{1}{4}$



1.  $[AB] \perp [BC]$
 $\Rightarrow |AB| = ?$
 $d: 3x - 4y + 2 = 0$
 A) $\frac{19}{5}$ B) 3 C) $\frac{12}{5}$ D) $\frac{4}{5}$ E) $\frac{3}{5}$

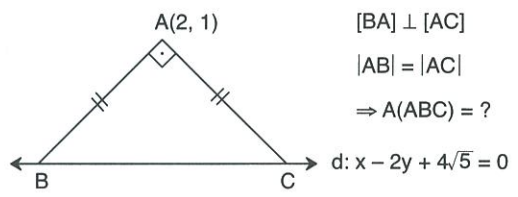
2.  $[AB] \perp [BC]$
 $\Rightarrow |AB| = ?$
 $d: 5x + 12y - 10 = 0$
 A) 8 B) 6 C) 4 D) 2 E) 1

3.  $[AB] \perp [BC]$
 $[BC] \perp [CD]$
 $\Rightarrow |BC| = ?$
 $d_1: 3x - 4y + 6 = 0$
 $d_2: 3x - 4y + 16 = 0$
 A) 6 B) 5 C) 4 D) 2 E) 1

4.  $d_1: 8x + 15y - 20 = 0$
 $d_2: 8x + 15y - 54 = 0$
 ABCD kare
 ABCD square
 $\Rightarrow A(ABCD) = ?$
 A) 1 B) 4 C) 9 D) 16 E) 25

PUZA YAYINLARI

5. $d_1: 2x - 3y + 14 = 0$ $d_1 \parallel d_2$
 $d_2: mx - 6y + 2 = 0$
 Bu iki doğru arasındaki uzaklık kaç br'dir?
 How many unit is the distance between these two lines?
 A) $2\sqrt{13}$ B) $\sqrt{13}$ C) $\frac{2\sqrt{13}}{3}$ D) $2\sqrt{3}$ E) $\frac{\sqrt{3}}{2}$

6.  $[BA] \perp [AC]$
 $|AB| = |AC|$
 $\Rightarrow A(ABC) = ?$
 $d: x - 2y + 4\sqrt{5} = 0$
 A) 4 B) 9 C) 16 D) 25 E) 36

PUZA YAYINLARI

7. A(1, 2) noktasının $y = \frac{2}{3}x + 1$ doğrusuna olan uzaklığı kaç br'dir?
 How many unit is the distance of A(1, 2) point to $y = \frac{2}{3}x + 1$ line?
 A) $\frac{\sqrt{13}}{2}$ B) $\frac{4\sqrt{13}}{13}$ C) $\frac{\sqrt{13}}{4}$
 D) $\frac{3\sqrt{13}}{13}$ E) $\frac{\sqrt{13}}{13}$

8. $\begin{cases} 3x - 4y + 2 = 0 \\ 4x + 3y - 6 = 0 \end{cases}$
 Doğrularına eşit uzaklıkta bulunan doğru denklemlerinden biri aşağıdakilerden hangisidir?
 Which one of the followings is the one of equations of the line that is the same distance to the lines?
 A) $7x - y - 6 = 0$ B) $7x + y - 4 = 0$
 C) $x - y + 4 = 0$ D) $x + y - 6 = 0$
 E) $7x - y - 4 = 0$

PUZA YAYINLARI



9. $d_1: x + 2y - 4 = 0$
 $d_2: 3x - y + 4 = 0$
 Doğruları arasındaki dar açının tanjantı kaçtır?
What is the tangential of the acute angle between the lines?

A) -7 B) -3 C) $\frac{3}{2}$ D) 3 E) 7

10. $d_1: x - y + 4 = 0$
 $d_2: -\sqrt{3}x + y - 4 = 0$
 Doğruları arasındaki geniş açı kaçtır?
What is the measure of the obtuse angle between the lines?

A) 165° B) 150° C) 135° D) 120° E) 110°

11. $d_1: y + x = 0$
 $d_2: y + \sqrt{3}x + 5 = 0$
 Doğruları arasındaki dar açı kaçtır?
What is the tangential of the acute angle between the lines?

A) 15° B) 30° C) 45° D) 60° E) 75°

12. $d_1: ax + y + 4 = 0$
 $d_2: 2x - y + 1 = 0$
 Doğruları arasındaki dar açının tanjantı 2 olduğuna göre a'nın alacağı değer aşağıdakilerden hangisidir?
While the tangential of the acute angle between the lines is 2, which one of the following can "a" take as a value?

A) -3 B) $\frac{4}{3}$ C) 1 D) 2 E) $\frac{5}{2}$

PUZA YAYINLARI

13. $x(2k + 3) + y(k - 2) + 6 - 3k = 0$
 Doğrularının kesim noktasını bulunuz?
Find the intersecting point of the lines?

A) $(\frac{1}{7}, 0)$ B) (0, 1) C) (0, 3)
 D) $(\frac{1}{7}, 2)$ E) $(\frac{1}{7}, -2)$

14. $(k + 1)x + (k - 2)y + k - 3 = 0$
 Doğrularının kesim noktası ve orijinden geçen doğru denklemi aşağıdakilerden hangisidir?
Which one of the following is the equation of line that passes through the origin and the intersecting / breakpoint of lines?

A) $y - 4x = 0$ B) $y + 2x = 0$ C) $x - 4y = 0$
 D) $x + 3y = 0$ E) $y + 4x = 0$

PUZA YAYINLARI

15. $3x - 4y + 3 = 0$ ve $4x + 3y - 2 = 0$ doğrularının açıortay denklemlerinden birinin denklemi aşağıdakilerden hangisidir?
Which one of the following is the equation of angle bisector equations of $3x - 4y + 3 = 0$ and $4x + 3y - 2 = 0$ lines?

A) $x - 7y - 6 = 0$ B) $4x - 3y + 3 = 0$
 C) $7y + x - 5 = 0$ D) $y + 7x - 4 = 0$
 E) $3x - 4y - 1 = 0$

16. $5x - 12y + 3 = 0$ ve $5y + 12x - 4 = 0$ doğrularının açıortay denklemlerinden birinin denklemi aşağıdakilerden hangisidir?
Which one of the following is the equation of angle bisector equations of $5x - 12y + 3 = 0$ ve $5y + 12x - 4 = 0$ lines?

A) $-17x + 7y + 1 = 0$ B) $7x - 4y + 1 = 0$
 C) $5x - 12y - 1 = 0$ D) $x + y - 1 = 0$
 E) $5x - 12y + 4 = 0$



1. $x = t + 1$ ve $y = 2t - 4$ parametrik denklemleriyle verilen noktaların analitik düzlemdeki görüntüsü nedir?

What is the image of points that are given by parametric equations $x = t + 1$ and $y = 2t - 4$ at the analytical plane?

- A) $2x + y - 4 = 0$ B) $4x - y + 4 = 0$
C) $2x - y + 4 = 0$ D) $y - 2x + 6 = 0$
E) $y - 2x - 2 = 0$

2. $A(2a - 1, 3a + 2)$ noktalarının geometrik yer denklemi aşağıdakilerden hangisidir?

Which one of the followings is the geometrical location equation of the $A(2a - 1, 3a + 2)$ points?

- A) $2x - 5y + 4 = 0$ B) $2x + 3y - 4 = 0$
C) $3x - 2y + 7 = 0$ D) $2x - 3y + 4 = 0$
E) $x + 2y - 6 = 0$

3. $A(1, 2)$ ve $B(6, -3)$ noktaları veriliyor. $C(x, 0)$ noktası için $\min(|AC| + |BC|)$ yapan x değeri nedir?

$A(1, 2)$ and $B(6, -3)$ points are given. What is the x value that makes $\min(|AC| + |BC|)$ for the $C(x, 0)$ point?

- A) 2 B) 3 C) 4 D) 5 E) 6

4. $A(-3, 18)$ ve $B(12, 3)$ noktaları veriliyor. $C(x, 0)$ olmak üzere $\max(|AC| - |CB|)$ için x değeri nedir?

$A(-3, 18)$ and $B(12, 3)$ points are given. What is the x value that makes $\max(|AC| - |CB|)$ for the $C(x, 0)$ point?

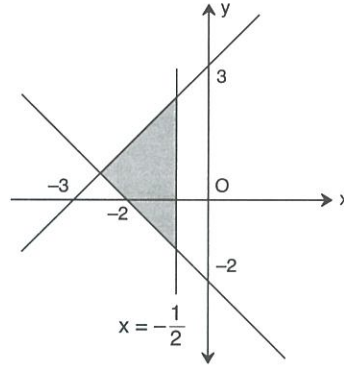
- A) 10 B) 13 C) 15 D) 17 E) 20

5. $A(2, 3)$ ve $B(3, 4)$ noktaları veriliyor. $C(x, 0)$ olmak üzere $\max(|BC| - |AC|)$ için x değeri nedir?

$A(2, 3)$ and $B(3, 4)$ points are given. What is the x value that makes $\max(|BC| - |AC|)$ for the $C(x, 0)$ point?

- A) 1 B) $\sqrt{2}$ C) 2 D) $2\sqrt{2}$ E) 4

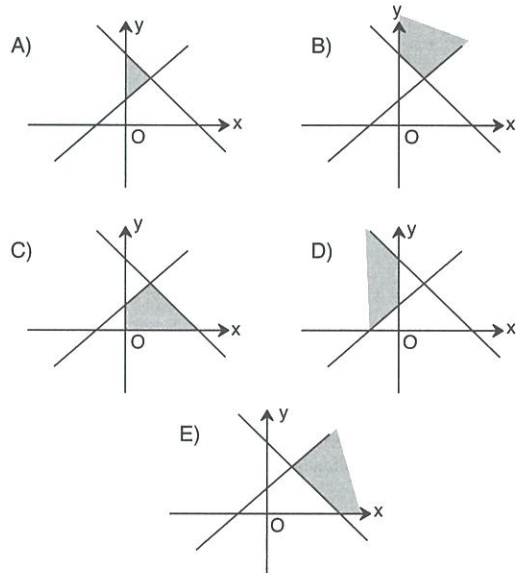
6.



- A) $x - y + 6 \geq 0$ B) $x - y + 3 \leq 0$
 $x - y - 2 \geq 2$ $x + y \leq 0$
 $x > -\frac{1}{2}$ $x \geq -\frac{1}{2}$
C) $x - y + 1 \geq 0$ D) $x - 2y + 6 \leq 0$
 $x + y > 3$ $x - y + 2 \geq 0$
 $x \leq 0$ $x \geq -1$
E) $y - x - 3 \leq 0$
 $x + y + 2 \geq 0$
 $x \leq -\frac{1}{2}$

7. Analitik düzlemde $y \geq x + 2$, $y \leq 4 - x$ ve $x \geq 0$ eşitsizliklerini sağlayan grafik aşağıdakilerden hangisidir?

Which one of the followings is the graph that proves the $y \geq x + 2$, $y \leq 4 - x$ and $x \geq 0$ inequalities at the analytical plane?





8. $y \leq 0$, $x \geq -4$ ve $3x - y + 6 \leq 0$ eşitsizlik sistemini gerçekleyen noktaların oluşturduğu bölgenin alanı kaç br^2 'dir?

How many unit² is the surface area of the sector that proves the $y \leq 0$, $x \geq -4$ and $3x - y + 6 \leq 0$ inequalities?

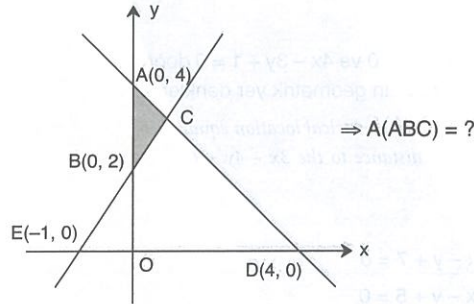
- A) 6 B) 10 C) 18 D) 20 E) 24

9. Analitik düzlemde, $(y + 1)(x - 2) - xy = 0$ bağıntısı ile verilen doğru denkleminin eğimi kaçtır?

What is the slope of line equation given with the $(y + 1)(x - 2) - xy = 0$ relationship at the analytical plane?

- A) -2 B) $-\frac{1}{2}$ C) 1 D) $\frac{1}{2}$ E) 2

10.



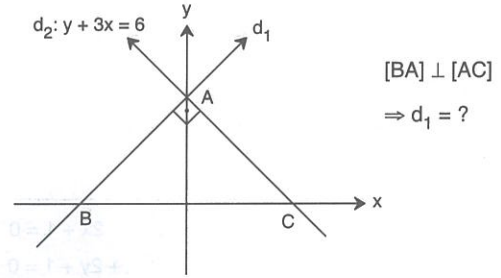
- A) $\frac{4}{9}$ B) $\frac{2}{3}$ C) 1 D) 2 E) $\frac{7}{3}$

11. A(2, 3) ve B(4, 5) noktaları veriliyor. [AB] doğru parçasının orta dikme doğru denklemini nedir?

A(2, 3) and B(4, 5) points are given. What is the equation of the perpendicular bisector of AB line segment?

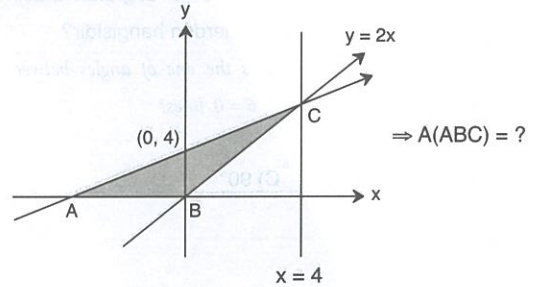
- A) $y - x - 4 = 0$ B) $y + x - 1 = 0$
C) $y + x - 7 = 0$ D) $y + x + 1 = 0$
E) $x - y - 1 = 0$

12.



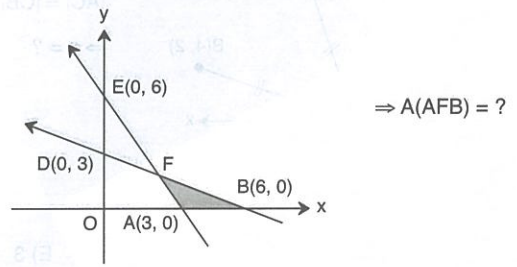
- A) $y - x - 6 = 0$ B) $y - x - 18 = 0$
C) $3y + x - 6 = 0$ D) $y - 3x - 6 = 0$
E) $3y - x - 18 = 0$

13.



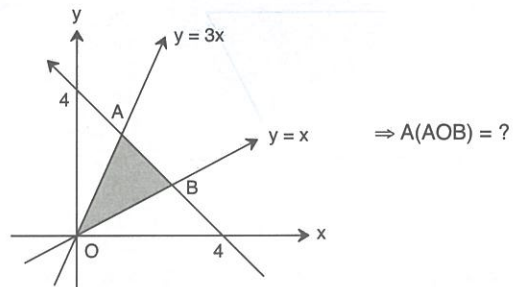
- A) 64 B) 32 C) 28 D) 24 E) 16

14.



- A) 3 B) 4 C) 6 D) 9 E) 18

15.



- A) 2 B) 4 C) 6 D) 8 E) 12



1. $(2 - a)y + ax - a + 2 = 0$ doğrularının kesim noktasından geçen ve $2x - 4y + 5 = 0$ doğrusuna dik olan doğru denklemi nedir?

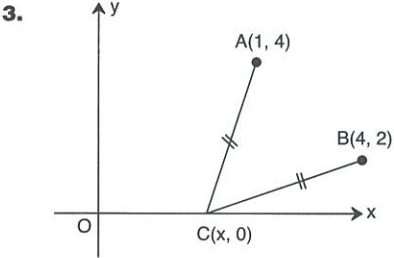
What is the equation of a line that is perpendicular to the $(2 - a)y + ax - a + 2 = 0$ line and passes through the point that the lines $2x - 4y + 5 = 0$ intersect at?

- A) $2y - x - 1 = 0$ B) $y + 2x + 1 = 0$
C) $x + 2y - 1 = 0$ D) $x + 2y + 1 = 0$
E) $2y + x - 2 = 0$

2. $-y + x - 4 = 0$ ve $x + \sqrt{3}y - 6 = 0$ doğruları arasındaki açılardan bir tanesi aşağıdakilerden hangisidir?

Which one of the following is the one of angles between the $-y + x - 4 = 0$ ve $x + \sqrt{3}y - 6 = 0$ lines?

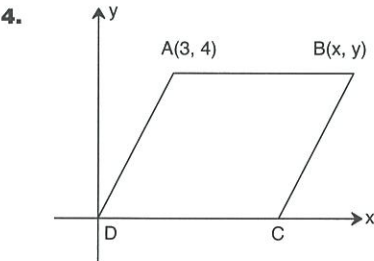
- A) 120° B) 105° C) 90° D) 60° E) 25°



$$|AC| = |CB|$$

$$\Rightarrow x = ?$$

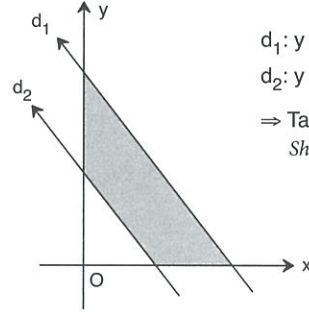
- A) $\frac{1}{6}$ B) $\frac{1}{2}$ C) 1 D) 2 E) 3



ABCD eşkenar
dörtgen
ABCD rhombus
 $\Rightarrow B(x, y) = ?$

- A) (5, 4) B) (5, 3) C) (8, 3)
D) (8, 4) E) (10, 4)

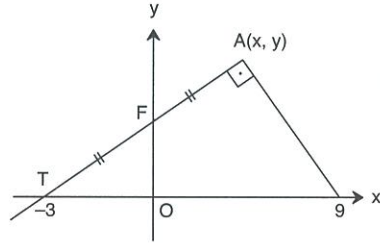
5.



$d_1: y = -x + 8$
 $d_2: y = -2x + 6$
 $\Rightarrow$ Taralı alan kaç br^2 dir?
Shaded area = ?

- A) 21 B) 23 C) 30 D) 42 E) 46

6.



$$|AF| = |FT|$$

$$\Rightarrow x + y = ?$$

- A) 12 B) 9 C) 8 D) 6 E) 4

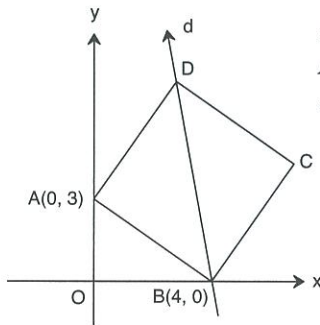
7.

- $3x - 4y + 6 = 0$ ve $4x - 3y + 1 = 0$ doğrularına eşit uzaklıktaki noktaların geometrik yer denklemi nedir?

What is the geometrical location equation of the points that have the same distance to the $3x - 4y + 6 = 0$ and $4x - 3y + 1 = 0$ lines?

- A) $x - y + 7 = 0$ B) $x - y + 1 = 0$
C) $x - y + 5 = 0$ D) $x - y - 1 = 0$
E) $7x - 7y + 8 = 0$

8.

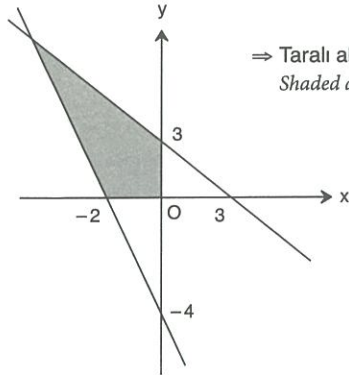


ABCD kare
ABCD square
 $\Rightarrow d: ax + by + c = ?$

- A) $y - x + 4 = 0$ B) $y + x - 2 = 0$
C) $2x - y - 4 = 0$ D) $y + 7x - 28 = 0$
E) $2x - y + 2 = 0$



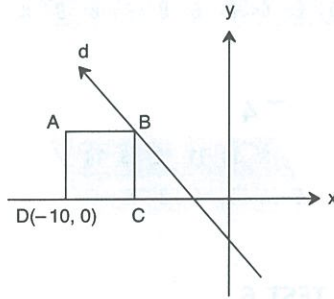
9.



⇒ Taralı alan kaç br^2 dir?
Shaded area = ?

- A) 14 B) $\frac{41}{2}$ C) 22 D) $\frac{45}{2}$ E) 26

10.



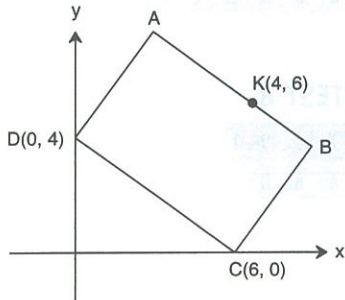
ABCD kare
ABCD square

$$d: \frac{x}{2} + \frac{y}{2} = -1$$

$$\Rightarrow A(ABCD) = ?$$

- A) 49 B) 36 C) 25 D) 16 E) 14

11.

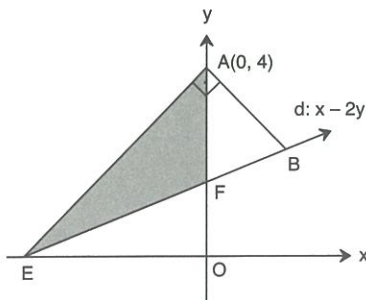


ABCD dikdörtgen
ABCD rectangle

$$\Rightarrow A(ABCD) = ?$$

- A) 36 B) 32 C) 28 D) 24 E) 14

12.

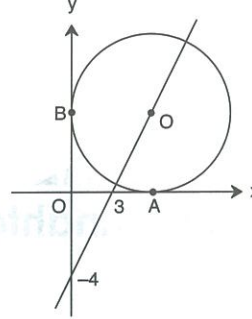


$$[EA] \perp [AB]$$

$$\Rightarrow A(AFE) = ?$$

- A) 2 B) 4 C) 8 D) $4\sqrt{5}$ E) $8\sqrt{5}$

13.



O merkezli dairenin
alanı kaç br^2 dir?
How many unit^2 is the
area of the circular region
with a center O?

- A) 169π B) 144π C) 100π D) 64π E) 36π

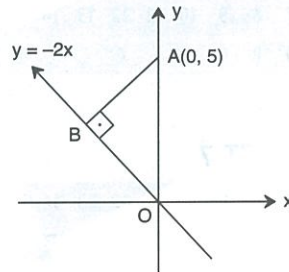
14.

Analitik düzlemde eğimleri 3 ve $-\frac{1}{3}$ olan iki doğrunun açı-
ortay doğrularından birinin eğimi aşağıdakilerden hangisi-
dir?

Which one of the followings is the slope of the one of angle bisector
lines that have the slope of 3 and $-1/3$ at the analytical plane?

- A) $-\frac{1}{3}$ B) -1 C) $\frac{1}{2}$ D) 1 E) 3

15.

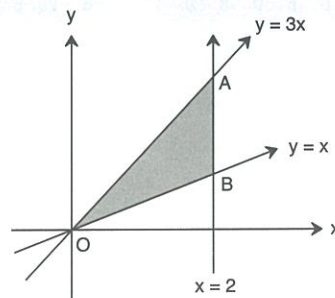


$$[AB] \perp [BO]$$

$$\Rightarrow A(ABO) = ?$$

- A) $\frac{1}{5}$ B) $\frac{\sqrt{5}}{5}$ C) 1 D) $\sqrt{5}$ E) 5

16.



$$\Rightarrow A(AOB) = ?$$

- A) 4 B) 16 C) 32 D) 36 E) 64



ANALİTİK GEOMETRİ

Yanıt Anahtarı

ANALYTIC GEOMETRY-LINE

Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	A	C	A	B	C	A	B	C	A	C	E	B	C	B

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	E	A	A	A	D	D	E	C	D	E	B	B	B	B	B

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	B	E	E	D	B	E	D	B	B	A	D	B	E	C	C

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	E	E	D	B	C	B	C	A	E	C	B	B	C	E	C

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	B	A	D	D	C	D	B	D	C	E	C	C	C	D	B

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	A	A	B	E	B	D	D	A	B	C	A	E	E	A	B

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	D	D	B	B	C	E	E	E	A	A	B	C	E	C	A

TEST 8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
D	C	B	C	B	E	A	A	D	B	C	E	E	A	A

TEST 9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	B	B	D	B	B	B	D	B	D	C	B	B	C	E	A



SIMETRI

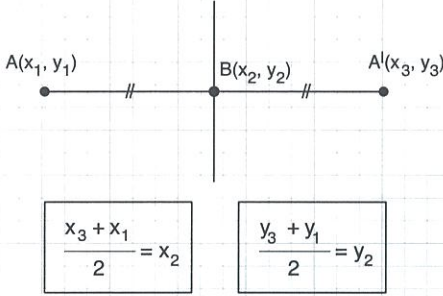
SYMMETRY



ÖZELLİK|Property 1

Noktanın Noktaya Göre Simetriği

Symmetry of a point as per another point:



1. A(3, 2) noktasının B(-1, 4) noktasına göre simetriği?
Symmetry of a point A(3, 2) as per another point B(-1, 4)?

(- 5, 6)

2. A(1, -2) noktasının B(a, b) noktasına göre simetriği olan nokta C(- 5, - 6) ise B(a, b) noktasının koordinatları nedir?

If the Symmetry of a point A(1, -2) as per another point B(a, b) is a point C(-5, -6), then what are the coordinates of point B(a, b)?

(- 2, - 4)

3. A(a, b) noktasının B(- 3, 2) noktasına göre simetriği C(- 6, 3) noktası ise A(a, b) noktasının koordinatları nedir?

If the Symmetry of a point A(a, b) as per another point B(-3, 2) is a point C(-6, 3), then what are the coordinates of point A(a, b)?

(0, 1)

ÖZELLİK|Property 2

Noktanın — Of a point

A(x, y)	x eksenine — x-axis	A'(x, -y)
A(x, y)	y eksenine — y-axis	A'(-x, y)
A(x, y)	orjine — origine	A'(-x, -y)
A(x, y)	y = x	A'(y, x)
A(x, y)	y = -x	A'(-y, -x)
göre simetrikleri the symmetry as per		

1. A(-2, 3) noktasının x eksenine göre simetriği B ve B noktasının y = x doğrusuna göre simetriği C noktası olduğuna göre,

Since the symmetry of a point A (-2, 3) as per the axis x is B, and the symmetry of a point B as per the line of y = x is point C

⇒ C(a, b) = ?

(- 3, - 2)

2. A(a, b) noktasının y = - x doğrusuna göre simetriği B ve B noktasının orijine göre simetriği C(- 4, 2) noktası olduğuna göre,

Since the symmetry of a point A (a, b) as per the line y = -x is B, and the symmetry of a point B as per the origin is point C(-4,2)

⇒ A(a, b) = ?

(2, - 4)

3. A(2, 1) noktasının x eksenine göre simetriği B ve y eksenine göre simetriği C noktası olduğuna göre,

Since the symmetry of a point A (2, 1) as per the axis x is B, and as per the axis y is point C

⇒ A(ABC) = ?

4



ÖZELLİK|Property 3

- Noktanın $x = a$ ve $y = b$ doğrularına göre simetriği
Symmetry of a point as per the $x = a$ and $y = b$ lines

$$A(x, y) \xrightarrow{x=a} A'(2a-x, y)$$

$$A(x, y) \xrightarrow{y=b} A'(x, 2b-y)$$

- $A(4, 6)$ noktasının $x = 2$ doğrusuna göre simetriği olan noktanın koordinatları nedir?
What are the coordinates of the point which is the symmetry of point $A(4, 6)$ as per the $x = 2$ line?

(0, 6)

- $A(-2, 4)$ noktasının $y + 2 = 0$ doğrusuna göre simetriği olan noktanın koordinatları nedir?
What are the coordinates of the point which is the symmetry of point $A(-2, 4)$ as per the $y + 2 = 0$ line?

(-2, -8)

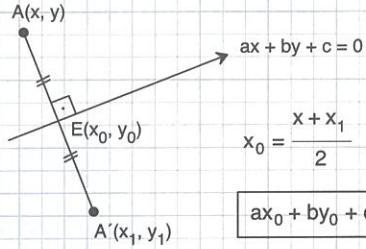
- $A(-3, 5)$ noktasının $y = 2$ noktasına göre simetriği B ve B noktasının orijine göre simetriği C noktası olduğuna göre

Since the symmetry of a point $A(-3, 5)$ as per the point $y = 2$ is B, and the symmetry of a point B as per the origin is point C

$$\Rightarrow C(a, b) = ?$$

(3, 1)

ÖZELLİK|Property 4



$$x_0 = \frac{x + x_1}{2}, \quad y_0 = \frac{y + y_1}{2}$$

$$ax_0 + by_0 + c = 0$$

$$\left(\frac{y_1 - y}{x_1 - x} \right) \cdot \left(-\frac{a}{b} \right) = -1$$

- $A(2, -2)$ noktasının $3x + 4y - 8 = 0$ doğrusuna göre simetriği B noktası ise,
If the symmetry of a point $A(2, -2)$ as per the $3x + 4y - 8 = 0$ line is a point B

$$\Rightarrow |AB| = ?$$

4

- $A(-2, 0)$ noktasının $x + 2y - 8 = 0$ doğrusuna göre simetriği olan noktanın koordinatları nedir?
What are the coordinates of the point which is the symmetry of point $A(-2, 0)$ as per the $x + 2y - 8 = 0$ line?

(2, 8)

- $A(1, 4)$ noktasının d: $ax + by + c = 0$ doğrusuna göre simetriği olan nokta B(4, 8) noktası ise A noktasının d doğrusuna olan en kısa uzaklığını bulunuz?

If the symmetry of a point $A(1, 4)$ as per the d: $ax + by + c = 0$ line is a point B(4, 8), then find the shortest distance of point A to d line?

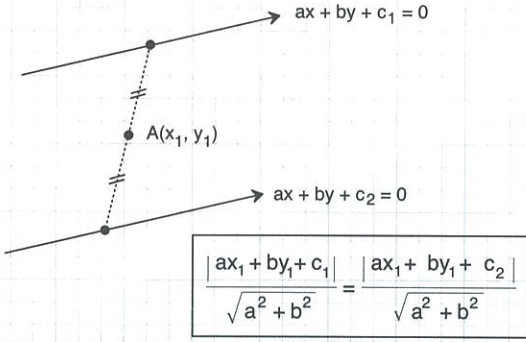
 $\frac{5}{2}$



ÖZELLİK|Property 5

d: $ax + by + c = 0$ doğrusunun $A(x_1, y_1)$ noktasına göre simetriği

Symmetry of a d: $ax + by + c_1 = 0$ line as per the point $A(x_1, y_1)$



1. $3x - 2y + 6 = 0$ doğrusunun $A(2, 4)$ noktasına göre simetriği olan doğru nedir?

What is the line which is the symmetry of a $3x - 2y + 6 = 0$ line as per the point $A(2, 4)$?

$$3x - 2y - 2 = 0$$

2. $x + 3y - 6 = 0$ doğrusunun $A(1, 0)$ noktasına göre simetriği olan doğru nedir?

What is the line which is the symmetry of a $x + 3y - 6 = 0$ line as per the point $A(1, 0)$?

$$x + 3y + 4 = 0$$

3. $y - x + 4 = 0$ doğrusunun $A(0, 0)$ noktasına göre simetriği olan doğru nedir?

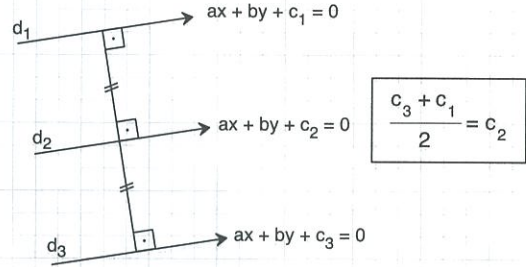
What is the line which is the symmetry of a $y - x + 4 = 0$ line as per the point $A(0, 0)$?

$$y - x - 4 = 0$$

ÖZELLİK|Property 6

- $d_1: ax + by + c_1 = 0$ doğrusunun $d_2: ax + by + c_2 = 0$ doğrusuna göre simetriği $d_3: ax + by + c_3 = 0$ doğrusudur.

Symmetry of a $d_1: ax + by + c_1 = 0$ line as per the $d_2: ax + by + c_2 = 0$ line is the $d_3: ax + by + c_3 = 0$ line ($d_1 \parallel d_3$)



1. $d_1: 3x - 4y + 6 = 0$

$$d_2: 3x - 4y + 10 = 0$$

d_1 doğrusunun d_2 doğrusuna göre simetriği olan doğru nedir?

What is the line which is the symmetry of the d_1 line as per the d_2 line?

$$3x - 4y + 14 = 0$$

2. $d_1: 2x - 4y + 5 = 0$

$$d_2: 2x - 4y + 7 = 0$$

d_1 doğrusunun d_2 doğrusuna göre simetriği olan doğru nedir?

What is the line which is the symmetry of the d_1 line as per the d_2 line?

$$2x - 4y + 9 = 0$$

3. $d_1: x - 3y + 5 = 0$

$$d_2: 6y - 2x - 8 = 0$$

d_1 doğrusunun d_2 doğrusuna göre simetriği olan doğru nedir?

What is the line which is the symmetry of the d_1 line as per the d_2 line?

$$x - 3y + 3 = 0$$



ÖZELLİK|Property 7

$ax + by + c = 0$	Doğrunun — Of a line x eksenine — x-axis	$\rightarrow ax - by + c = 0$
$ax + by + c = 0$	y eksenine — y-axis	$\rightarrow -ax + by + c = 0$
$ax + by + c = 0$	orijine — origine	$\rightarrow -ax - by + c = 0$
$ax + by + c = 0$	$y = x$	$\rightarrow bx + ay + c = 0$
$ax + by + c = 0$	$y = -x$	$\rightarrow -bx - ay + c = 0$
göre simetrikleri the symmetry as per		

1. $2x - 3y + 5 = 0$ doğrusunun $y = x$ doğrusuna göre simetriği olan doğru nedir?

What is the line that is symmetry of a $2x - 3y + 5 = 0$ line as per the $y = x$ line?

$$-3x + 2y + 5 = 0$$

2. $d_1: x - 2y + 4 = 0$ doğrusunun orijine göre simetriği olan doğru d_2 , d_2 doğrusunun $y = -x$ doğrusuna göre simetriği olan doğru d_3 doğrusudur.

The line that is the symmetry of a $d_1: x - 2y + 4 = 0$ line as per the origin is d_2 , the symmetry of a line d_2 as per the $y = -x$ line is d_3 line.

$$\Rightarrow d_3 = ?$$

$$-2x + y + 4 = 0$$

3. $d_1: 2x + 4y - 6 = 0$ doğrusunun orijine göre simetriği d_2 , d_2 doğrusuna paralel olan ve $(2, 0)$ noktasından geçen doğru denklemi nedir?

What is the equation of a line that is parallel to d_2 line that is the symmetry of a $d_1: 2x + 4y - 6 = 0$ line as per the origin and intersects the point $(2, 0)$?

$$x + 2y - 2 = 0$$

ÖZELLİK|Property 8

d_1 doğrusunun d_2 doğrusuna göre simetriği

$$d_1: a_1x + b_1y + c_1 = 0$$

$$d_2: a_2x + b_2y + c_2 = 0$$

symmetry of a $d_1: a_1x + b_1y + c_1 = 0$ line
as per the $d_2: a_2x + b_2y + c_2 = 0$ line

$$a_1x + b_1y + c_1 + k(a_2x + b_2y + c_2) = 0$$

$$k = -2 \cdot \frac{a_1a_2 + b_1b_2}{a_2^2 + b_2^2}$$

1. $d_1: 2x - y + 5 = 0$ doğrusunun

$d_2: 3x + y + 4 = 0$ doğrusuna göre simetriği nedir?

What is the symmetry of a $d_1: 2x - y + 5 = 0$ line as per the $d_2: 3x + y + 4 = 0$ line?

$$x + 2y - 1 = 0$$

2. $d_1: x - y + 4 = 0$ doğrusunun

$d_2: 2x + y - 2 = 0$ doğrusuna göre simetriği nedir?

What is the symmetry of a $d_1: x - y + 4 = 0$ line as per the $d_2: 2x + y - 2 = 0$ line?

$$x - 7y + 24 = 0$$

3. $d_1: x + 3y - 1 = 0$ doğrusunun

$d_2: x + y - 2 = 0$ doğrusuna göre simetriği nedir?

What is the symmetry of a $d_1: x + 3y - 1 = 0$ line as per the $d_2: x + y - 2 = 0$ line?

$$3x + y - 7 = 0$$



1. A(2, 3) noktasının B(1, -3) noktasına göre simetriği olan nokta C(x, y)'dir.

Symmetry of a point A(2, 3) as per another point B(1, -3) is point C(x, y).

$$\Rightarrow C(x, y) = ?$$

- A) (0, -6) B) $(\frac{3}{2}, 0)$ C) (0, -9)
D) (3, 0) E) (3, 9)

2. A(-2, 4) noktasının B(a, b) noktasına göre simetriği olan nokta C(0, 0)'dir.

Symmetry of a point A(-2, 4) as per another point B(a, b) is point C(0, 0).

$$\Rightarrow B(a, b) = ?$$

- A) (-1, 2) B) (-4, 8) C) (2, -4)
D) (2, 6) E) (-1, 0)

3. A(-2, 3) noktasının x eksenine göre simetriği B, B noktasının y = x doğrusuna göre simetriği C(x, y) noktasıdır.

The symmetry of a point A(-2, 3) as per the axis x is B, and the symmetry of a point B as per the line of y = x is point C(x, y).

$$\Rightarrow C(x, y) = ?$$

- A) (3, 2) B) (-3, 2) C) (-2, -3)
D) (-3, -2) E) (2, -3)

4. A(a, b) noktasının orijine göre simetriği B, B noktasının y = -x doğrusuna göre simetriği C(-4, 7) noktasıdır.

The symmetry of a point A(a, b) as per the origin is B, and the symmetry of a point B as per the line of y = -x is point C(-4, 7).

$$\Rightarrow A(a, b) = ?$$

- A) (-7, -4) B) (7, -4) C) (7, 4)
D) (4, -7) E) (5, 7)

5. A(-4, 5) noktasının y eksenine göre simetriği olan nokta ax + y - 4 = 0 doğrusu üzerinde ise,

If the Symmetry of a point A(-4, 5) as per the axis y is the point on the ax + y - 4 line,

$$\Rightarrow a = ?$$

- A) $-\frac{1}{4}$ B) $-\frac{1}{2}$ C) $\frac{1}{2}$ D) 1 E) $\frac{1}{4}$

6. A(-3, 4) noktası y = x doğrusuna göre simetriği B, x eksenine göre simetriği C noktası ise,

If the symmetry of a point A(-3, 4) as per the y = x line is B, and as per the axis x is point C,

$$\Rightarrow A(ABC) = ?$$

- A) 16 B) 28 C) 32 D) 40 E) 48

7. A(-5, 6) noktasının B(-3, 3) noktasına göre simetriği C, C noktasının orijine göre simetriği D(x, y) noktası ise,

If the symmetry of a point A(-5, 6) as per the point B(-3, 3) is C, and the symmetry of a point C as per the origin is point D(x, y)

$$\Rightarrow D(x, y) = ?$$

- A) (0, -1) B) (1, 0) C) (-1, 2)
D) (1, -2) E) (2, 1)

8. A(a, b) noktasının x eksenine göre simetriği B, B noktasının orijine göre simetriği C(3a - 4, 2b - 2) noktası ise,

If the symmetry of a point A(a, b) as per the axis x is B, and the symmetry of a point B as per the origin is point C(3a - 4, 2b - 2),

$$\Rightarrow a + b = ?$$

- A) 2 B) 3 C) 4 D) 6 E) 8



9. $A(4, 3)$ noktasının $x = 6$ doğrusuna göre simetriği $B(x, y)$ noktası ise,

If the symmetry of point $A(4, 3)$ as per the line $x = 6$ is point $B(x, y)$,

$$\Rightarrow B(x, y) = ?$$

- A) (6, 3) B) (4, 9) C) (8, 3)
D) (10, 3) E) (14, 3)

10. $A(-2, 3)$ noktasının $y - 3 = 0$ doğrusuna göre simetriği $B(x, y)$ noktası ise,

If the symmetry of point $A(-2, 3)$ as per the line $y - 3 = 0$ is point $B(x, y)$,

$$\Rightarrow B(x, y) = ?$$

- A) $(-2, 6)$ B) (8, 3) C) $(-4, 3)$
D) $(-2, 3)$ E) (3, -2)

11. $A(5, 1)$ noktasının x eksenine göre simetriği B, B noktasının $x + 3 = 0$ doğrusuna göre simetriği $C(x, y)$ noktası ise,

If the symmetry of a point $A(5, 1)$ as per the axis x is B, and the symmetry of a point B as per the $x + 3 = 0$ line is point $C(x, y)$

$$\Rightarrow x + y = ?$$

- A) -14 B) -12 C) -10 D) -8 E) -6

12. $A(-2, 3)$ noktasının $y = -x$ doğrusuna göre simetriği B, B noktasının $x - 2 = 0$ doğrusuna göre simetriği C, C noktasının y eksenine göre simetriği $D(a, b)$ noktası ise,

If the symmetry of a point $A(-2, 3)$ as per the $y = -x$ line is B, and the symmetry of a point B as per the $x - 2 = 0$ line is C, and the symmetry of point C as per the axis y is the point $D(a, b)$,

$$\Rightarrow a + b = ?$$

- A) -9 B) -5 C) 3 D) 7 E) 9

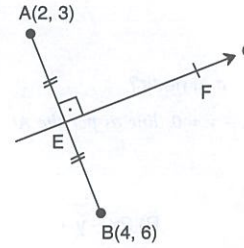
13. $A(2, 4)$ noktasının $3x - 4y = 0$ doğrusuna göre simetriği olan nokta B noktası ise,

If the symmetry of point $A(2, 4)$ as per the line $3x - 4y = 0$ is the point B,

$$\Rightarrow |AB| = ?$$

- A) 2 B) 4 C) 6 D) 8 E) 10

- 14.



$$[AB] \perp d$$

$$|AE| = |EB|$$

$$\Rightarrow |AE| = ?$$

- A) 13 B) $\frac{13}{2}$ C) $\sqrt{13}$ D) $\frac{\sqrt{13}}{2}$ E) 2

15. $A(3, 5)$ noktasının $x - y + 6 = 0$ doğrusuna göre simetriği olan nokta $B(a, b)$ ise,

If the symmetry of point $A(3, 5)$ as per the line $x - y + 6 = 0$ is the point $B(a, b)$,

$$\Rightarrow B(a, b) = ?$$

- A) $(-3, -5)$ B) (9, -1) C) $(-2, 3)$
D) $(-9, 1)$ E) $(-1, 9)$

16. $A(0, 2)$ noktasının $2x + y - 4 = 0$ doğrusuna göre simetriği olan nokta $B(a, b)$ ise,

If the symmetry of point $A(0, 2)$ as per the line $2x + y - 4 = 0$ is the point $B(a, b)$,

$$\Rightarrow B(a, b) = ?$$

- A) (4, -5) B) $(\frac{2}{5}, \frac{4}{5})$ C) $(\frac{8}{5}, \frac{14}{5})$
D) $(\frac{4}{5}, \frac{14}{5})$ E) (4, 5)



1. $x - y + 6 = 0$ doğrusunun

$A(2, 4)$ noktasına göre simetriği nedir?

What is the symmetry of a $x - y + 6 = 0$ line as per the $A(2, 4)$ point?

- A) $x - y - 2 = 0$ B) $x - y - 6 = 0$
C) $2x - y - 2 = 0$ D) $x - 2y - 2 = 0$
E) $x - y - 4 = 0$

2. $2x - y = 0$ doğrusunun

$A(-1, 3)$ noktasına göre simetriği nedir?

What is the symmetry of a $2x - y = 0$ line as per the $A(-1, 3)$ point?

- A) $x - y + 2 = 0$ B) $2x - y + 4 = 0$
C) $x + y + 2 = 0$ D) $2x - y + 10 = 0$
E) $2x - y - 2 = 0$

3. $x - 2y + 6 = 0$ doğrusunun

$x - 2y + 10 = 0$ doğrusuna göre simetriği nedir?

What is the symmetry of a $x - 2y + 6 = 0$ line as per the $x - 2y + 10 = 0$ line?

- A) $x - 2y + 14 = 0$ B) $x - 2y - 14 = 0$
C) $x - 2y + 28 = 0$ D) $x - 2y - 28 = 0$
E) $2x - y - 28 = 0$

4. $3x - 2y + 5 = 0$ doğrusunun

$-6x + 4y - 4 = 0$ doğrusuna göre simetriği nedir?

What is the symmetry of a $3x - 2y + 5 = 0$ line as per the $-6x + 4y - 4 = 0$ line?

- A) $-6x + 4y - 1 = 0$ B) $3x - 2y - 1 = 0$
C) $-6x + 4y - 4 = 0$ D) $3x - 2y - 2 = 0$
E) $3x - 2y + 2 = 0$

5. $x - 2y + 5 = 0$ doğrusunun

$y = x$ doğrusuna göre simetriği nedir?

What is the symmetry of a $x - 2y + 5 = 0$ line as per the $y = x$ line?

- A) $x - 2y + 10 = 0$ B) $2x - 4y - 5 = 0$
C) $2x - 4y + 5 = 0$ D) $y - 2x + 5 = 0$
E) $x - 2y - 5 = 0$

6. $3x + 2y - 4 = 0$ doğrusunun

$y + x = 0$ doğrusuna göre simetriği nedir?

What is the symmetry of a $3x + 2y - 4 = 0$ line as per the $y + x = 0$ line?

- A) $6x - 4y + 6 = 0$ B) $3x + 2y + 3 = 0$
C) $3x + 2y + 1 = 0$ D) $3x + 2y + 6 = 0$
E) $2x + 3y + 4 = 0$

7. $2x + ay - 4 = 0$ doğrusunun

$y + x = 0$ doğrusuna göre simetriği $A(2, 1)$ noktasından geçtiğine göre,

Since the symmetry of a $2x + ay - 4 = 0$ line as per the $y + x = 0$ line passes through the point $A(2, 1)$

$\Rightarrow a = ?$

- A) -6 B) -3 C) 0 D) 3 E) 6

8. $2x - y + 4 = 0$ doğrusunun

$x = 0$ doğrusuna göre simetriği nedir?

What is the symmetry of a $2x - y + 4 = 0$ line as per the $x = 0$ line?

- A) $2x + y - 8 = 0$ B) $2x + y - 4 = 0$
C) $2x - y + 16 = 0$ D) $x + y - 8 = 0$
E) $x + 2y - 8 = 0$



9. $A(3, 5)$ noktasının $y = x$ doğrusuna göre simetriği B , B noktasının $y = -x$ doğrusuna göre simetriği $C(a, b)$ ise,
If the symmetry of a point $A(3, 5)$ as per the $y = x$ line is B , and the symmetry of a point B as per the line of $y = -x$ is point $C(a, b)$,
 $\Rightarrow C(a, b) = ?$

A) $(0, 5)$ B) $(3, 5)$ C) $(3, -5)$
D) $(-3, 5)$ E) $(-3, -5)$

10. $A(2, 4)$ noktasının $B(a, 3)$ noktasına göre simetriği $3x + y + 4 = 0$ doğrusu üzerinde ise,
If the symmetry of a point $A(2, 4)$ as per another point $B(a, 3)$ is on the $3x + y + 4 = 0$ line,
 $\Rightarrow a = ?$

A) $-\frac{8}{7}$ B) -1 C) 0 D) $\frac{8}{7}$ E) 8

11. Analitik düzlemde verilen $y = mx + n$ doğrusunun $A(1, 4)$ noktasına göre simetriği $2x - y + 1 = 0$ doğrusu olduğuna göre,
Since the symmetry of a $y = mx + n$ line given at the analytical plane, as per the point $A(1, 4)$ is $2x - y + 1 = 0$,
 $\Rightarrow m + n = ?$

A) 3 B) 4 C) 5 D) 6 E) 7

12. Analitik düzlemde verilen $x + y - 4 = 0$ doğrusunun $A(a, b)$ noktasına göre simetriği $x + y + 6 = 0$ doğrusu ise,
Since the symmetry of a $x + y - 4 = 0$ line given at the analytical plane as per the point $A(a, b)$ is $x + y + 6 = 0$ line,
 $\Rightarrow a + b = ?$

A) -1 B) 0 C) 1 D) 3 E) 6

13. $A(a + 2, a - 2)$ noktasının $y = x$ doğrusuna göre simetriği x ekseninde ise, A noktasının $x + 2 = 0$ doğrusuna göre simetriği nedir?

If the symmetry of a point $A(a + 2, a - 2)$ as per the $y = x$ line is on the x axis, then what is the symmetry of a point A as per the $x + 2 = 0$ line?

A) $(1, 0)$ B) $(1, 2)$ C) $(4, 4)$
D) $(-4, -4)$ E) $(-4, -2)$

14. $A(-1, 2)$ noktasının $x = 2$ doğrusuna göre simetriği B , $y = 3$ doğrusuna göre simetriği C noktası ise B ve C noktalarından geçen doğru denklemi nedir?
If the symmetry of a point $A(-1, 2)$ as per the $x = 2$ line is B , the symmetry as per the $y = 3$ line is C , then what is the equation of the line that passes through the point B and C ?

A) $y = 2$ B) $y = 4$ C) $x = 5$
D) $3x - y - 6 = 0$ E) $3y + x - 11 = 0$

15. $x - 2y - 6 = 0$, $2x + y - 5 = 0$ doğrularının açıortay denklemlerinden birinin orijine göre simetriği nedir?
What is the symmetry of one of the equations of angles bisectors of the $x - 2y - 6 = 0$, $2x + y - 5 = 0$ lines as per the origin?

A) $x + 3y - 1 = 0$ B) $x + 3y - 2 = 0$
C) $x + 3y + 1 = 0$ D) $2x + 3y - 2 = 0$
E) $2x - 3y - 1 = 0$

16. $2x + 3y - 6 = 0$ doğrusunun $3x - 2y - 6 = 0$ doğrusuna göre simetriği nedir?
What is the symmetry of a $2x + 3y - 6 = 0$ line as per the $3x - 2y - 6 = 0$ line?

A) $x - 5y = 0$ B) $2x + 3y - 6 = 0$
C) $x - 5y + 6 = 0$ D) $x - 5y + 12 = 0$
E) $x + 5y - 12 = 0$



SİMETRİ SYMMETRY

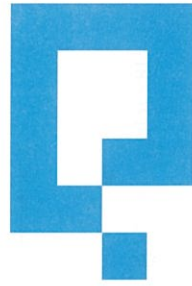
Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	A	D	B	A	B	B	B	C	D	B	B	B	D	E	C

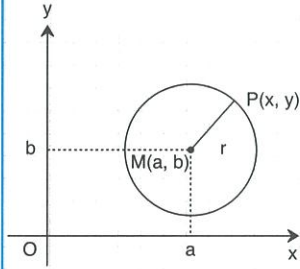
TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	D	A	B	D	E	B	B	E	C	C	A	D	E	A	B



ÇEMBER ANALİTİĞİ
ANALYTIC GEOMETRY
CIRCLE

ÖZELLİK|Property 1



$$r = \sqrt{(x-a)^2 + (y-b)^2}$$

$$r^2 = (x-a)^2 + (y-b)^2$$

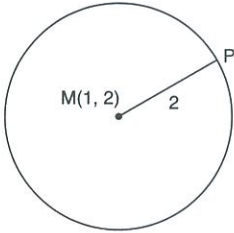
$M(a, b)$ merkez

$M(a, b)$ center

r yarıçaplı çember

circle with radius r

1.

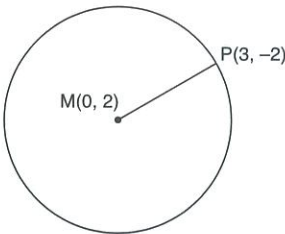


⇒ M merkezli çember denklemi nedir?

What is the circle equation with a center M?

$$(x-1)^2 + (y-2)^2 = 4$$

2.

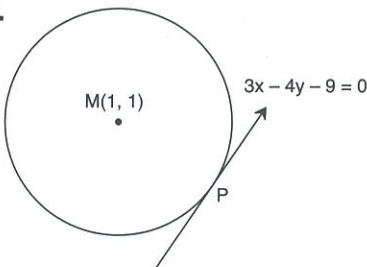


⇒ M merkezli çember denklemi nedir?

What is the circle equation with a center M?

$$x^2 + (y-2)^2 = 25$$

3.



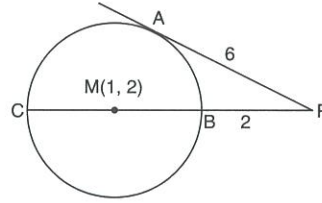
⇒ M merkezli çember denklemi nedir?

What is the circle equation with a center M?

$$(x-1)^2 + (y-1)^2 = 4$$

PUZA YAYINLARI

4.

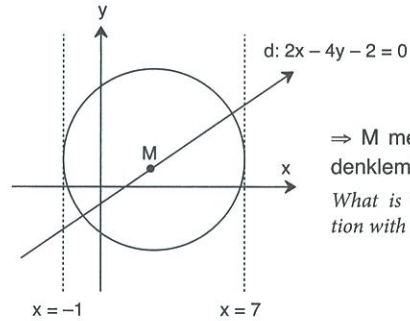


⇒ M merkezli çember denklemi nedir?

What is the circle equation with a center M?

$$(x-1)^2 + (y-2)^2 = 64$$

5.



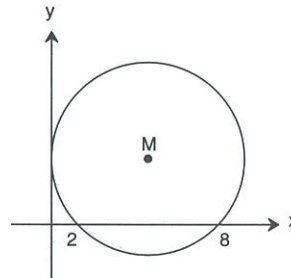
⇒ M merkezli çember denklemi nedir?

What is the circle equation with a center M?

$$(x-3)^2 + (y-1)^2 = 16$$

PUZA YAYINLARI

6.

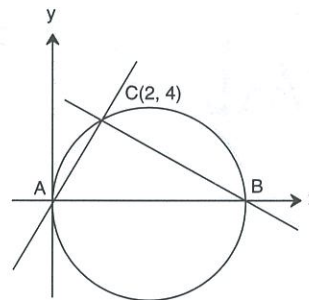


⇒ M merkezli çember denklemi nedir?

What is the circle equation with a center M?

$$(x-5)^2 + (y-4)^2 = 25$$

7.



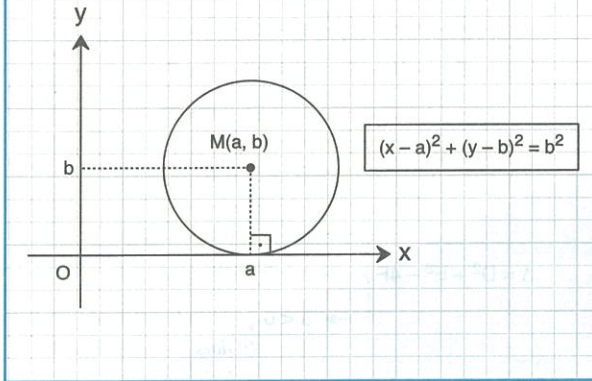
⇒ [AB] çaplı çember denklemi nedir?

What is the circle equation with a diameter [AB]?

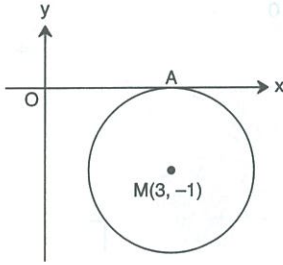
$$(x-5)^2 + y^2 = 25$$



ÖZELLİK|Property 2

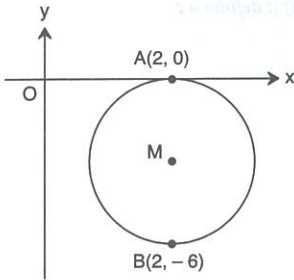


1. $\Rightarrow M$ merkezli çember denklemini nedir?
What is the circle equation with a center M ?



$$(x-3)^2 + (y+1)^2 = 1$$

2. $\Rightarrow M$ merkezli çember denklemini nedir?
What is the circle equation with a center M ?

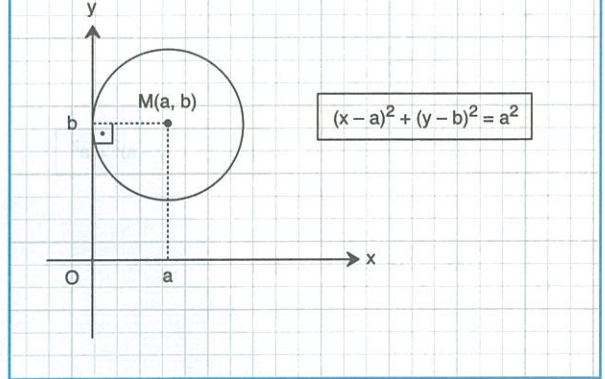


$$(x-2)^2 + (y+3)^2 = 9$$

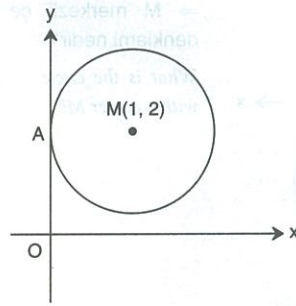
3. $\Rightarrow |AB| = ?$
-

6

ÖZELLİK|Property 3

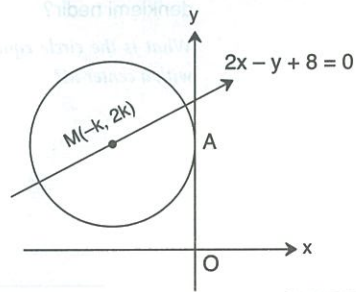


1. $\Rightarrow M$ merkezli çember denklemini nedir?
What is the circle equation with a center M ?



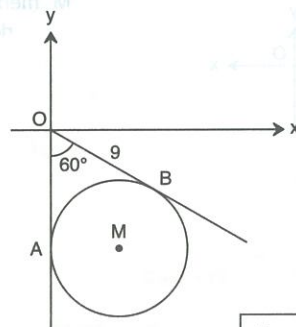
$$(x-1)^2 + (y-2)^2 = 1$$

2. $\Rightarrow M$ merkezli çember denklemini nedir?
What is the circle equation with a center M ?



$$(x+2)^2 + (y-4)^2 = 4$$

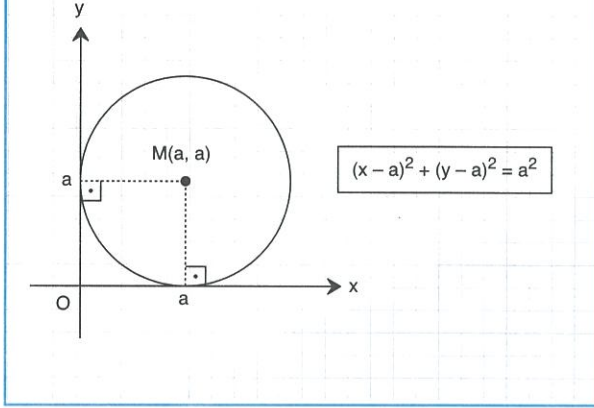
3. $|OB| = 9$ br
 $\Rightarrow M$ merkezli çember denklemini nedir?
What is the circle equation with a center M ?



$$(x-3\sqrt{3})^2 + (y+9)^2 = 27$$



ÖZELLİK|Property 4



1. $\Rightarrow M$ merkezli çember denklemini nedir?
What is the circle equation with a center M ?

2. $\Rightarrow M$ merkezli çember denklemini nedir?
What is the circle equation with a center M ?

3. $\Rightarrow M$ merkezli çember denklemini nedir?
What is the circle equation with a center M ?

ÖZELLİK|Property 5

$$(x-a)^2 + (y-b)^2 = r^2$$

$$x^2 + y^2 - 2ax - 2by + a^2 + b^2 - r^2 = 0$$

$$-2a = D \quad -2b = E \quad a^2 + b^2 - r^2 = F$$

$$x^2 + y^2 + Dx + Ey + F = 0$$

$$M\left(-\frac{D}{2}, -\frac{E}{2}\right) \quad r = \frac{1}{2}\sqrt{D^2 + E^2 - 4F}$$

$$\Delta = D^2 + E^2 - 4F \left\{ \begin{array}{l} \rightarrow \Delta > 0 \text{ çember (circle)} \\ \rightarrow \Delta = 0 \text{ nokta (point)} \\ \rightarrow \Delta < 0 \text{ çember belirtmez (it does not define a circle)} \end{array} \right.$$

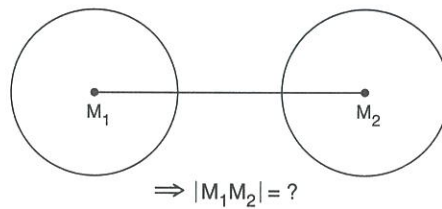
1. $x^2 + y^2 - 6x + 4y - 3 = 0$
 $\Rightarrow M = ?$
 $\Rightarrow r = ?$

$(3, -2), 4$

2. $(m-2)x^2 + 4y^2 + 8x + (m+2)y - 4 = 0$
çember belirtiyorsa (If it defines a circle)
 $\Rightarrow r = ?$

$\sqrt{3}$

3. $x^2 + y^2 - 2x - 6y - 12 = 0 \rightarrow M_1$ (merkezi) (its center is)
 $x^2 + y^2 + 6x - 4y - 8 = 0 \rightarrow M_2$ (merkezi) (its center is)



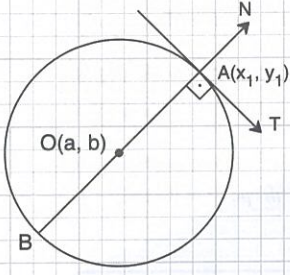
$\Rightarrow |M_1M_2| = ?$

$\sqrt{17}$



ÖZELLİK|Property 6

Çember üzerinden çizilen teğet ve normal denklemi
The equation of a tangent and normal line that is drawn over the circle



$$m_N = \frac{y_1 - b}{x_1 - a}$$

$$m_T \cdot m_N = -1$$

Teğet Denklemi

Equation of tangential

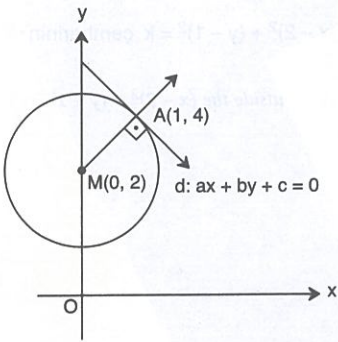
$$y - y_1 = m_T(x - x_1)$$

Normal Denklemi

Equation of normal line

$$y - y_1 = m_N(x - x_1)$$

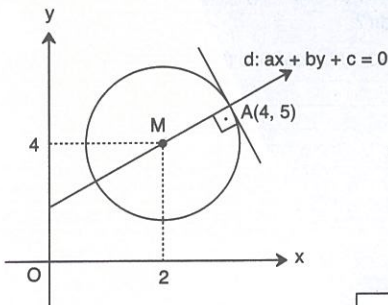
1.



$$\Rightarrow d = ?$$

$$2y + x - 9 = 0$$

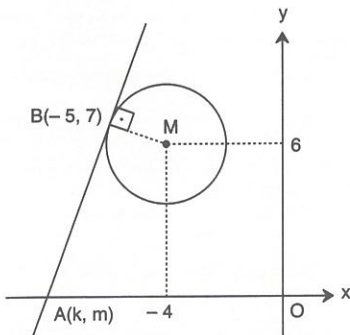
2.



$$\Rightarrow d = ?$$

$$2y - x - 6 = 0$$

3.



$$\Rightarrow k + m = ?$$

$$-12$$

ÖZELLİK|Property 7

Doğru ile çemberin birbirine göre durumları
Cases of a line and circle as per each other

$$(x - a)^2 + (y - b)^2 = r^2 \quad y = mx + n$$

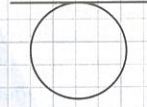
$$(x - a)^2 + (mx + n - b)^2 = r^2$$

$$(x - a)^2 + (mx + n - b)^2 - r^2 = 0$$

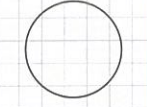
$$\Delta > 0$$



$$\Delta = 0$$



$$\Delta < 0$$

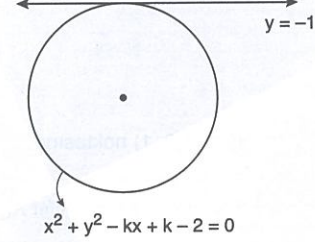


1. $(x - 1)^2 + (y - 3)^2 = 2$ çemberi ile $y = x + 2$ doğrusunun varsa kesim noktalarını bulunuz.

Find the intersecting points of the $(x - 1)^2 + (y - 3)^2 = 2$ circle and the $y = x + 2$ line if there is any.

$$(0, 2), (2, 4)$$

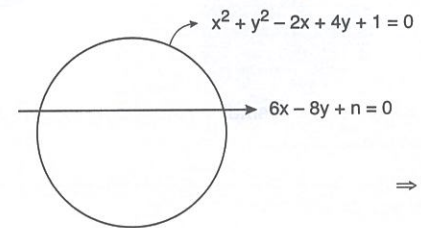
2.



$$\Rightarrow k = ?$$

$$2$$

3.



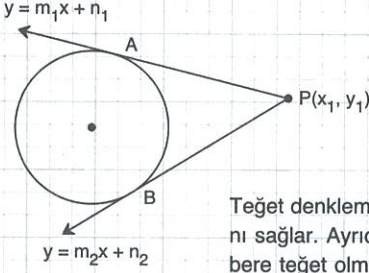
$$\Rightarrow ? < n < ?$$

$$-42 < n < -2$$



ÖZELLİK|Property 8

Çember dışındaki bir noktadan çizilen teğet denklemleri
The equations of tangent which are drawn from a point outside the circle



Teğet denklemi $P(x_1, y_1)$ noktasını sağlar. Ayrıca, doğrunun çembere teğet olma şartı kullanılarak m ve n değerleri bulunur.

An equation of tangent proves the point $P(x_1, y_1)$. Furthermore, by utilizing the condition being tangential to a circle, m and n values are found.

1. $(x - 6)^2 + y^2 = 36$ çemberinin dışındaki $(16, 0)$ noktasından çizilen teğet denklemleri nedir?

The equations of tangents which are drawn from a point $(16, 0)$ outside the circle $(x - 6)^2 + y^2 = 36$

$$\begin{aligned} 5y + 3x + 48 &= 0 \\ 5y - 3x + 48 &= 0 \end{aligned}$$

2. $x^2 + y^2 = 5$ çemberinin dışındaki $A(3, 1)$ noktasından çizilen teğet denklemleri nedir?

The equations of tangents which are drawn from a point $A(3, 1)$ outside the circle $x^2 + y^2 = 5$

$$\begin{aligned} y &= 2x - 5 \\ y &= -\frac{1}{2}x + \frac{5}{2} \end{aligned}$$

3. $x^2 + y^2 = 10$ çemberine dışındaki $A(2, 4)$ noktasından çizilen teğet denklemleri nedir?

The equations of tangents which are drawn from a point $A(2, 4)$ outside the circle $x^2 + y^2 = 10$

$$\begin{aligned} 3y - x - 10 &= 0 \\ y + 3x - 10 &= 0 \end{aligned}$$

ÖZELLİK|Property 9

$A(x_1, y_1)$ noktası ile $(x - a)^2 + (y - b)^2 = r^2$ çemberi için

$(x_1 - a)^2 + (y_1 - b)^2 < r^2 \Rightarrow$ nokta çemberin içinde
the point inside the circle

$(x_1 - a)^2 + (y_1 - b)^2 > r^2 \Rightarrow$ nokta çemberin dışında
the point outside the circle

$(x_1 - a)^2 + (y_1 - b)^2 = r^2 \Rightarrow$ nokta çemberin üstünde
the point at the circle

1. $A(1, -2)$ noktası $(x - 2)^2 + (y - 1)^2 = k$ çemberinin dışında ise k ne olmalıdır?

If the point $A(1, -2)$ is outside the $(x - 2)^2 + (y - 1)^2 = k$ circle, what must k be?

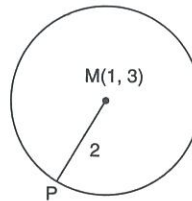
$$k < 10$$

2. $A(2, 1)$ noktası $(x - 1)^2 + (y + 1)^2 = k$ çemberinin içinde ise k ne olmalıdır?

If the point $A(2, 1)$ is inside the $(x - 1)^2 + (y + 1)^2 = k$ circle, what must k be?

$$5 < k$$

- 3.



$A(4, -1)$

A noktasının çemberin en uzak noktasına olan uzaklığı kaç br'dir?

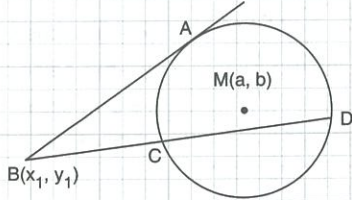
How many unit is the distance of a point A to the farthest point of the circle?

$$7$$



ÖZELLİK|Property 10

Bir noktanın çembere göre kuvveti
Power of a point with respect to a circle



$|AB|^2 = |BC| \cdot |BD|$ (kuvvete p dersek) (Let the power be p)

$$\star (x - a)^2 + (y - b)^2 = r^2$$

$$|p| = (x_1 - a)^2 + (y_1 - b)^2 - r^2$$

$$\star x^2 + y^2 + Dx + Ey + F = 0$$

$$|p| = x_1^2 + y_1^2 + Dx_1 + Ey_1 + F$$

1. $A(1, -2)$ noktasının $(x - 1)^2 + (y - 2)^2 = 3$ çemberine göre kuvvetini bulunuz.

Find the power of the point $A(1, -2)$ as per the circle
 $(x - 1)^2 + (y - 2)^2 = 3$.

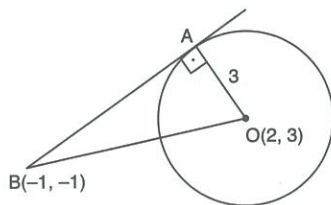
13

2. $A(-2, 1)$ noktasının $x^2 + y^2 + 2x + y + 1 = 0$ çemberine göre kuvvetini bulunuz.

Find the power of the point $A(-2, 1)$ as per the circle
 $x^2 + y^2 + 2x + y + 1 = 0$.

3

3.

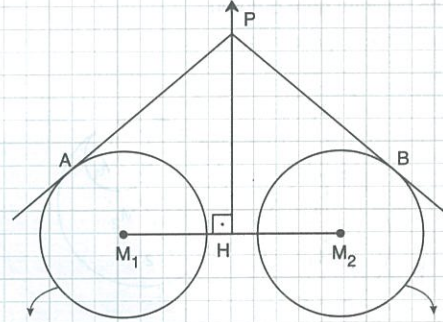


$$\Rightarrow |AB| = ?$$

4

ÖZELLİK|Property 11

Kuvvet Eksenini
Radical axis



$$x^2 + y^2 + D_1x + E_1y + F_1 = 0$$

$$x^2 + y^2 + D_2x + E_2y + F_2 = 0$$

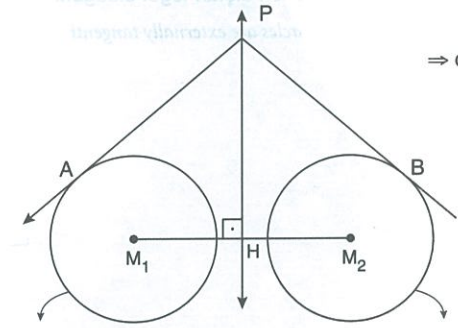
Kuvvet eksenini bulmak için x^2 ve y^2 yok edilir.

In order to find the radical axis, the x^2 and y^2 are eliminated.

1.

$$d: ax + by + c = 0$$

$$\Rightarrow d = ?$$



$$x^2 + y^2 - 2x + y - 4 = 0$$

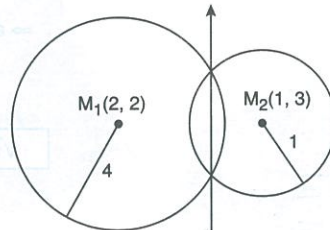
$$x^2 + y^2 + 3x - 2y + 1 = 0$$

$$5x - 3y + 5 = 0$$

2.

$$d: ax + by + c = 0$$

$$\Rightarrow d = ?$$



$$2y - 2x - 17 = 0$$

3.

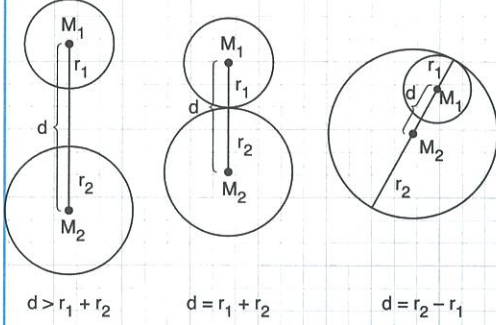
$$x^2 + y^2 + 4x + 6y + 4 = 0 \quad x^2 + y^2 - 8x - 10y + 30 = 0$$

çemberlerinin kuvvet eksenini nedir?
What is the radical axis of the circles $x^2 + y^2 + 4x + 6y + 4 = 0$
 $x^2 + y^2 - 8x - 10y + 30 = 0$?

$$6x + 8y - 13 = 0$$

ÖZELLİK|Property 12

İki çemberin birbirine göre durumu
Cases of a two circles as per each other



1. $x^2 + y^2 = 16$ $(x + 4)^2 + (y - a)^2 = 1$
 $a > 0$ çemberleri dıştan teğet olduğuna göre
 if the circles are externally tangential
 $\Rightarrow a = ?$

3

2. $x^2 + (y - a)^2 = 16$ $(x - 2)^2 + y^2 = 1$
 $a > 0$ çemberleri içten teğet ise
 in case the circles are internally tangential
 $\Rightarrow a = ?$

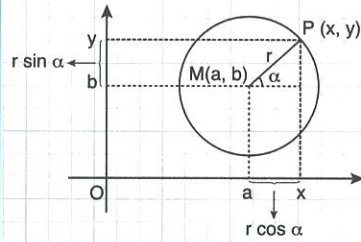
$\sqrt{5}$

3. $(x + 3)^2 + (y - 2)^2 = 9$
 $(x - 1)^2 + (y + 1)^2 = r^2$
 çemberleri dıştan teğet olduğuna göre
 if the circles are externally tangential
 $\Rightarrow r = ?$

2

ÖZELLİK|Property 13

Çemberin Parametrik Denklemleri
The parametric equation of a circle



$$\begin{aligned}(x - a) &= r \cos \alpha \\(y - b) &= r \sin \alpha \\x &= a + r \cos \alpha \\y &= b + r \sin \alpha\end{aligned}$$

$$\begin{aligned}(x - a)^2 + (y - b)^2 &= r^2(\cos^2 \alpha + \sin^2 \alpha) \\(x - a)^2 + (y - b)^2 &= r^2\end{aligned}$$

1. $x = 2 \cos \alpha + 1$
 $y = 2 \sin \alpha - 3$
 $\Rightarrow$ çemberinin denklemi nedir?
 What is the equation of the circle?

$$(x - 1)^2 + (y + 3)^2 = 4$$

2. $x = 3 + 4 \cos \alpha$
 $y = -2 + 4 \sin \alpha$
 $\Rightarrow$ çemberinin denklemi nedir?
 What is the equation of the circle?

$$(x - 3)^2 + (y + 2)^2 = 16$$

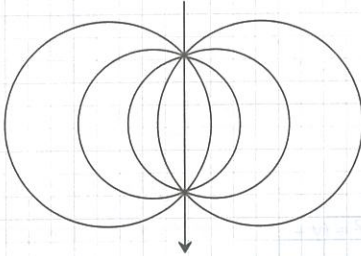
3. $(x - 1)^2 + (y + 2)^2 = 4$ olan çemberin parametrik denklemleri nedir?
 What is the parametric equation of the circle which is
 $(x - 1)^2 + (y + 2)^2 = 4$?

$$\begin{aligned}x &= 1 + 2 \cos \alpha \\y &= -2 + 2 \sin \alpha\end{aligned}$$



ÖZELLİK|Property 14

Çember Demeti Circle Bundle

d: $ax + by + c$

$$x^2 + y^2 + D_1x + E_1y + F_1 + k(x^2 + y^2 + D_2x + E_2y + F) = 0$$

1. $(x - 4)^2 + (y - 4)^2 = 9$ ve $(x - 3)^2 + (y - 3)^2 = 4$ çemberlerinin kesim noktalarından ve $P(2, 1)$ noktasından geçen çember denklemi nedir?

What is the equation of a circle that passes through the intersecting point of $(x - 4)^2 + (y - 4)^2 = 9$ and $(x - 3)^2 + (y - 3)^2 = 4$ circles and a point $P(2, 1)$?

$$x^2 + y^2 - \frac{16}{3}x - \frac{16y}{3} + 3 = 0$$

2. $x^2 + y^2 - 2x + y - 4 = 0$

$$x^2 + y^2 - 2x + 2y - 8 = 0$$

çemberlerinin kesim noktalarından geçen doğru denklemi nedir?

What is the equation of a line that passes through the intersecting point of $x^2 + y^2 - 2x + y - 4 = 0$ and $x^2 + y^2 - 2x + 2y - 8 = 0$ circles?

$$y = 4$$

3. $x^2 + y^2 - 8x + 4y + 16 = 0$

$$x^2 + y^2 + 4x - 8y - 4 = 0$$

çemberlerinin kesim noktalarından geçen doğru denklemi nedir?

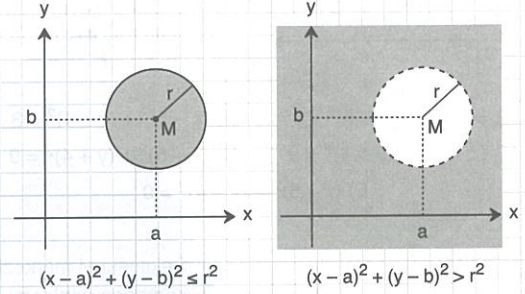
What is the equation of a line that passes through the intersecting point of $x^2 + y^2 - 8x + 4y + 16 = 0$ and $x^2 + y^2 + 4x - 8y - 4 = 0$ circles?

$$3y - 3x + 5 = 0$$

ÖZELLİK|Property 15

Çemberin Düzlemde Ayırdığı Bölge

Sector that a circle separates at the plane



1. $(x - 2)^2 + (y - 1)^2 \leq 4$

Eşitsizliğin çözüm kümesinin grafiğini çiziniz.

Draw the graph of a solution set of the $(x - 2)^2 + (y - 1)^2 \leq 4$ inequality.

2. $4 < x^2 + y^2 \leq 9$

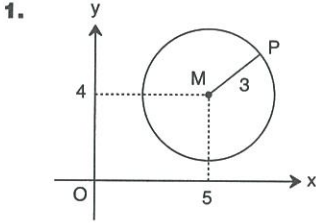
Eşitsizliğin çözüm kümesinin grafiğini çiziniz.

Draw the graph of a solution set of the $4 < x^2 + y^2 \leq 9$ inequality.

3. $x^2 + y^2 - 2x + 4y - 4 > 0$

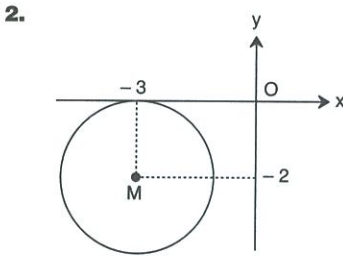
Eşitsizliğin çözüm kümesinin grafiğini çiziniz.

Draw the graph of a solution set of the $x^2 + y^2 - 2x + 4y - 4 > 0$ inequality.



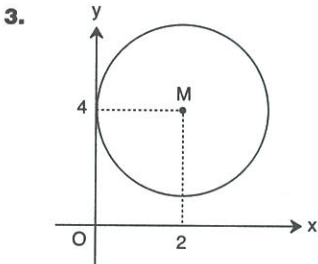
$|MP| = 3$ br
Şekildeki M merkezli
çemberin denklemi
nedir?
What is the circle equation
with a center M as
in figure?

- A) $(x+4)^2 + (y+5)^2 = 9$ B) $(x-5)^2 + (y-4)^2 = 3$
C) $(x-5)^2 + (y+4)^2 = 9$ D) $(x+5)^2 + (y+4)^2 = 9$
E) $(x-5)^2 + (y-4)^2 = 9$



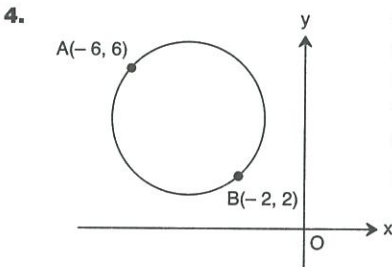
Şekildeki M merkezli
çemberin denklemi
nedir?
What is the circle equation
with a center M as
in the figure?

- A) $(x-3)^2 + (y-2)^2 = 9$ B) $(x+3)^2 + (y+2)^2 = 4$
C) $(x+3)^2 + (y+2)^2 = 9$ D) $(x-3)^2 + (y-2)^2 = 4$
E) $(x+3)^2 + (y+2)^2 = 2$



Şekildeki M merkezli
çemberin denklemi
nedir?
What is the circle equation
with a center M as
in figure?

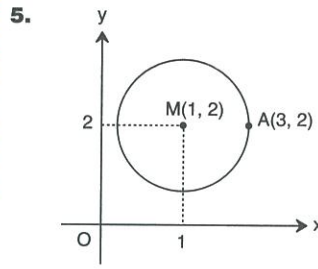
- A) $(x-2)^2 + (y-4)^2 = 16$ B) $(x+2)^2 + (y-4)^2 = 4$
C) $(x+2)^2 + (y+4)^2 = 16$ D) $(x+2)^2 + (y+4)^2 = 4$
E) $(x-2)^2 + (y-4)^2 = 4$



Şekildeki [AB] çaplı
çemberin denklemi
nedir?
What is the circle equation
with a diameter
[AB] as in figure?

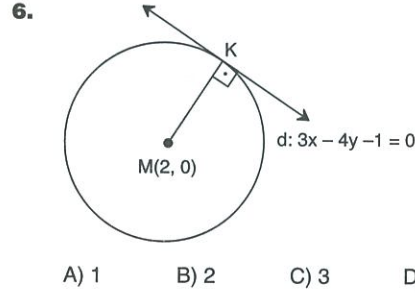
- A) $(x-4)^2 + (y+4)^2 = 8$ B) $(x+4)^2 + (y-4)^2 = 8$
C) $(x+4)^2 + (y-4)^2 = 32$ D) $(x-4)^2 + (y-4)^2 = 16$
E) $(x-2)^2 + (y+2)^2 = 8$

PUZA YAYINLARI



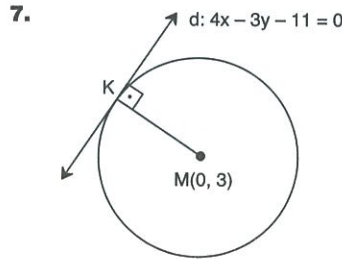
M merkezli
çemberin denklemi
nedir?
What is the circle
equation with a
center M?

- A) $(x-1)^2 + (y-2)^2 = 2$ B) $(x-1)^2 + (y-2)^2 = 4$
C) $(x+1)^2 + (y+2)^2 = 2$ D) $(x+1)^2 + (y+2)^2 = 4$
E) $(x+1)^2 + (y+2)^2 = 4$



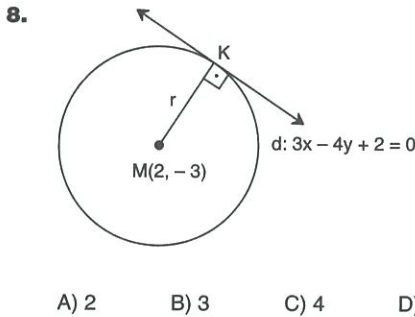
M merkezli
çemberin
yarıçapı kaç
birimdir?
What's the lenght
of the radius of the
given circle with
center M?

- A) 1 B) 2 C) 3 D) 4 E) 5



M merkezli
çemberin denklemi
nedir?
What is the circle
equation with a
center M?

- A) $x^2 + (y-3)^2 = 3$ B) $x^2 + (y-3)^2 = 25$
C) $x^2 + (y+3)^2 = 3$ D) $x^2 + (y-3)^2 = 16$
E) $x^2 + (y+3)^2 = 16$



$\Rightarrow r = ?$

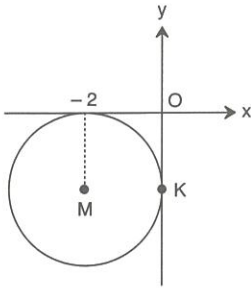
- A) 2 B) 3 C) 4 D) 5 E) 6

PUZA YAYINLARI

PUZA YAYINLARI



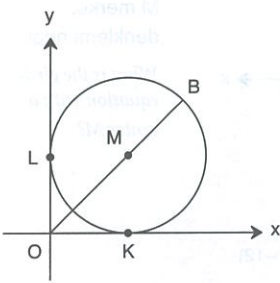
9.



M merkezli çemberin denklemi nedir?
What is the circle equation with a center M?

- A) $(x+2)^2 + (y+2)^2 = 2$ B) $(x-2)^2 + (y-2)^2 = 2$
C) $x^2 + y^2 = 4$ D) $(x+2)^2 + (y+2)^2 = 4$
E) $(x-2)^2 + (y-2)^2 = 4$

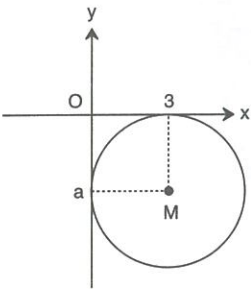
10.



$|OB| = (6 + 6\sqrt{2})$ br
M merkezli çemberin denklemi nedir?
What is the circle equation with a center M?

- A) $(x-1)^2 + (y-1)^2 = 1$ B) $(x-2)^2 + (y-2)^2 = 4$
C) $(x-3)^2 + (y-3)^2 = 9$ D) $(x-6)^2 + (y-6)^2 = 36$
E) $x^2 + y^2 = 6$

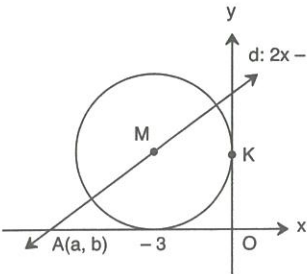
11.



M merkezli çemberin denklemi
The circle equation with a center M
 $(x-3)^2 + (y-a)^2 = 9$
 $\Rightarrow a = ?$

- A) -2 B) -3 C) -4 D) -5 E) -6

12.

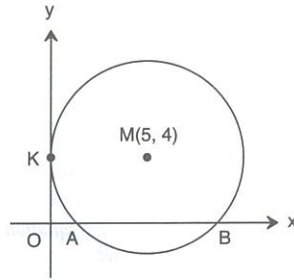


$\Rightarrow a = ?$

- A) $-\frac{9}{2}$ B) -4 C) $-\frac{10}{3}$ D) -3 E) -1,5

PUZA YAYINLARI

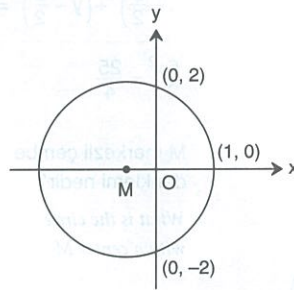
13.



$\Rightarrow |AB| = ?$

- A) 2 B) 4 C) 6 D) 8 E) 10

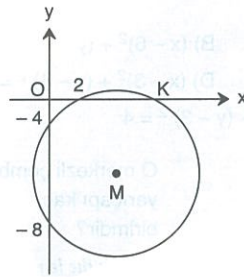
14.



M merkezli çemberin yarıçapı kaç birimdir?
What's the length of the radius of the given with center M?

- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 3

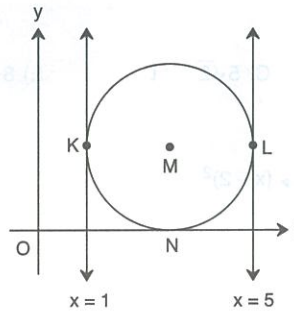
15.



M merkezli çemberin denklemi nedir?
What is the circle equation with a center M?

- A) $(x-3)^2 + (y+6)^2 = 16$ B) $(x-9)^2 + (y+6)^2 = 85$
C) $(x-3)^2 + (y-6)^2 = 80$ D) $(x-2)^2 + (y+2)^2 = 16$
E) $(x-9)^2 + (y+6)^2 = 117$

16.



M merkezli çemberin denklemi nedir?
What is the circle equation with a center M?

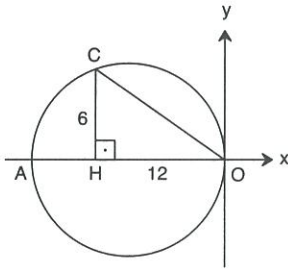
- A) $(x-1)^2 + (y-5)^2 = 16$ B) $(x-3)^2 + (y-2)^2 = 4$
C) $(x-3)^2 + (y-3)^2 = 4$ D) $(x-3)^2 + (y-2)^2 = 16$
E) $(x-3)^2 + y^2 = 16$

PUZA YAYINLARI

PUZA YAYINLARI



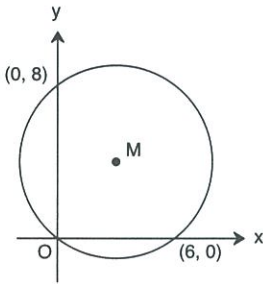
1.



[CH] $\perp$ [AO]
[AB] çap
[AB] diameter
|CH| = 6 br
|HO| = 12 br
Çemberin denklemi nedir?
What is the equation of the circle?

- A) $(x - 12)^2 + y^2 = 36$ B) $(x + 12)^2 + y^2 = 36$
C) $(x + \frac{15}{2})^2 + y^2 = \frac{225}{4}$ D) $(x - \frac{5}{2})^2 + (y - \frac{5}{2})^2 = \frac{25}{4}$
E) $(x + \frac{5}{2})^2 + (y - \frac{5}{2})^2 = \frac{25}{4}$

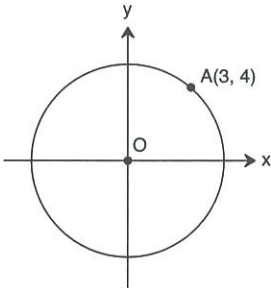
2.



M merkezli çemberin denklemi nedir?
What is the circle equation with a center M?

- A) $(x - 8)^2 + (y - 6)^2 = 10$ B) $(x - 6)^2 + (y - 8)^2 = 25$
C) $(x + 3)^2 + (y + 4)^2 = 10$ D) $(x - 3)^2 + (y - 4)^2 = 25$
E) $(x - 2)^2 + (y - 3)^2 = 4$

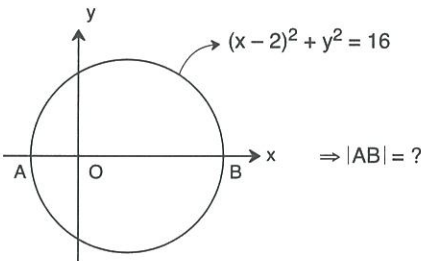
3.



O merkezli çemberin yarıçapı kaç birimdir?
What's the length of the radius of the given circle with center O?

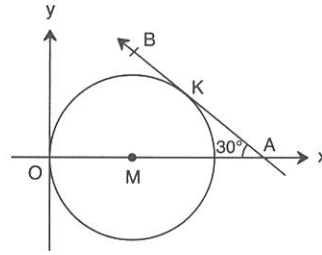
- A) 4 B) 5 C) $5\sqrt{2}$ D) 8 E) $8\sqrt{2}$

4.



- A) 2 B) 3 C) $2\sqrt{3}$ D) 4 E) 8

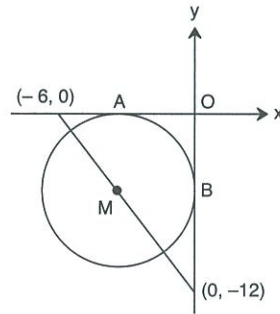
5.



A(9, 0)
 $m(\widehat{BAO}) = 30^\circ$
M merkezli çemberin denklemi nedir?
What is the circle equation with a center M?

- A) $(x - 2)^2 + y^2 = 4$ B) $(x + 1)^2 + y^2 = 4$
C) $(x + 3)^2 + y^2 = 9$ D) $(x - 3)^2 + y^2 = 9$
E) $(x - 1)^2 + y^2 = 1$

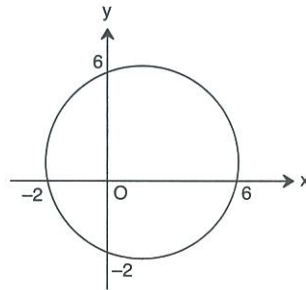
6.



M merkezli çemberin denklemi nedir?
What is the circle equation with a center M?

- A) $(x + 2)^2 + (y + 2)^2 = 3$ B) $(x + 2)^2 + (y + 2)^2 = 4$
C) $(x - 1)^2 + (y + 1)^2 = 1$ D) $(x + 1)^2 + (y + 1)^2 = 1$
E) $(x + 4)^2 + (y + 4)^2 = 16$

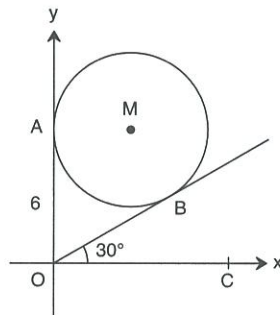
7.



$\Rightarrow r = ?$

- A) 1 B) 2 C) $2\sqrt{5}$ D) 4 E) $4\sqrt{5}$

8.

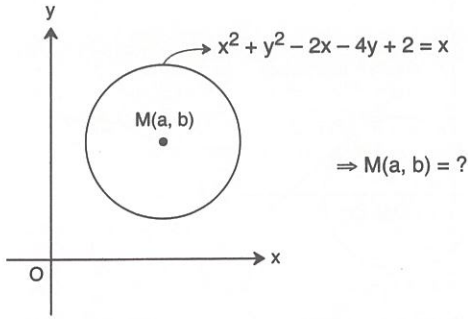


|OA| = 6 br
 $m(\widehat{BOC}) = 30^\circ$
M merkezli çemberin yarıçapı kaçtır?
What's the length of the radius of the given circle with center M?

- A) 1 B) 2 C) $2\sqrt{3}$ D) 4 E) $4\sqrt{3}$

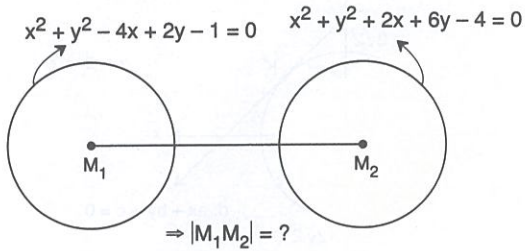


9.



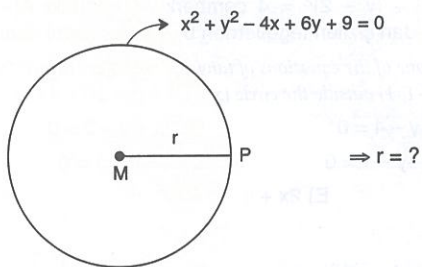
- A) $(-2, -4)$ B) $(2, 4)$ C) $(-1, -2)$
D) $(1, 2)$ E) $(-4, 2)$

10.



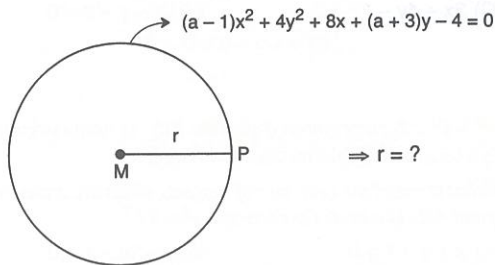
- A) $\sqrt{7}$ B) $\sqrt{13}$ C) 5 D) 6 E) $\sqrt{51}$

11.



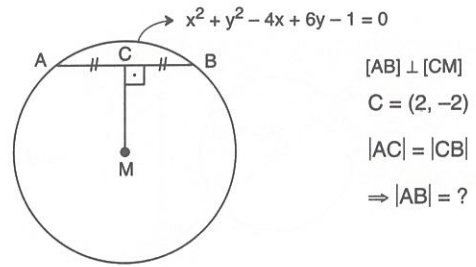
- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 3

12.



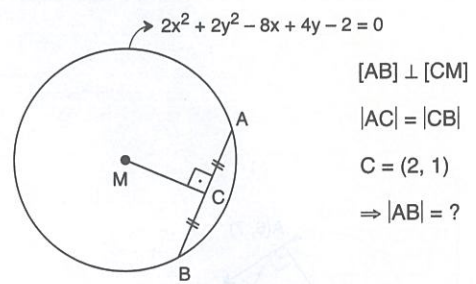
- A) 1 B) $\sqrt{2}$ C) $\frac{3}{2}$ D) $\sqrt{3}$ E) $\frac{7}{2}$

13.



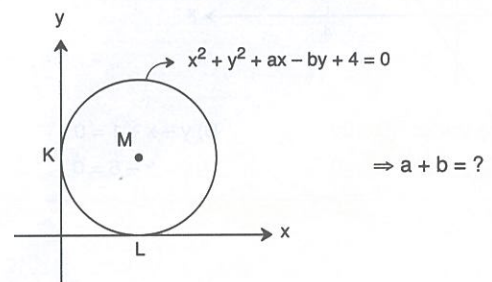
- A) $2\sqrt{2}$ B) $\sqrt{13}$ C) 5 D) $4\sqrt{2}$ E) $2\sqrt{13}$

14.



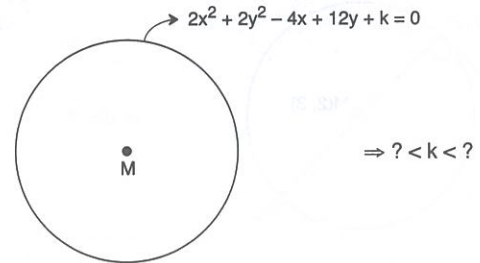
- A) 1 B) $\sqrt{2}$ C) 2 D) $2\sqrt{2}$ E) 4

15.



- A) -4 B) 0 C) 2 D) 4 E) 8

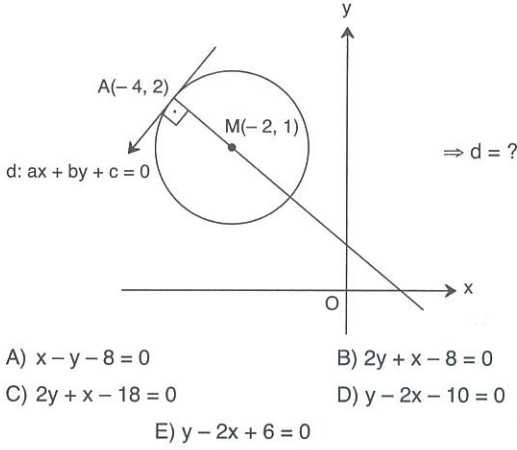
16.



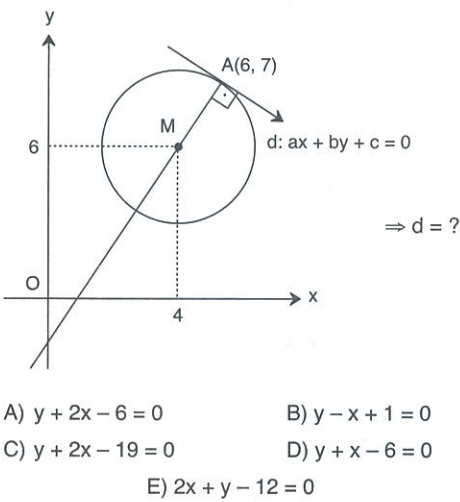
- A) $(-\infty, 20)$ B) $(-\infty, -20)$ C) $(-\infty, 0)$
D) $(0, \infty)$ E) $(20, \infty)$



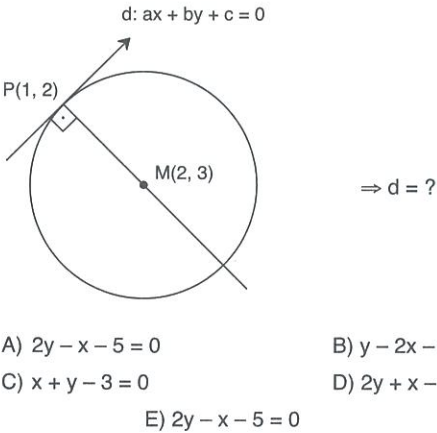
1.



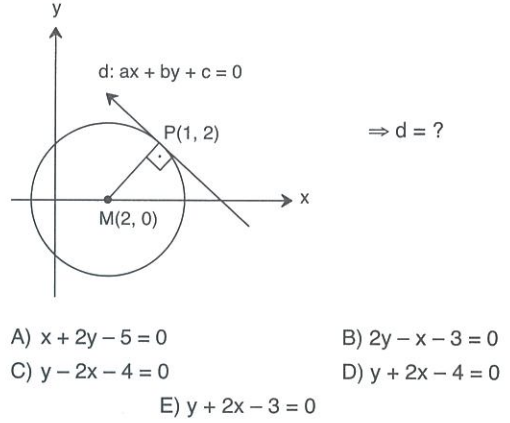
2.



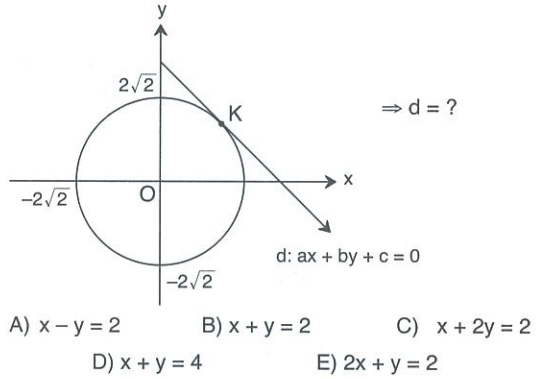
3.



4.



5.



6.

$(x - 1)^2 + (y - 2)^2 = 4$ çemberinin dışındaki $A(-1, 1)$ noktasından çizilen tegetlerden birinin denklemi nedir?
 What is one of the equations of tangents which are drawn from a point $A(-1, 1)$ outside the circle $(x - 1)^2 + (y - 2)^2 = 4$?
 A) $3x - y - 4 = 0$ B) $2x + y - 2 = 0$
 C) $3x + 4y - 1 = 0$ D) $x - y + 1 = 0$
 E) $2x + y - 1 = 0$

7.

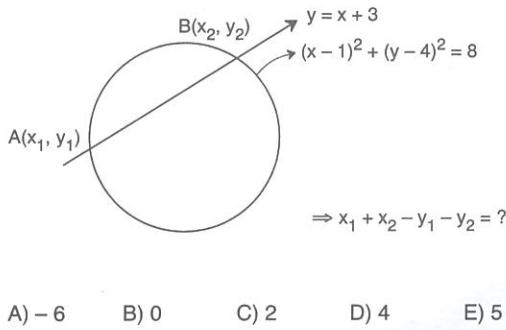
$(x - 1)^2 + (y - 1)^2 = 1$ çemberinin dışındaki $A(0, 3)$ noktasından çizilen tegetlerden birinin denklemi nedir?
 What is one of the equations of tangents which are drawn from a point $A(0, 3)$ outside the circle $(x - 1)^2 + (y - 1)^2 = 1$?
 A) $3x - y - 6 = 0$ B) $x + y - 3 = 0$
 C) $3x + 4y - 12 = 0$ D) $2x - y - 6 = 0$
 E) $x + y - 5 = 0$

8.

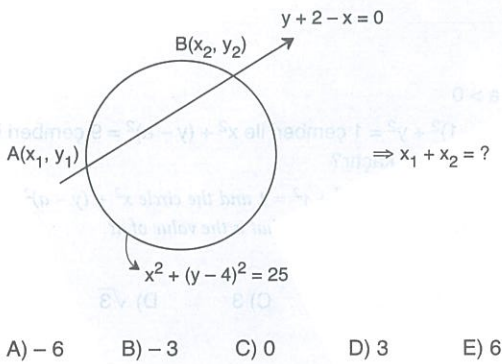
$x^2 + y^2 = 5$ çemberinin dışındaki $A(3, 1)$ noktasından çizilen tegetlerden birinin denklemi nedir?
 What is one of the equations of tangents which are drawn from a point $A(3, 1)$ outside the circle $x^2 + y^2 = 5$?
 A) $x + y - 1 = 0$ B) $x - 2y - 1 = 0$
 C) $x - y - 1 = 0$ D) $x + y + 2 = 0$
 E) $y - 2x + 5 = 0$



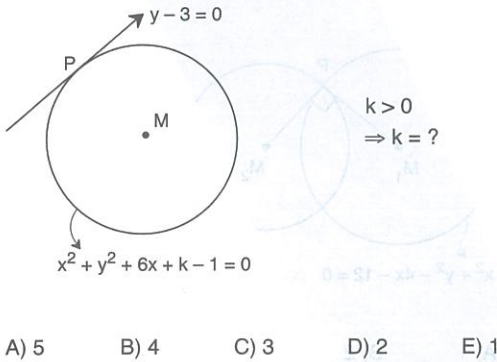
9.



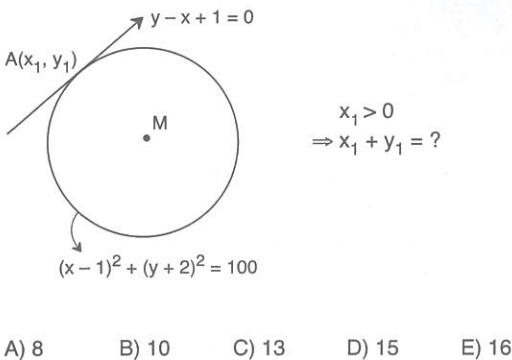
10.



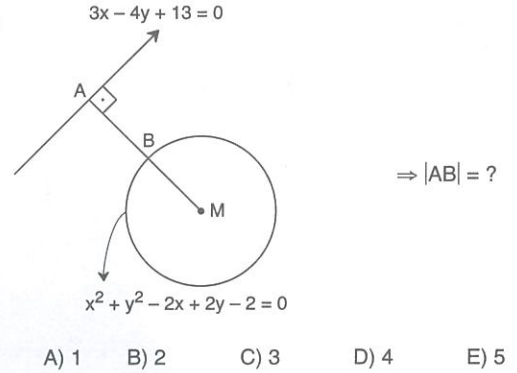
11.



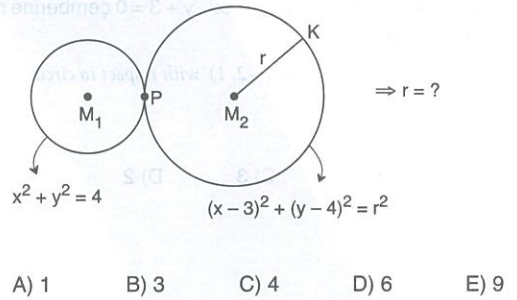
12.



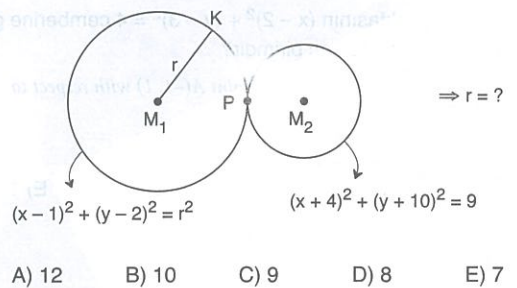
13.



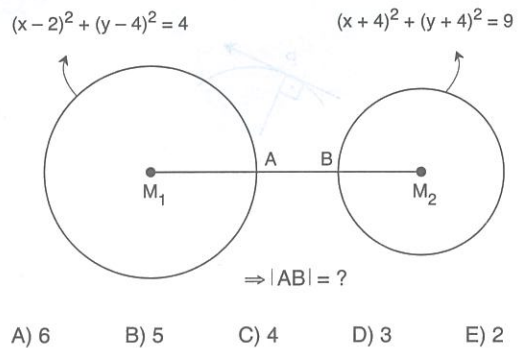
14.



15.



16.





1. $A(1, 2)$ noktasının $x^2 + y^2 + 2x - y + 1 = 0$ çemberine göre kuvveti nedir?

What is the power of point $A(1, 2)$ with respect to circle $x^2 + y^2 + 2x - y + 1 = 0$?

A) 36 B) 12 C) 10 D) 6 E) 4

2. $A(-2, 1)$ noktasının $x^2 + y^2 + 2x - y + 3 = 0$ çemberine göre kuvveti nedir?

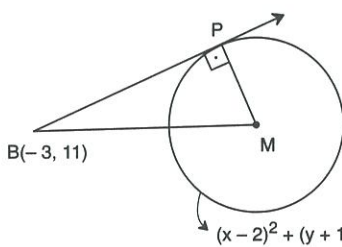
What is the power of point $A(-2, 1)$ with respect to circle $x^2 + y^2 + 2x - y + 3 = 0$?

A) 15 B) 4 C) 3 D) 2 E) 1

3. $A(-1, 1)$ noktasının $(x - 2)^2 + (y - 3)^2 = 4$ çemberine göre kuvvet uzunluğu kaç birimdir?

What is the length of power of point $A(-1, 1)$ with respect to a circle $(x - 2)^2 + (y - 3)^2 = 4$?

A) 6 B) 5 C) 3 D) 2 E) 1

4.  $[BP] \perp [PM]$
 $\Rightarrow |PB| = ?$

A) 20 B) 16 C) 14 D) 12 E) 10

5. $(x - a)^2 + y^2 = a^2$ çemberi ile $x^2 + (y - 3)^2 = 1$ çemberi dıştan teğet ise a kaçtır?

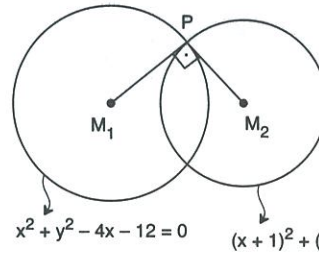
If the circle $(x - a)^2 + y^2 = a^2$ and the circle $x^2 + (y - 3)^2 = 1$ are externally tangents then what is the value of a ?

A) 5 B) 4 C) $\frac{7}{2}$ D) 3 E) $\frac{5}{2}$

6. $a > 0$
 $(x - 1)^2 + y^2 = 1$ çemberi ile $x^2 + (y - a)^2 = 9$ çemberi içten teğet ise a kaçtır?

If the circle $(x - 1)^2 + y^2 = 1$ and the circle $x^2 + (y - a)^2 = 9$ are internally tangents, then what is the value of a ?

A) $4\sqrt{2}$ B) 4 C) 3 D) $\sqrt{3}$ E) $\sqrt{2}$

7.  $[PM_1] \perp [PM_2]$
 $\Rightarrow r = ?$

A) 1 B) 2 C) 3 D) 4 E) 5

8. $(x + 2)^2 + (y - 3)^2 = 25$ çemberi ile $x^2 + (y + 2)^2 = r^2$ çemberi dik kesiştiğine göre r kaçtır?

In case the circle $(x + 2)^2 + (y - 3)^2 = 25$ and the circle $x^2 + (y + 2)^2 = r^2$ are intersecting at right angles, then what is the value of r ?

A) $2\sqrt{5}$ B) 4 C) $\sqrt{6}$ D) $\sqrt{5}$ E) 2



9. $x = 2 \cos t - 1$

$y = 2 \sin t$

sistemine karşılık gelen çemberin denklemi nedir?

What is the equation of the circle that corresponds to the system $x = 2 \cos t - 1$, $y = 2 \sin t$?

- A) $(x + 1)^2 + y^2 = 4$ B) $x^2 + (y + 1)^2 = 2$
 C) $(x - 1)^2 + y^2 = 2$ D) $(x - 1)^2 + y^2 = 8$
 E) $x^2 + (y - 1)^2 = 2$

10. $x^2 + y^2 = 10$ çemberinin parametrik denklemi nedir?

What is the parametric equation of the circle $x^2 + y^2 = 10$?

- A) $y = \cos \alpha$ B) $x = \sqrt{10} \cos \alpha$
 $y = \sin \alpha$ $y = \sqrt{10} \sin \alpha$
 C) $x = 10 \cos \alpha$ D) $x = 5 \cos \alpha$
 $y = 10 \sin \alpha$ $y = 5 \sin \alpha$
 E) $x = 25 \cos \alpha$
 $y = 25 \sin \alpha$

11. $x = 1 + 5 \sin \alpha$

$y = -2 + 5 \cos \alpha$

sistemine karşılık gelen çemberin denklemi nedir?

What is the equation of the circle that corresponds to the system $x = 1 + 5 \sin \alpha$, $y = -2 + 5 \cos \alpha$?

- A) $(x - 2)^2 + (y + 1)^2 = 25$ B) $(x - 1)^2 + (y + 2)^2 = 25$
 C) $(x + 1)^2 + (y - 2)^2 = 25$ D) $(x - 1)^2 + (y - 2)^2 = 25$
 E) $(x - 1)^2 + (y - 2)^2 = 25$

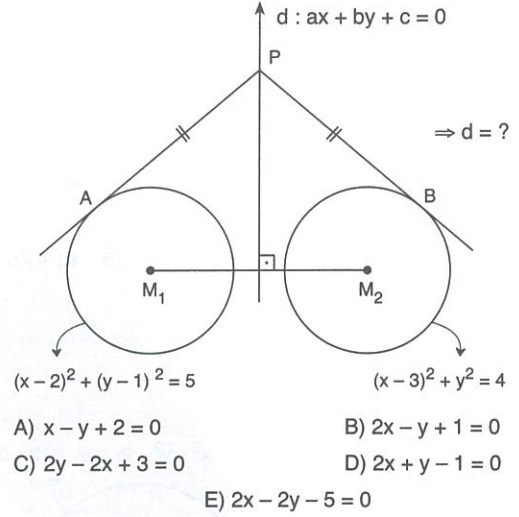
12. Denklemleri $x^2 + y^2 - 2x + y - 6 = 0$ ve

$x^2 + y^2 + 3x - y - 1 = 0$ olan çemberlerin kuvvet ekseninin denklemi nedir?

What is the equation of the radical axis of the circles with the equations $x^2 + y^2 - 2x + y - 6 = 0$ and $x^2 + y^2 + 3x - y - 1 = 0$?

- A) $2y - 5x - 5 = 0$ B) $y - x - 4 = 0$
 C) $-x - 5 = 0$ D) $x + 2y - 2 = 0$
 E) $2x - y - 6 = 0$

13.



14. $x^2 + y^2 - 2x + y - 6 = 0$

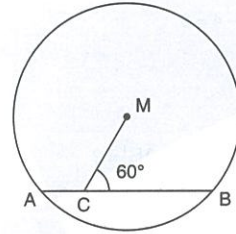
$x^2 + y^2 + 3x - 5y - 1 = 0$

çemberlerinin kesim noktalarından geçen doğrunun denklemi nedir?

What is the equation of the line that passes through the intersecting point of $x^2 + y^2 - 2x + y - 6 = 0$, $x^2 + y^2 + 3x - 5y - 1 = 0$ circles?

- A) $x - 4y - 7 = 0$ B) $5x - 6y + 5 = 0$
 C) $5x - 6y - 5 = 0$ D) $x + y - 5 = 0$
 E) $-x + 4y - 5 = 0$

15.



- A) $(x + 4)^2 + (y - 4)^2 = 100$
 B) $(x - 2)^2 + (y + 4)^2 = 10$
 C) $(x + 4)^2 + (y - 2)^2 = 10$
 D) $(x - 2)^2 + (y - 2)^2 = 100$
 E) $(x + 4)^2 + (y - 2)^2 = 100$

16. $x^2 + y^2 - x + y - 1 = 0$

$x^2 + y^2 - 2x + y - 2 = 0$

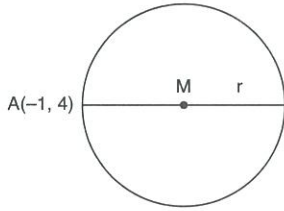
Çemberlerinin kesim noktalarından geçen doğrunun denklemi nedir?

What is the equation of the line that passes through the intersecting point of $x^2 + y^2 - x + y - 1 = 0$, $x^2 + y^2 - 2x + y - 2 = 0$ circles?

- A) $x - 4y - 7 = 0$ B) $5x + 4y - 5 = 0$
 C) $5x - 6y - 5 = 0$ D) $x + 1 = 0$
 E) $-x + 4y - 5 = 0$



1.



[AB] çaplı çemberin yarıçapı nedir?

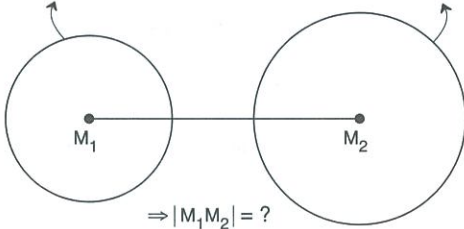
What is the radius of circle with a diameter [AB]?

- A) $\sqrt{2}$ B) $\sqrt{5}$ C) 4 D) $2\sqrt{5}$ E) $4\sqrt{5}$

2.

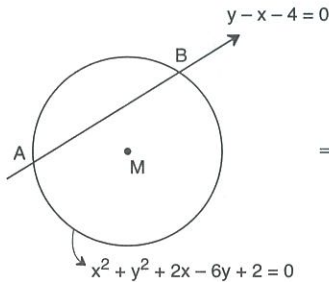
$$x^2 + y^2 + 6x - 4y + 8 = 0$$

$$x^2 + y^2 - 2x - 6y + 12 = 0$$



- A) $2\sqrt{7}$ B) $2\sqrt{5}$ C) $\sqrt{17}$ D) 4 E) $\sqrt{10}$

3.



$$\Rightarrow |AB| = ?$$

- A) 8 B) $4\sqrt{2}$ C) 4 D) $3\sqrt{2}$ E) 3

4.

$$(x + 2)^2 + (y - 5)^2 = 26$$

çemberine üzerindeki A(-1, 10) noktasında çizilen teget denklemini nedir?

What is the equation of tangent which is drawn from a point A(-1, 10) at the circle $(x + 2)^2 + (y - 5)^2 = 26$?

- A) $x + y - 1 = 0$ B) $5x + y - 49 = 0$
C) $5y + x - 49 = 0$ D) $5x + y - 1 = 0$
E) $x + y - 4 = 0$

5.

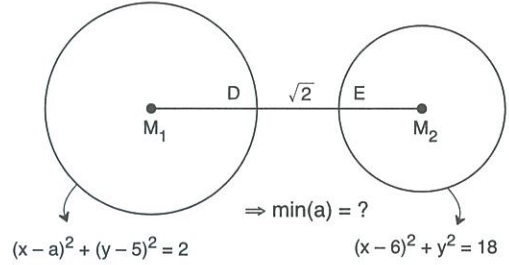
$$x^2 + y^2 - 4x + 2y + k = 0$$

çemberinin yarıçapı 3 br ise k kaçtır?

If the radius of the $x^2 + y^2 - 4x + 2y + k = 0$ circle is 3 units, then what is the value of k?

- A) -10 B) -9 C) -8 D) -5 E) -4

6.



$$(x - a)^2 + (y - 5)^2 = 2$$

$$\Rightarrow \min(a) = ?$$

$$(x - 6)^2 + y^2 = 18$$

- A) -2 B) -1 C) 1 D) 2 E) 3

7.

A(-1, -2) noktasından 2 br uzaklıktaki noktaların geometrik yerinin denklemini nedir?

What is the geometrical locus equation of the points which are at a distance of 2 units from the point A(-1, -2) ?

- A) $x^2 + y^2 = 4$ B) $(x - 1)^2 + (y + 4)^2 = 4$
C) $(x - 1)^2 + (y + 2)^2 = 4$ D) $(x - 1)^2 + (y + 2)^2 = 2$
E) $(x + 1)^2 + (y + 2)^2 = 4$

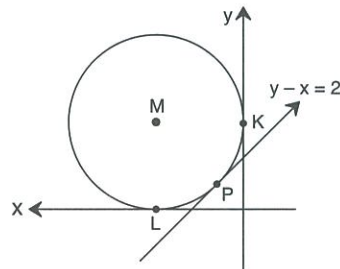
8.

A(3, 2) noktasından 1 br uzaklıktaki noktaların geometrik yerinin denklemini nedir?

What is the geometrical locus equation of the points which are at a distance of 1 units from the point A(3, 2) ?

- A) $(x - 3)^2 + (y - 2)^2 = 1$ B) $x^2 + y^2 = 1$
C) $(x - 2)^2 + (y - 1)^2 = 1$ D) $(x - 4)^2 + (y - 3)^2 = 1$
E) $(x + 2)^2 + (y + 1)^2 = 1$

9.



$$\Rightarrow M(a, b) = ?$$

- A) (-2, 2) B) $(-\sqrt{2}, \sqrt{2})$
C) $(2 - \sqrt{2}, 2 + \sqrt{2})$ D) $(-2 + \sqrt{2}, 2 - \sqrt{2})$
E) $(-2 - \sqrt{2}, 2 + \sqrt{2})$



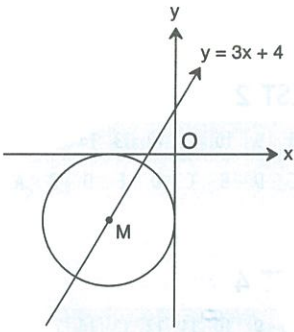
10. $kx^2 + 2y^2 - (k+6)x - 16y + 8 = 0$

çemberinin yarıçapı kaçtır?

What is the radius of the $kx^2 + 2y^2 - (k+6)x - 16y + 8 = 0$ circle?

- A) 2 B) 3 C) 4 D) 5 E) 6

11.

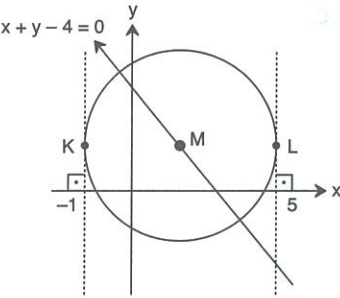


M merkezli çemberin yarıçapı kaç br'dir?

How many unit is the radius of a circle with a center M?

- A) 1 B) 2 C) 3 D) 4 E) 5

12.



M merkezli çember
The circle with a center M

$\Rightarrow M(a, b) = ?$

- A) (1, 3) B) (-1, 2) C) (2, 2) D) (1, 4) E) (3, 2)

13. A(0, 3) noktasından $x^2 + y^2 - 4x + 2y + 1 = 0$ çemberine çizilen teget denklemi nedir?

What is the equation of tangent which is drawn from a point A(0, 3) to the $x^2 + y^2 - 4x + 2y + 1 = 0$ circle?

- A) $3x + 4y - 12 = 0$ B) $x - y - 2 = 0$
C) $x - 2 = 0$ D) $2x + y - 10 = 0$
E) $y + 3 = 0$

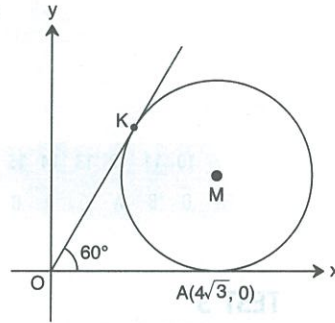
PUZA YAYINLARI

14. A(1,1) noktasının $y = mx + 1$ doğrusuna göre simetrisinin geometrik yer denklemi nedir?

What are geometrical locus which is the symmetry of point A(1, 1) as per the $y = mx + 1$ line?

- A) $x^2 + y^2 = 2$
B) $(x-1)^2 + (y-2)^2 = 4$
C) $(x-1)^2 + (y+2)^2 = 2$
D) $(x-1)^2 + (y-1)^2 = 4$
E) $x^2 + y^2 = 4$

15.



$m(\widehat{KOA}) = 60^\circ$

M merkezli çemberin yarıçapı nedir?

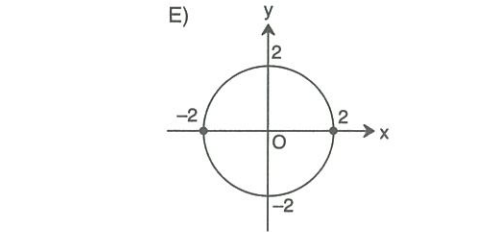
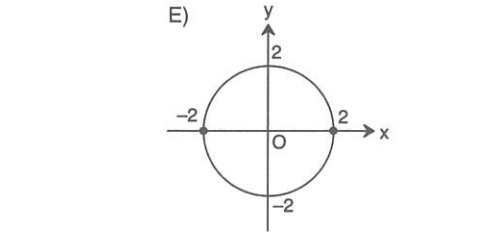
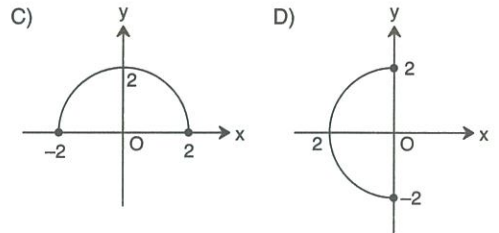
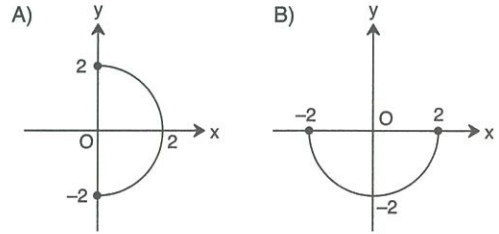
What is the radius of circle with a center M?

- A) $2\sqrt{3}$ B) 4 C) $3\sqrt{2}$ D) 5 E) $4\sqrt{3}$

PUZA YAYINLARI

16. $y = \sqrt{4 - x^2}$ denkleminin ait grafik aşağıdakilerden hangisidir?

Which is the graph belongs to $y = \sqrt{4 - x^2}$ line equation amongst the following ones?





ÇEMBER ANALİTİĞİ

Yanıt Anahtarı

ANALYTIC GEOMETRY-CIRCLE

Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
E	B	E	B	B	A	D	C	D	D	B	A	C	D	B	B

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	B	E	D	E	C	C	D	B	C	D	E	D	B	A

TEST 3

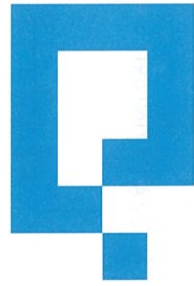
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	C	B	D	C	C	E	A	E	E	C	B	B	B	B

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	C	D	B	D	C	E	A	B	B	A	E	B	E	D

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	C	B	C	E	C	E	A	E	C	B	C	A	D	B	C



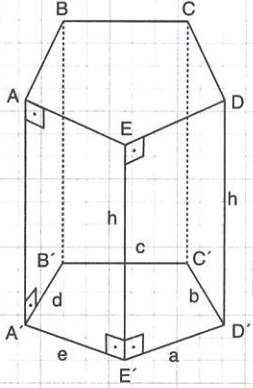
KATI CİSİM

SOLID OBJECT



ÖZELLİK|Property 1

Dik Prizma
Right Prism



$$V_{(\text{Hacim})} = \text{Taban alanı} \cdot \text{yükseklik (h)}$$

$$V_{(\text{Volume})} = \text{Bottom area} \cdot \text{height (h)}$$

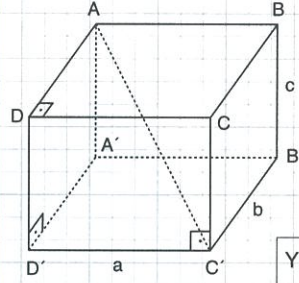
$$\text{Yanal Alan} = \text{Taban çevresi} \cdot \text{yükseklik}$$

$$\text{Lateral Area} = \text{Bottom circumference} \cdot \text{height}$$

$$= (a + b + c + d + e) \cdot h$$

ÖZELLİK|Property 2

Dikdörtgenler Prizması
Rectangular prism



$$V_{(\text{Hacim})} = a \cdot b \cdot c$$

$$V_{(\text{Volume})} = a \cdot b \cdot c$$

$$\text{Yanal alan} = 2(a + b) \cdot c$$

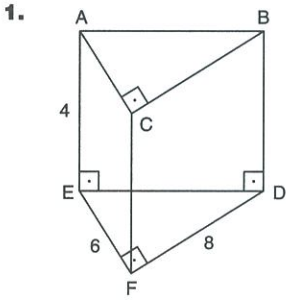
$$\text{Lateral area} = 2(a + b) \cdot c$$

$$\text{Yüzey Alanı} = 2(ab + ac + bc)$$

$$\text{Surface area} = 2(ab + ac + bc)$$

$$\text{Cisim Köşegeni} = |AC'| = \sqrt{a^2 + b^2 + c^2}$$

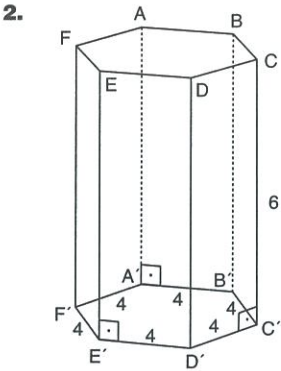
$$\text{Solid diagonal}$$



$$\Rightarrow V_{(\text{Hacim})} = ?$$

$$V_{(\text{Volume})} = ?$$

96



ABCDEF altıgen

ABCDEF hexagon

$$\Rightarrow V_{(\text{Hacim})} = ?$$

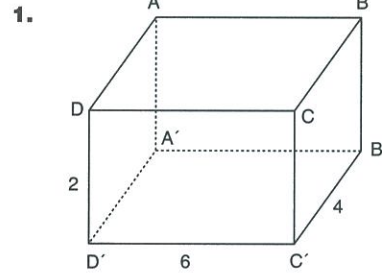
$$V_{(\text{Volume})} = ?$$

144√3

3. Taban çevresi 12 cm ve yüksekliği 6 cm olan dik prizmanın yanal alanı kaç cm²'dir?

How many cm² is the lateral area of a right prism having a bottom circumference of 12 cm and a height of 6 cm?

72



$$\Rightarrow V_{(\text{Hacim})} = ?$$

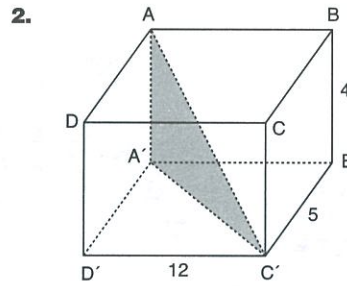
$$V_{(\text{Volume})} = ?$$

$$\Rightarrow \text{Yüzey Alanı} = ?$$

$$\text{Surface Area} = ?$$

$$\Rightarrow |BD'| = ?$$

48, 88, 2√14



$$\Rightarrow A(AA'C') = ?$$

26

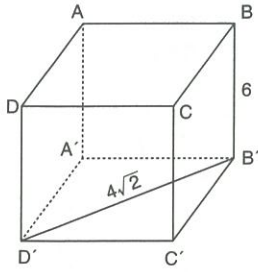
3. Hacmi 100 cm³ ve yüksekliği 4 cm olan kare dik prizmanın alanı kaç cm²'dir?

How many cm² is the area of a square right prism having a volume of 100 cm³ and a height of 4 cm?

130



4.



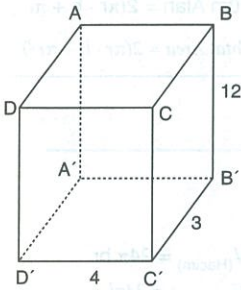
ABCD kare (square)

$$\Rightarrow V_{(\text{Hacim})} = ?$$

$$V_{(\text{Volume})} = ?$$

96

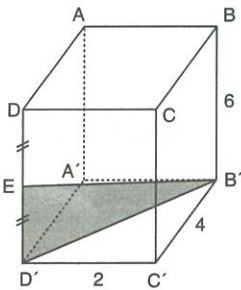
5.



$$\Rightarrow |AC'| = ?$$

13

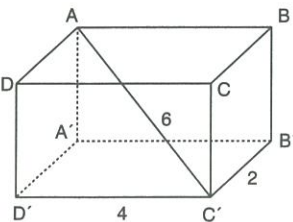
6.



$$\Rightarrow A(ED'B') = ?$$

 $3\sqrt{5}$

7.

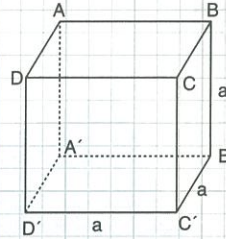


$$\Rightarrow V_{(\text{Hacim})} = ?$$

$$V_{(\text{Volume})} = ?$$

32

ÖZELLİK|Property 3

Küp
Cube

$$V_{(\text{Hacim})} = a^3$$

$$V_{(\text{Volume})} = a^3$$

$$\text{Yanal Alan} = 4a^2$$

$$\text{Lateral area} = 4a^2$$

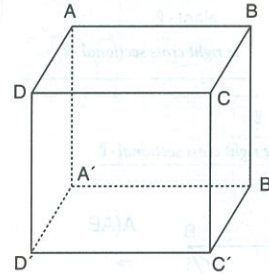
$$\text{Yüzey Alanı} = 6a^2$$

$$\text{Surface area} = 6a^2$$

$$\text{Cisim Köşegeni} = |AC'| = a\sqrt{3}$$

$$\text{Object diagonal} = |AC'| = a\sqrt{3}$$

1.



Şekil bir küp

A form cube

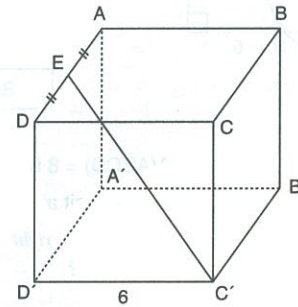
$$|AC'| = 5\sqrt{3} \text{ cm}$$

$$\Rightarrow V_{(\text{Hacim})} = ?$$

$$V_{(\text{Volume})} = ?$$

125

2.



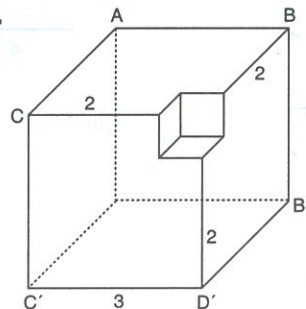
Şekil bir küp

A form cube

$$\Rightarrow |EC'| = ?$$

9

3.



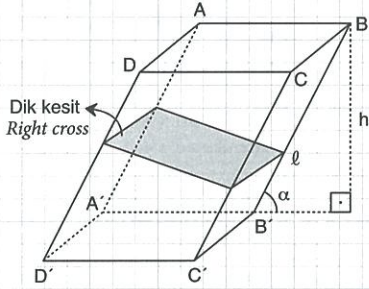
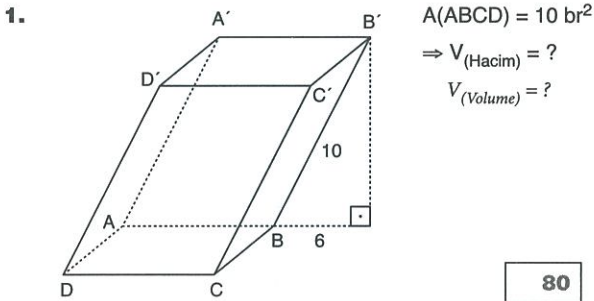
Şekildeki küpün köşesinden bir parça küp çıkarılıyor. Geri kalan cismin yüzey alanı kaç cm^2 'dir?

A piece of cube form is cut off at a corner of the cube shown as figure. How many cm^2 is the lateral surface of the remaining solid?

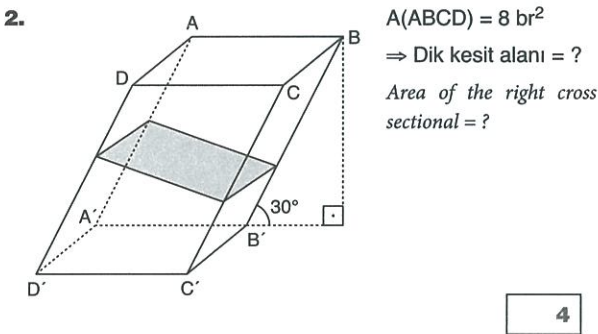
54



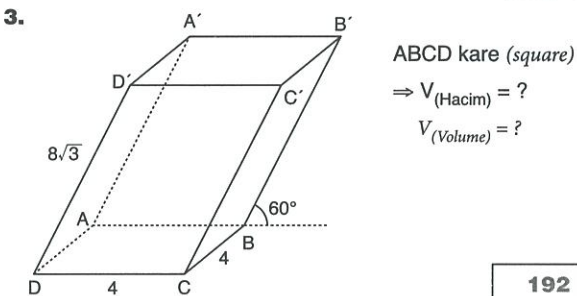
ÖZELLİK|Property 4

Eğik Prizma
Oblique PrismDik kesit alanı = Taban alanı $\cdot \sin \alpha$ Area of the right cross sectional = Bottom area $\cdot \sin \alpha$ $V_{(\text{Hacim})} = \text{Taban alanı} \cdot h = \text{Dik kesit alanı} \cdot l$ $V_{(\text{Volume})} = \text{Bottom area} \cdot h = \text{Area of the right cross sectional} \cdot l$ Yanal alan = Dik kesit çevresi $\cdot l$ Lateral area = Circumference of the right cross sectional $\cdot l$ 

80

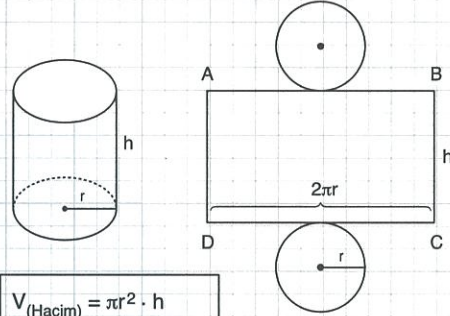
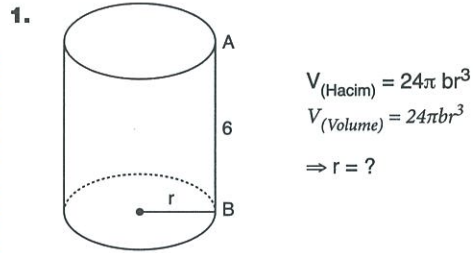


4

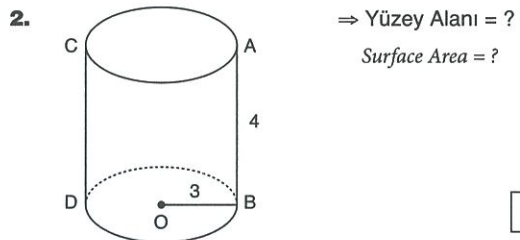


192

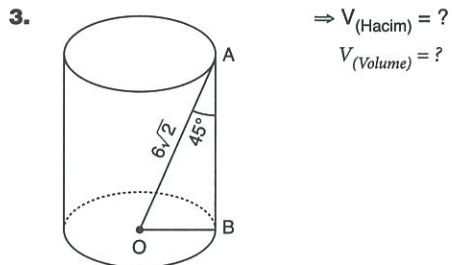
ÖZELLİK|Property 5

Silindir
Cylinder $V_{(\text{Hacim})} = \pi r^2 \cdot h$ $V_{(\text{Volume})} = \pi r^2 \cdot h$ Yanal Alan = $2\pi r \cdot h$ Lateral Area = $2\pi r \cdot h$ Tüm Alan = $2(\pi r \cdot h + \pi r^2)$ Total Area = $2(\pi r \cdot h + \pi r^2)$ 

2



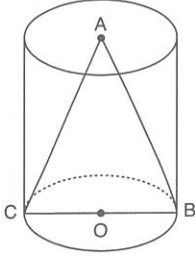
42π



216π



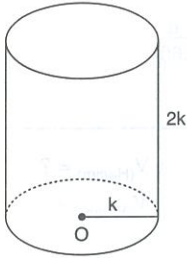
4.



ABC eşkenar üçgen
ABC equilateral triangle
 $|AC| = 6 \text{ br}$
 $\Rightarrow V_{(\text{Hacim})} = ?$
 $V_{(\text{Volume})} = ?$

$$27\sqrt{3}\pi$$

5.



$V_{(\text{Hacim})} = 128\pi$
 $V_{(\text{Volume})} = 128\pi$
 $\Rightarrow \text{Yüzey Alanı} = ?$
Surface Area = ?

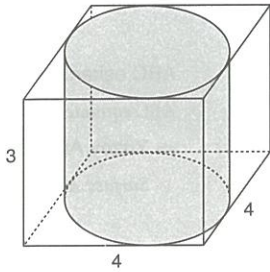
$$96\pi$$

6. Hacmi $18\pi \text{ cm}^3$ olan 3 cm yarıçapındaki silindirin yanıl alanı kaç cm^2 'dir?

How many cm^2 is the lateral area of a cylinder having a volume of 18 cm^3 and with a radius of 3 cm?

$$12\pi$$

7.



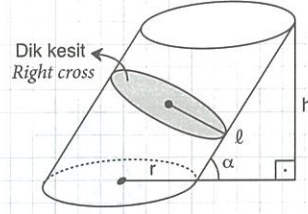
Dik prizmanın içine silindir yerleştirilmiştir. Silindir ile prizma arasındaki boşluğun hacmi en az kaç cm^3 'tür?

A cylinder is placed inside of a right prism. What is the minimum cm^3 of the space volume between the cylinder and prism?

$$48 - 12\pi$$

ÖZELLİK|Property 6

Eğik Silindir
Oblique Cylinder

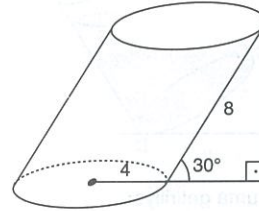


Yanal Alan = Dik kesit çevresi $\cdot l$
Lateral Area = Circumference of the right cross sectional $\cdot l$

Dik Kesit Alanı = Taban Alanı $\cdot \sin \alpha$
Area of the right cross sectional = Bottom area $\cdot \sin \alpha$

$V_{(\text{Hacim})} = \text{Taban Alanı} \cdot h = \text{Dik kesit alanı} \cdot l$
 $V_{(\text{Volume})} = \text{Bottom area} \cdot h$
 $= \text{Area of the right cross sectional} \cdot l$

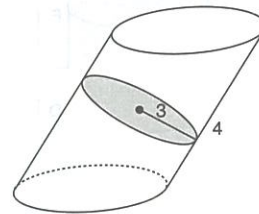
1.



$\Rightarrow V_{(\text{Hacim})} = ?$
 $V_{(\text{Volume})} = ?$

$$64\pi$$

2.



$\Rightarrow \text{Yanal alan} = ?$
Lateral area = ?

$$24\pi$$

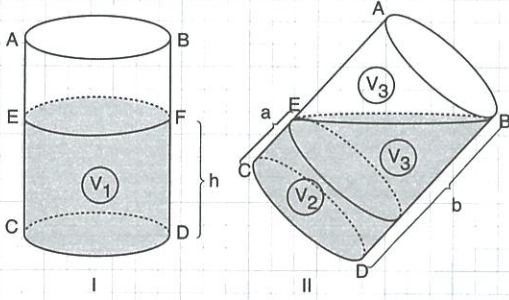
3.

Taban düzlemi ile 60° açı yapan eğik silindirin taban alanı 18 cm^2 ise dik kesit alanı kaç cm^2 'dir?

If the bottom area of an oblique cylinder making an angle of 60° with the bottom plane is 18 cm^2 , how many cm^2 is the right cross sectional area of that cylinder?

$$9\sqrt{3}$$

ÖZELLİK|Property 7

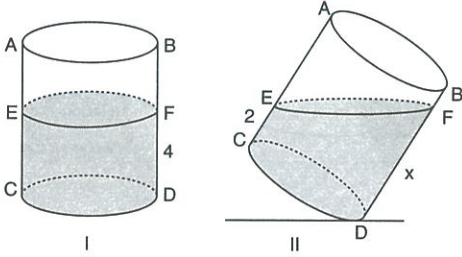


Silindir I. durumdan II. duruma getiriliyor.
Cylinder turns from I. situation to II. situation.

$$V_1 = V_2 + V_3$$

$$h = \frac{a+b}{2}$$

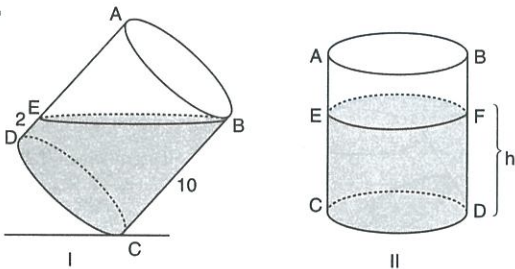
1.



Silindir I. durumdan II. duruma getiriliyor.
Cylinder I situation II brought the situation
 $\Rightarrow x = ?$

6

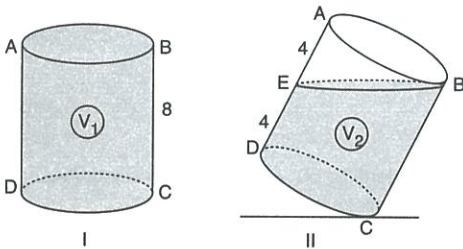
2.



Silindir I. durumdan II. duruma getiriliyor.
Cylinder turns from I. situation to II. situation.
 $\Rightarrow h = ?$

6

3.

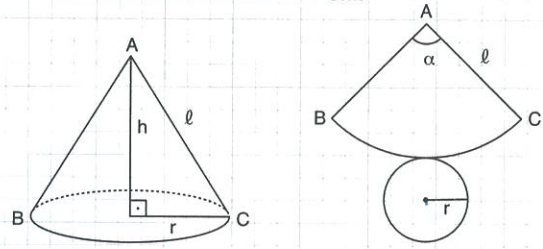


Silindir I. durumdan II. duruma getiriliyor.
Cylinder turns from I. situation to II. situation.

$$\Rightarrow \frac{V_1}{V_2} = ?$$

$$\frac{4}{3}$$

ÖZELLİK|Property 8

Koni
Cone

$$V_{(\text{Hacim})} = \frac{\pi r^2 \cdot h}{3}$$

$$V_{(\text{Volume})}$$

$$\text{Yüzey Alanı} = \pi r^2 + \pi r l$$

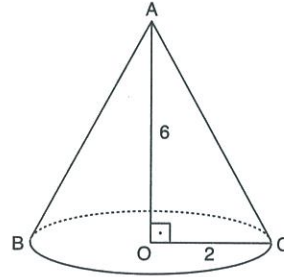
Surface Area

$$\text{Yanal alan} = \pi r l$$

Lateral area

$$2\pi r = 2\pi l \cdot \frac{\alpha}{360^\circ} \Rightarrow r = l \cdot \frac{\alpha}{360^\circ}$$

1.

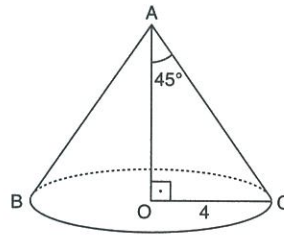


$$\Rightarrow V_{(\text{Hacim})} = ?$$

$$V_{(\text{Volume})} = ?$$

8π

2.

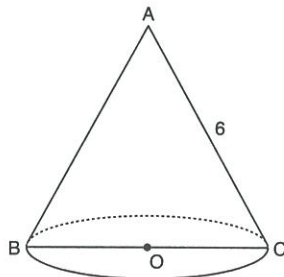


$$\Rightarrow \text{Yanal Alan} = ?$$

$$\text{Lateral Area} = ?$$

16√2 π

3.

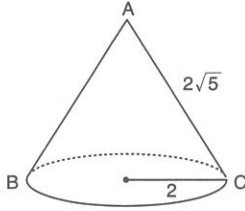


ABC eşkenar üçgen
ABC equilateral triangle
 $\Rightarrow \text{Yüzey Alanı} = ?$
Surface Area = ?

27π



4.

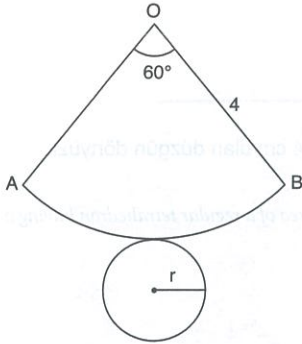


$$\Rightarrow V_{(\text{Hacim})} = ?$$

$$V_{(\text{Volume})} = ?$$

$$\frac{16\pi}{3}$$

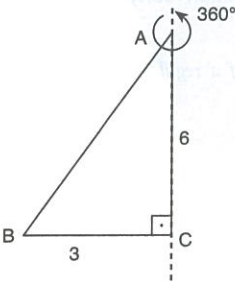
5.



$$\Rightarrow r = ?$$

$$\frac{2}{3}$$

6.

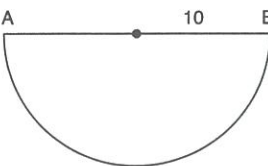


Yandaki şekilde, [AC] kenarı etrafında 360° döndürülmesi ile oluşan şeklin hacmi kaç cm^3 'tür?

As a result of a 360° revolving of the figure adjoining around the [AC] edge, how many cm^3 is the volume of the solid formed?

$$18\pi$$

7.



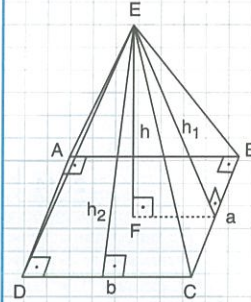
Şekildeki daire dilimi yanal alan olacak şekilde kıvrılarak bir koni oluşturuluyor. Bu koninin hacmi kaç br^3 'tür?

As shown in the picture, a slice of circle is curled in order to form a surface area and formed a cone. How many unit^3 is the volume of this cone?

$$\frac{125\sqrt{3}\pi}{3}$$

ÖZELLİK|Property 9

Piramit
Pyramid



$$V_{(\text{Hacim})} = \frac{a \cdot b \cdot h}{3}$$

$$V_{(\text{Volume})}$$

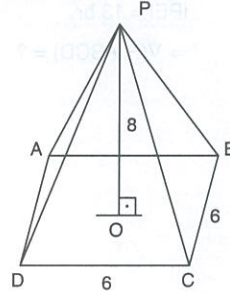
$$\text{Yanal Alan} = a \cdot h_1 + b \cdot h_2$$

$$\text{Lateral Area}$$

$$\text{Yüzey Alanı} = a \cdot h_1 + b \cdot h_2 + ab$$

$$\text{Surface Area}$$

1.



Kare piramit

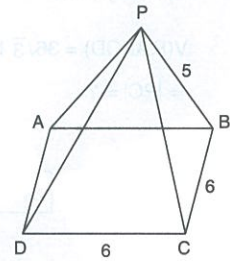
Square pyramid

$$|PO| = 8 \text{ br}$$

$$\Rightarrow V(P, ABCD) = ?$$

$$96$$

2.



Kare piramit

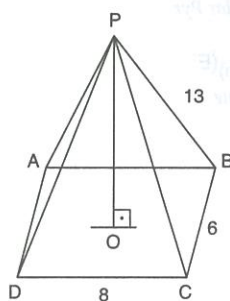
Square pyramid

$$\Rightarrow \text{Yanal Alan} = ?$$

$$\text{Lateral Area} = ?$$

$$48$$

3.



Dikdörtgen piramit

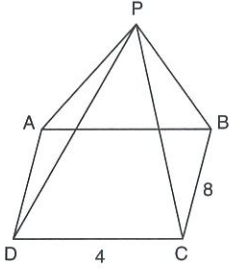
Rectangle pyramid

$$\Rightarrow V(P, ABCD) = ?$$

$$192$$



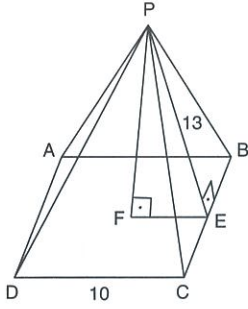
4.



Dikdörtgen piramit
Rectangle pyramid
 $V(P, ABCD) = 64 \text{ br}^2$
 $\Rightarrow |PD| = ?$

$2\sqrt{14}$

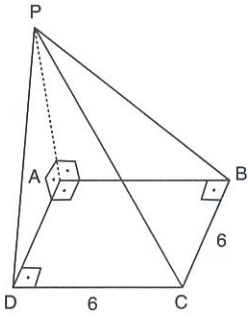
5.



Kare piramit
Square pyramid
 $IPEI = 13 \text{ br}$
 $\Rightarrow V(P, ABCD) = ?$

400

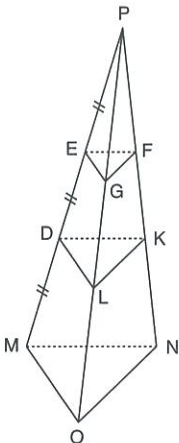
6.



Kare Piramit
Square Pyramid
 $V(P, ABCD) = 36\sqrt{3} \text{ br}^3$
 $\Rightarrow |PC| = ?$

$3\sqrt{11}$

7.

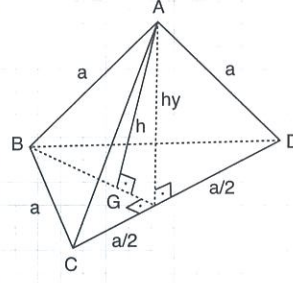


Üçgen Piramit
Triangular Pyramid
 $V_{(Hacim)}(EFG, DLK) = 14 \text{ br}^3$
 $V_{(Volume)}$
 $\Rightarrow V_{(Hacim)}(DLK, MON) = ?$
 $V_{(Volume)}$

38

ÖZELLİK|Property 10

Düzgün Dörtüzlü
Regular Tetrahedron



$$h = \frac{a\sqrt{6}}{3}$$

$$h_y = \frac{a\sqrt{3}}{2}$$

$$\text{Yüzey Alanı} = a^2 \sqrt{3}$$

Surface Area

$$V_{(Hacim)} = \frac{a^3 \sqrt{2}}{12}$$

$V_{(Volume)}$

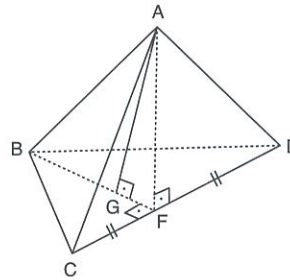
1. Bir ayrıtın uzunluğu 4 cm olan düzgün dörtüzlünün alanı kaç cm^2 'dir?
How many cm^2 is the area of a regular tetrahedron having an edge of 4 cm?

$16\sqrt{3}$

2. Hacmi $18\sqrt{2} \text{ cm}^3$ olan düzgün dörtüzlünün alanı kaç cm^2 'dir?
How many cm^2 is the area of a regular tetrahedron having a volume of $18\sqrt{2} \text{ cm}^3$?

$36\sqrt{3}$

3.



Düzgün dörtüzlü
Regular tetrahedron

G, BDC'nin ağırlık merkezi
G is the center of gravity of a triangle BDC

$$|AF| = 4\sqrt{3} \text{ br}$$

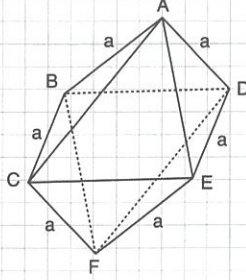
$$\Rightarrow V(A, BDC) = ?$$

$\frac{128\sqrt{2}}{3}$



ÖZELLİK|Property 11

Düzgün Sekizyüzlü
Regular Octahedron



$$V_{(\text{Hacim})} = \frac{a^3 \sqrt{2}}{3}$$

$$V_{(\text{Volume})}$$

$$\text{Yüzey Alanı} = 2a^2 \sqrt{3}$$

$$\text{Surface Area}$$

1. Bir ayrıtı 6 cm olan düzgün sekizyüzlünün hacmi kaç cm^3 'tür?

How many cm^3 is the volume of a regular octahedron having an edge of 6 cm?

$$72\sqrt{2}$$

2. Yüzey alanı $32\sqrt{3} \text{ cm}^2$ olan düzgün sekizyüzlünün bir ayrıtının uzunluğu kaç cm'dir?

How many cm of one edge of a regular octahedron having a total area of $32\sqrt{3} \text{ cm}^2$?

$$4$$

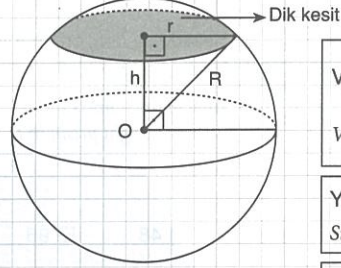
3. Hacmi $9\sqrt{2} \text{ cm}^3$ olan düzgün sekizyüzlünün alanı kaç cm^2 'tür?

How many cm^2 is the area of a regular octahedron having a volume of $9\sqrt{2} \text{ cm}^3$?

$$18\sqrt{3}$$

ÖZELLİK|Property 12

Küre
Sphere



$$V_{(\text{Hacim})} = \frac{4\pi R^3}{3}$$

$$V_{(\text{Volume})} = \frac{4\pi R^3}{3}$$

$$\text{Yüzey Alanı} = 4\pi R^2$$

$$\text{Surface Area} = 4\pi R^2$$

$$\text{Kesit Alanı} = \pi r^2$$

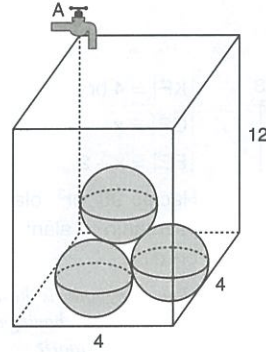
$$\text{Cross Sectional Area} = \pi r^2$$

1. Yarıçapı 2 cm olan kürenin hacmi kaç cm^3 'tür?

How many cm^3 is the volume of a sphere having a radius of 2 cm?

$$\frac{32\pi}{3}$$

2.



Ayrıtları 4 cm, 4 cm ve 12 cm olan üstü açık prizmaya 2 cm çapındaki 3 bilye atılıyor ve A musluğu açılıyor. Bu prizmanın dolması için musluktan kaç cm^3 su akıtılmalıdır? ($\pi = 3$)

3 pieces of marbles with 2 cm of diameter is dropped into a prism with an opened top having the dimensions / edges of 4 cm, 4 cm and 12 cm and then the tap A is opened. In order to be filled of this prism how many cm^3 of water has to be fed by the tap?

$$180$$

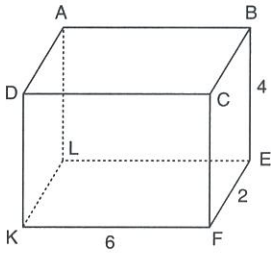
3. Yarıçapı 10 cm olan bir kürenin merkezinden 6 cm uzakta alınan kesitin alanı kaç cm^2 'dir?

How many cm^2 is the cross sectional area of a sphere cut off 6 cm away from the center of a sphere having a radius of 10 cm?

$$64\pi$$



1.



$|BE| = 4 \text{ br}$

$|EF| = 2 \text{ br}$

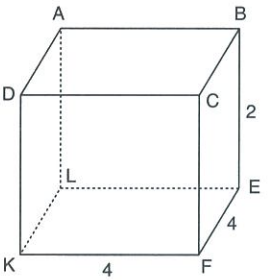
$|KF| = 6 \text{ br}$

Şekildeki dik prizmanın hacmi kaç br^3 'tür?

How many unit^3 is the volume of right prism in the figure?

- A) 18 B) 24 C) 36 D) 48 E) 96

2.



$|BE| = 2 \text{ br}$

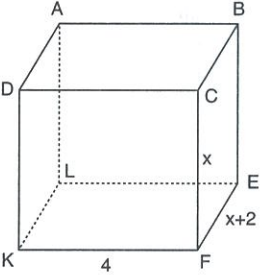
$|EF| = |KF| = 4 \text{ br}$

Şekildeki kare dik prizmanın alanı kaç br^2 'dir?

How many unit^2 is the area of right prism in the figure?

- A) 20 B) 32 C) 48 D) 60 E) 64

3.



$|KF| = 4 \text{ br}$

$|CF| = x$

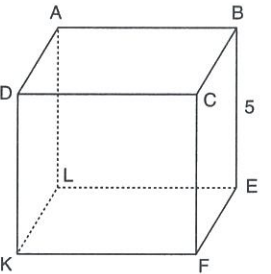
$|FE| = x + 2$

Hacmi 96 br^3 olan dik prizmanın alanı kaç br^2 'dir?

How many unit^2 is the area of a right prism having a volume of 96 unit^3 ?

- A) 32 B) 48 C) 64 D) 96 E) 128

4.



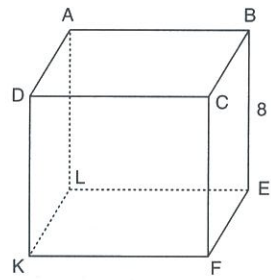
$|BE| = 5 \text{ br}$

Şekildeki bir ayrıtı 5 br olan küpün hacmi kaç br^3 'tür?

How many unit^3 is the volume of the cube having an edge of 5 unit as in the figure?

- A) 5 B) 10 C) 25 D) 50 E) 125

5.



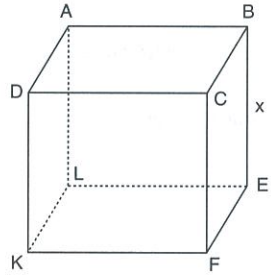
$|BE| = 8 \text{ br}$

Şekildeki bir ayrıtı 8 br olan küpün alanı kaç br^2 'dir?

How many unit^2 is the surface area of the cube having an edge of 8 unit as in the figure?

- A) 384 B) 256 C) 144 D) 64 E) 48

6.



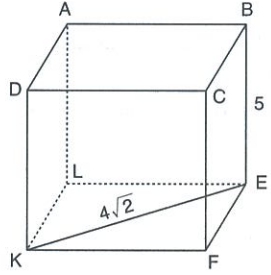
Küpün alanı 96 br^2

The surface area of the cube is 96 unit^2

$\Rightarrow |BE| = x = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

7.



$|EK| = 4\sqrt{2} \text{ br}$

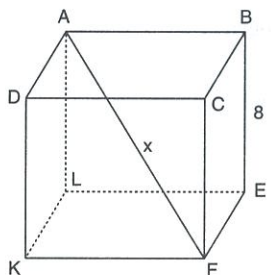
$|BE| = 5 \text{ br}$

Şekildeki kare dik prizmanın hacmi kaç br^3 'tür?

How many unit^3 is the volume of square right prism in the figure?

- A) 160 B) 150 C) 120 D) 100 E) 80

8.



Bir ayrıtı 8 br olan küp

A cube with an edge of 8 units

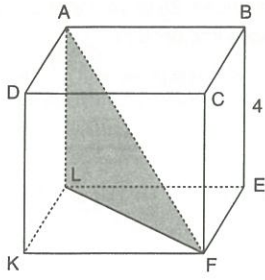
$|BE| = 8 \text{ br}$

$\Rightarrow |AF| = x = ?$

- A) 4 B) $4\sqrt{3}$ C) 8 D) $8\sqrt{3}$ E) 16



9.

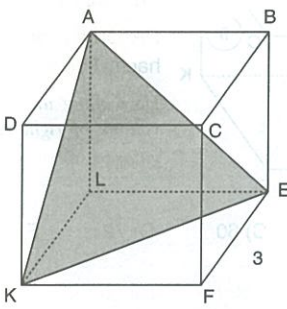


Bir ayrıtı 4 br olan küp
A cube with an edge of 4 units

$$|BE| = 4 \text{ br} \\ \Rightarrow A(ALF) = ?$$

- A) $4\sqrt{2}$ B) 8 C) $8\sqrt{2}$ D) 16 E) $16\sqrt{2}$

10.

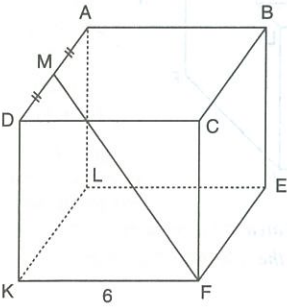


Bir ayrıtı 3 br olan küp
A cube with an edge of 3 units

$$|EF| = 3 \text{ br} \\ \Rightarrow A(AKE) = ?$$

- A) $\frac{9\sqrt{3}}{4}$ B) $\frac{9\sqrt{3}}{2}$ C) $9\sqrt{3}$ D) $18\sqrt{3}$ E) 54

11.

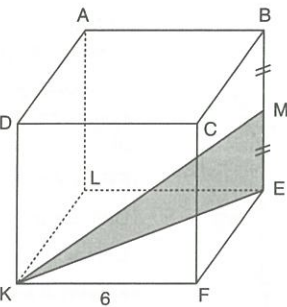


Bir ayrıtı 6 br olan küp
A cube with an edge of 6 units

$$|KF| = 6 \text{ br} \\ |DM| = |MA| \\ \Rightarrow |MF| = ?$$

- A) 9 B) $4\sqrt{5}$ C) $2\sqrt{17}$ D) 7 E) $4\sqrt{3}$

12.

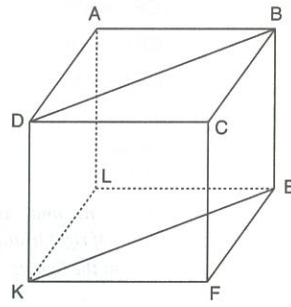


Bir ayrıtı 6 br olan küp
A cube with an edge of 6 units

$$|KF| = 6 \text{ br} \\ |BM| = |ME| \\ \Rightarrow A(MEK) = ?$$

- A) $9\sqrt{2}$ B) 9 C) $4\sqrt{5}$ D) $2\sqrt{17}$ E) $4\sqrt{3}$

13.

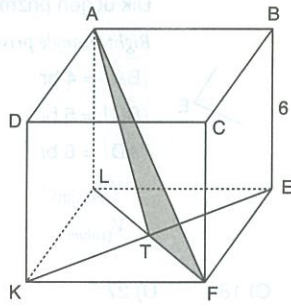


$A(DBEK) = 25\sqrt{2} \text{ br}^2$
Şekildeki küpün alanı kaç br^2 'dir?

How many unit^2 is the area of the cube in figure?

- A) 150 B) 125 C) 120 D) 100 E) 80

14.

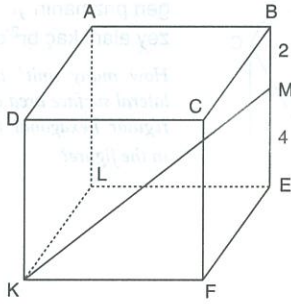


Bir ayrıtı 6 br olan küp
A cube with an edge of 6 units

$$|BE| = 6 \text{ br} \\ \Rightarrow A(ATF) = ?$$

- A) $18\sqrt{2}$ B) 18 C) $9\sqrt{2}$ D) 9 E) $6\sqrt{2}$

15.

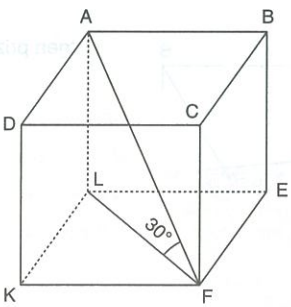


Bir ayrıtı 6 br olan küp
A cube with an edge of 6 units

$$|BM| = 2 \text{ br} \\ |ME| = 4 \text{ br} \\ \Rightarrow |KM| = ?$$

- A) 10 B) $2\sqrt{22}$ C) $4\sqrt{5}$ D) 8 E) $5\sqrt{2}$

16.



Kare dik prizmanın cisim köşegeni 12 br

The solid diagonal of square right prism is 12 units

$$m(\widehat{AFL}) = 30^\circ$$

$$|AF| = 12 \text{ br}$$

Kare dik prizmanın hacmi kaç br^3 'tür?

How many unit^3 is the volume of square right prism?

- A) 566 B) 484 C) 324 D) 300 E) 256



1.
 $|CF| = 6 \text{ br}$
 $|EF| = 4 \text{ br}$
 $|DE| = 2 \text{ br}$
 Şekildeki dik üçgen prizmanın hacmi kaç br^3 'tür?
 How many unit^3 is the volume of right triangular prism in the figure?

A) 96 B) 64 C) 48 D) 24 E) 12

2.
 Dik üçgen prizma
 Right triangle prism
 $|BA| = 4 \text{ br}$
 $|BC| = 5 \text{ br}$
 $|AD| = 6 \text{ br}$
 $\Rightarrow V_{(\text{Hacim})} = ?$
 $V_{(\text{volume})} = ?$

A) 13 B) 15 C) 18 D) 27 E) 36

3.
 $|EL| = |BC| = 4 \text{ br}$
 Şekildeki düzgün altıgen prizmanın yan yüz alanı kaç br^2 'dir?
 How many unit^2 is the lateral surface area of the regular hexagonal prism in the figure?

A) 128 B) 118 C) 100 D) 96 E) 78

4.
 Dikdörtgen prizma
 Rectangular prism
 $|BC| = 2 \text{ br}$
 $|KC| = 6 \text{ br}$
 $|NK| = 4 \text{ br}$
 $\Rightarrow A(EKC) = ?$

A) $6\sqrt{5}$ B) $2\sqrt{19}$ C) 8 D) $5\sqrt{2}$ E) 36

PUZA YAYINLARI

PUZA YAYINLARI

PUZA YAYINLARI

PUZA YAYINLARI

5. Taban alanı 30 br^2 , taban çevresi 25 br ve yanal alanı 100 br^2 olan dik prizmanın hacmi kaç br^3 'tür?
 How many unit^3 is the volume of a right prism with a bottom area of 30 unit^2 , a bottom circumference of 25 unit and a lateral area of 100 unit^2 ?

A) 100 B) 108 C) 120 D) 122 E) 144

6.
 $A(ABCD) = 18 \text{ br}^2$
 $A(BKFC) = 9 \text{ br}^2$
 $A(DCFE) = 8 \text{ br}^2$
 Dikdörtgen prizmanın hacmi kaç br^3 'tür?
 How many unit^3 is the volume of right rectangular prism?

A) 36 B) 49 C) 60 D) 72 E) 98

7.
 Şekildeki tahtadan oluşan küpün bir köşesinden şeklideki gibi küçük bir küp çıkartılıyor. Geri kalan cismin alanı 150 br^2 'dir. Buna göre bu prizmanın hacmi kaç br^3 'tür?
 A small wooden cube form is cut off at a corner of a cube as indicated in the picture. The area of the remaining solid is 150 unit^2 . Thus, how many unit^3 is the volume of this prism?

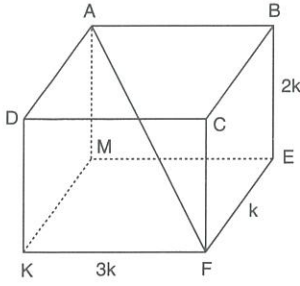
A) 150 B) 125 C) 120 D) 100 E) 80

8.
 Dikdörtgen prizmanın hacmi 48 br^3
 The volume of a rectangular prism is 48 unit^3
 $|EF| = 2 \text{ br}$
 $|DK| = 4 \text{ br}$
 $|DM| = |MC|$
 $\Rightarrow |KM| = x = ?$

A) $4\sqrt{5}$ B) $4\sqrt{2}$ C) 5 D) 4 E) 3



9.



$$|BE| = 2k$$

$$|FE| = k$$

$$|KF| = 3k$$

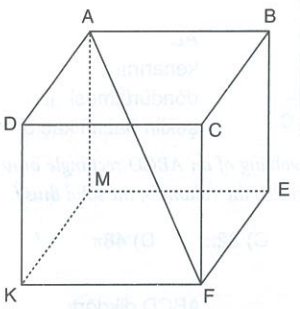
$$|AF| = 3\sqrt{14} \text{ br}$$

Dikdörtgen prizmasının hacmi kaç br^3 'tür?

How many unit^3 is the volume of right rectangular prism?

- A) 162 B) 196 C) 198 D) 200 E) 208

10.



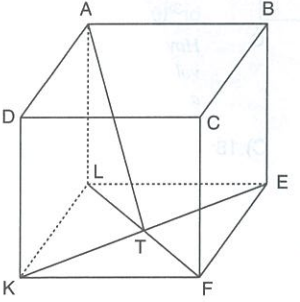
Alanı hacmine eşit olan küpün cisim köşegeni uzunluğu kaç br'dir?

How many unit is the length of a solid diagonal of a cube of which area equals to its volume?

$$\Rightarrow |AF| = x = ?$$

- A) $3\sqrt{3}$ B) $4\sqrt{3}$ C) $5\sqrt{3}$ D) $6\sqrt{3}$ E) $8\sqrt{3}$

11.



Bir ayrıttının uzunluğu 6 br olan küp verilmiştir.

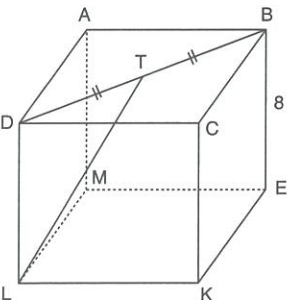
A cube with an edge of 6 units is given

$$|BE| = 6 \text{ br}$$

$$\Rightarrow |AT| = ?$$

- A) 3 B) $3\sqrt{2}$ C) $3\sqrt{5}$ D) $3\sqrt{6}$ E) $6\sqrt{5}$

12.



Bir ayrıttının uzunluğu 8 br olan küp verilmiştir.

A cube with an edge of 8 units is given

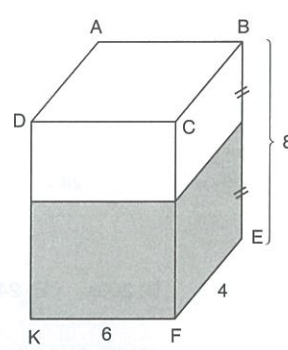
$$|BE| = 8 \text{ br}$$

$$|DT| = |TB|$$

$$\Rightarrow |LT| = ?$$

- A) $8\sqrt{5}$ B) 10 C) $4\sqrt{6}$ D) 9 E) $6\sqrt{2}$

13.

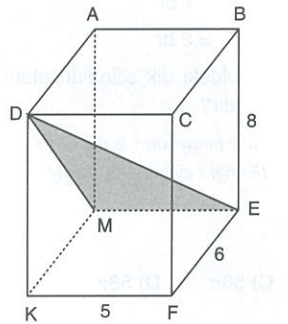


- A) 1 B) 2 C) 3 D) 4 E) 5

Ayrıtları 4, 6, 8 br olan dikdörtgenler prizmasının yarısı su ile doludur. Bu prizma büyük yüzey üzerine yatırılırsa suyun yüksekliği kaç br olur?

A half of a rectangular prism with the edge lengths of 4, 6, 8 units is filled with water. In case it is laid over the larger surface, how many units of the height of the water level shall be?

14.



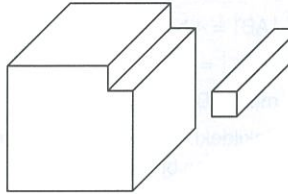
- A) 100 B) 80 C) 50 D) 30 E) 25

Ayrıtları 8, 6, 5 br olan dikdörtgen prizma

A rectangular prism with the edge lengths of 8, 6, 5 units

$$\Rightarrow A(DME) = ?$$

15.

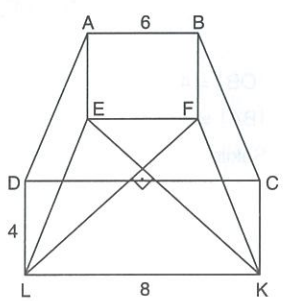


Yandaki şekilde alanı 600 br^2 olan bir küp şeklindeki gibi bir köşesinden dik bir kare prizma çıkartıldığında alanı 592 br^2 oluyor. Buna göre çıkartılan dik kare prizmanın hacmi kaç br^3 'tür?

At the picture adjoining, when a right square prism is cut off from any vertex, a cube's area of 600 unit^2 becomes 592 unit^2 . Thus, how many unit^3 is the volume of this right square prism that is cut off?

- A) 5 B) 10 C) 15 D) 20 E) 40

16.



- A) 196 B) 168 C) 144 D) 96 E) 84

$$[LF] \perp [EK]$$

$$|AB| = 6 \text{ br}$$

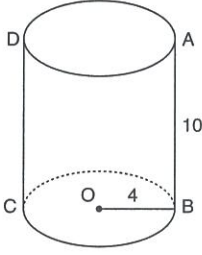
$$|LK| = 8 \text{ br}$$

$$|DL| = 4 \text{ br}$$

Şekildeki ikizkenar yamuk dik prizmanın hacmi kaç br^3 'tür?

How many unit^3 is the volume of a square right prism with a isosceles trapezoidal bottom?

1.



$|AB| = 10 \text{ br}$

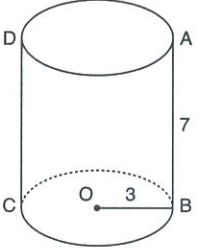
$|OB| = 4 \text{ br}$

Şekildeki dik silindirin hacmi kaç br^3 'tür?

How many unit^3 is the volume of right cylinder in the figure?

- A) 150π B) 160π C) 180π D) 200π E) 240π

2.



$|AB| = 7 \text{ br}$

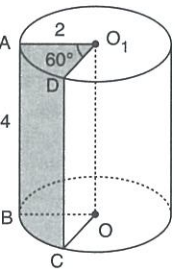
$|OB| = 3 \text{ br}$

Şekildeki dik silindirin alanı kaç br^2 'dir?

How many unit^2 is the surface area of the right cylinder in the figure?

- A) 36π B) 48π C) 56π D) 58π E) 60π

3.



$|AB| = 4 \text{ br}$

$|AO_1| = 2 \text{ br}$

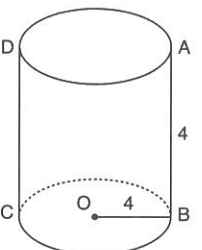
$m(\widehat{AO_1D}) = 60^\circ$

Şekildeki taralı silindir diliminin hacmi kaç br^3 'tür? ($\pi = 3$)

How many unit^3 is the volume of a slice of a cylinder as traced in figure? ($\pi = 3$)

- A) 8 B) 12 C) 16 D) 20 E) 24

4.



$|OB| = 4 \text{ br}$

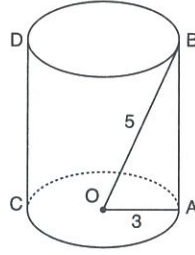
$|BA| = 4 \text{ br}$

Şekildeki dik silindirin yanal alanı kaç br^2 'dir?

How many unit^2 is the lateral surface area of the right cylinder in the figure?

- A) 64π B) 32π C) 16π D) 8π E) 4π

5.



$|OB| = 5 \text{ br}$

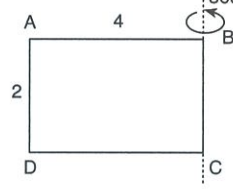
$|OA| = 3 \text{ br}$

Şekildeki dik silindirin hacmi kaç br^3 'tür?

How many unit^3 is the volume of right cylinder in the figure?

- A) 64π B) 48π C) 45π D) 36π E) 27π

6.



$|AD| = 2 \text{ br}$

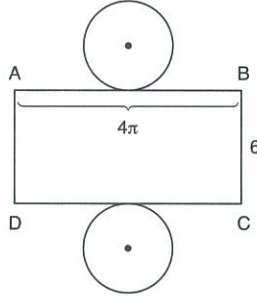
$|AB| = 4 \text{ br}$

ABCD dikdörtgenini [BC] kenarının etrafında 360° döndürülmesi ile oluşan şeklin hacmi kaç br^3 'tür?

As a result of a 360° revolving of an ABCD rectangle around its [BC] edge, how many unit^3 is the volume of the solid thus formed?

- A) 16π B) 24π C) 32π D) 48π E) 64π

7.



ABCD dikdörtgen

ABCD rectangle

$|AB| = 4\pi$

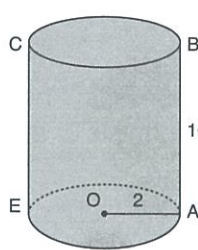
$|BC| = 6 \text{ br}$

Şeklin birleştirilmesi ile oluşan silindirin hacmi kaç br^3 'tür?

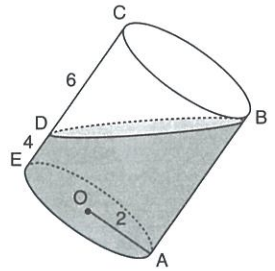
How many unit^3 is the volume of the cylinder formed as aggregating the figure?

- A) 6π B) 12π C) 18π D) 24π E) 30π

8.



Şekil I / Figure I



Şekil II / Figure II

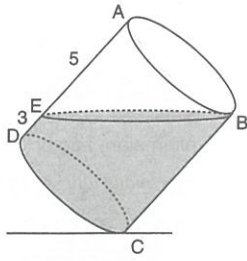
$|AB| = 10 \text{ br}$, $|OA| = 2 \text{ br}$, $|DE| = 4 \text{ br}$, $|DC| = 6 \text{ br}$
Şekilde içi su ile dolu bir dik silindir Şekil I'deki konumdan Şekil II'deki konuma getirildiğinde suyun bir kısmı dökülüyor. Buna göre Şekil II'deki suyun hacmi kaç br^3 'tür?

When a right cylinder filled with water inside as in figure is put the position indicated in Figure I to the position indicated in Figure II some amount of water is dropped. According to this how many unit^3 of the volume of the water in Figure II?

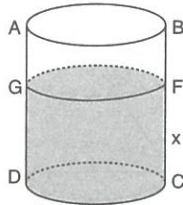
- A) 40π B) 36π C) 32π D) 30π E) 28π



9.



Şekil I / Figure I



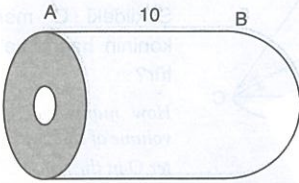
Şekil II / Figure II

Silindir I. durumdan II. duruma getiriliyor.

Cylinder turns from I. situation to II. situation.

$|AE| = 5$ br , $|ED| = 3$ br $\Rightarrow |FC| = x = ?$
A) 3 B) 4 C) 4,5 D) 5 E) 5,5

10.

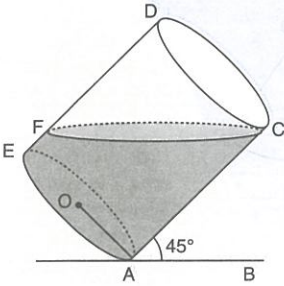


$|AB| = 10$ br
Yarıçapı 4 br ve 6 br olan iki borunun arasına su doldurulmak isteniyor. Bunun için kaç br^3 suya ihtiyaç vardır?

It is required to fill water between two pipes having a radius of 4 units and 6 units, how many unit^3 of water is required for that?

A) 200π B) 166π C) 160π D) 96π E) 20π

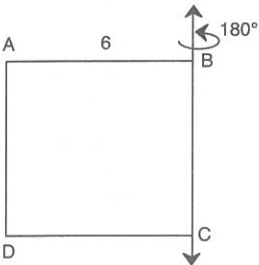
11.



$|EF| = 2$ br
 $|OA| = 4$ br
 $m(\widehat{CAB}) = 45^\circ$
Silindirin içindeki suyun hacmi kaç br^3 'tür?
How many unit^3 is the volume of water in figure?

A) 12π B) 24π C) 48π D) 96π E) 100π

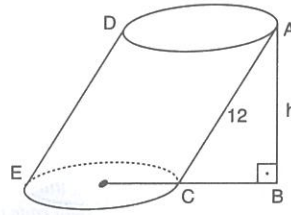
12.



$|AB| = 6$ br
ABCD karesi $[BC]$ doğru-
su etrafında 180° döndü-
rülmesi ile oluşan şeklin
hacmi kaç br^3 'tür?
How many unit^3 is the
volume of the solid formed by
revolving 180° of an ABCD
square around $[BC]$ line?

A) 216π B) 240π C) 120π D) 60π E) 30π

13.



$[AB] \perp [CB]$

Taban alanı 30 br^2 , dik
kesit alanı 20 br^2 ve
eğik silindirin yanal ay-
rıtı 12 br 'dir.

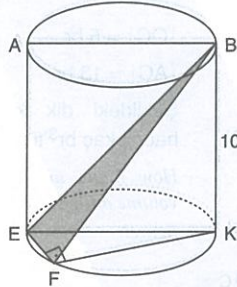
The bottom area is 30 unit^2 , the right cross
sectional area is 20 unit^2

and, the lateral edge of an oblique cylinder is 12 unit.

$\Rightarrow |AB| = ?$

A) 12 B) 10 C) 9 D) 8 E) 6

14.



$[EF] \perp [FK]$

$[AB] \parallel [EK]$

$|EF| = 6$ br

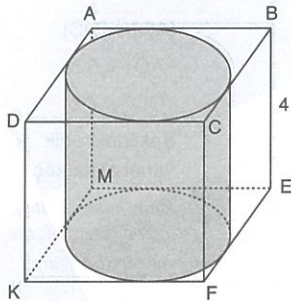
$|FK| = 8$ br

$|BK| = 10$ br

$\Rightarrow A(EFB) = ?$

A) $6\sqrt{41}$ B) $30\sqrt{2}$ C) 30 D) $3\sqrt{41}$ E) 24

15.



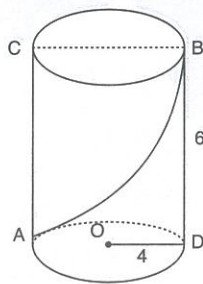
$|BE| = 4$ br

Şekildeki küpün içine
yerleştirilecek en
büyük hacimli silindiri-
nin yüzey alanı kaç
 br^2 'dir?

How many unit^2 is the
area of a cylinder with
maximum volume,
placed in a cube in figure?

A) 60π B) 48π C) 42π D) 40π E) 24π

16.



$|OA| = 4$ br

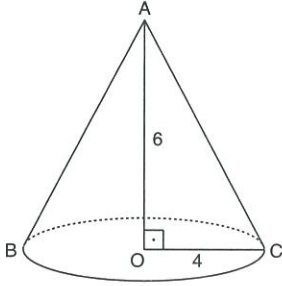
$|AB| = 6$ br

A noktasından B noktasına
gitmek isteyen bir karıncanın
alacağı en kısa mesafe kaç
 br 'dir? ($\pi = 3$)

How many units is the shortest
distance for an ant that wants
to go from point A to point B?
($\pi = 3$)

A) $12\sqrt{5}$ B) 12 C) $6\sqrt{5}$ D) $4\sqrt{3}$ E) 6

1.



- A) 24π B) 32π C) 48π D) 64π E) 96π

$$[AO] \perp [OC]$$

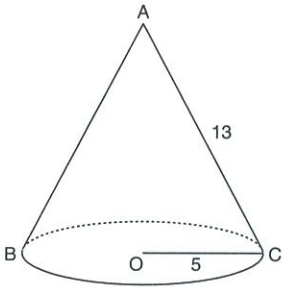
$$|AO| = 6 \text{ br}$$

$$|OC| = 4 \text{ br}$$

Şekildeki dik koninin hacmi kaç br^3 'tür?

How many unit^3 is the volume of right cone in the figure?

2.



- A) 100π B) 150π C) 200π D) 300π E) 325π

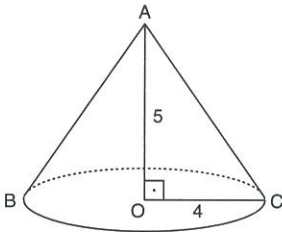
$$|OC| = 5 \text{ br}$$

$$|AC| = 13 \text{ br}$$

Şekildeki dik koninin hacmi kaç br^3 'tür?

How many unit^3 is the volume of right cone in the figure?

3.



- A) 12π B) 16π C) 20π D) $4\sqrt{41}\pi$ E) 30π

$$[AO] \perp [OC]$$

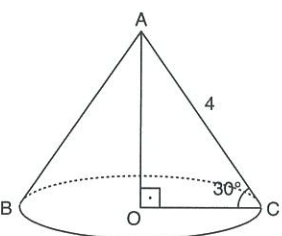
$$|AO| = 5 \text{ br}$$

$$|OC| = 4 \text{ br}$$

Şekildeki dik koninin yanıl alanı kaç br^2 'dir?

How many unit^2 is the lateral area of the right cone in the figure?

4.



- A) 2π B) 4π C) 8π D) 10π E) 12π

$$[AO] \perp [OC]$$

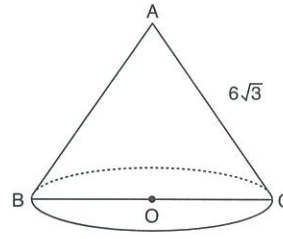
$$|AC| = 4 \text{ br}$$

$$m(\widehat{ACO}) = 30^\circ$$

Şekildeki dik koninin hacmi kaç br^3 'tür?

How many unit^3 is the volume of right cone in the figure?

5.



- A) 27π B) $27\pi + 3\sqrt{3}\pi$ C) 81π
D) 100π E) 144π

ABC eşkenar üçgen

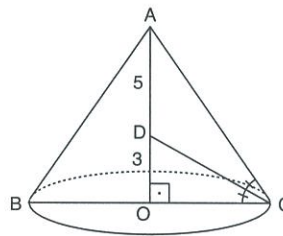
ABC equilateral triangle

$$|AC| = 6\sqrt{3}$$

Şekildeki O merkezli koninin alanı kaç br^2 dir?

How many unit^2 is the area of cone with a center O in the figure?

6.



- A) 12π B) 48π C) 71π D) 96π E) 100π

$$m(\widehat{ACD}) = m(\widehat{DCB})$$

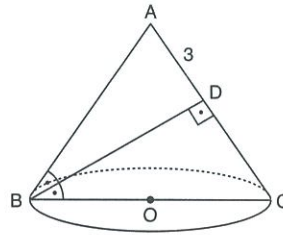
$$|AD| = 5 \text{ br}$$

$$|DO| = 3 \text{ br}$$

Şekildeki O merkezli koninin hacmi kaç br^3 tür?

How many unit^3 is the volume of cone with a center O in the figure?

7.



- A) 9π B) $9\sqrt{3}\pi$ C) 27π D) 81π E) 90π

$$m(\widehat{ABD}) = m(\widehat{DBC})$$

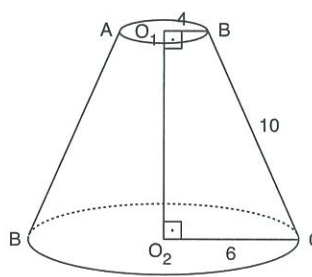
$$[BD] \perp [AC]$$

$$|AD| = 3 \text{ br}$$

Şekildeki O merkezli koninin hacmi kaç br^3 'tür?

How many unit^3 is the volume of right cone in the figure?

8.



How many unit^2 is the lateral area of a truncated cone in the figure?

- A) 5π B) 10π C) 25π D) 50π E) 100π

O_1 ve O_2 merkezli çemberler

Circles with O_1 and O_2 center points

$$|O_1B| = 4 \text{ br}$$

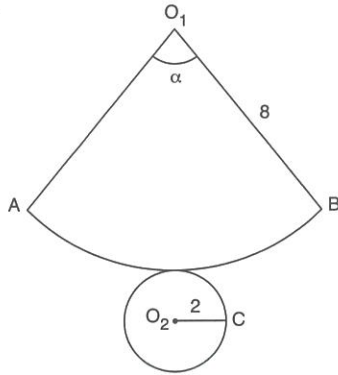
$$|O_2C| = 6 \text{ br}$$

$$|BC| = 10 \text{ br}$$

Şekildeki kesik koninin yanıl alanı kaç br^2 'dir?

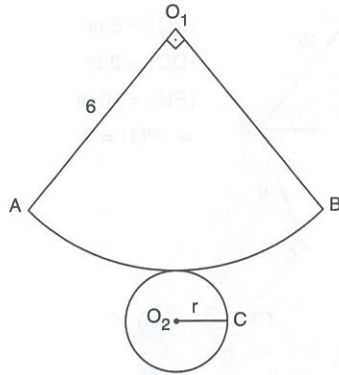


9.



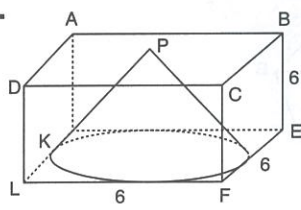
- A) 30 B) 45 C) 60 D) 75 E) 90

10.



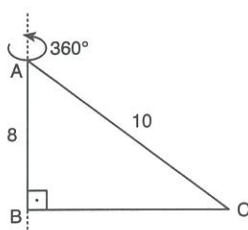
- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 3

11.



- A) 9π B) 18π C) $9\pi + 9\sqrt{3}\pi$
D) $27\pi + 9\sqrt{3}\pi$ E) 36π

12.



As a result of a 360° revolving of a right-angled triangle around its [AB] edge, how many unit^2 is the surface area of the figure thus formed?

- A) 48π B) 96π C) 128π D) 288π E) 384π

Şekildeki açık koni

Open cone in figure

$$|O_1B| = 8 \text{ br}$$

$$|O_2C| = 2 \text{ br}$$

$$\Rightarrow m(\widehat{AO_1B}) = \alpha = ?$$

Şekildeki açık koni

Open cone in figure

$$m(\widehat{AO_1B}) = 90^\circ$$

$$|O_1A| = 6 \text{ br}$$

$$\Rightarrow |O_2C| = r = ?$$

$|LF| = |FE| = |BE| = 6 \text{ br}$
Küpün içine yerleştirilmiş en büyük hacimli koninin tüm alanı kaç br^2 dir?

How many unit^2 is the area of a cone with maximum volume, placed in a cube in figure?

$$[AB] \perp [BC]$$

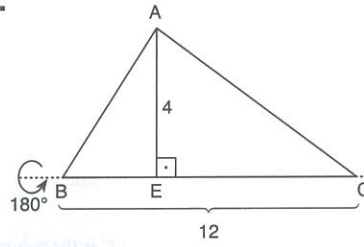
$$|AB| = 8 \text{ br}$$

$$|AC| = 10 \text{ br}$$

Şekildeki dik üçgenin [AB] kenarı etrafında 360° döndürülmesi ile oluşan şeklin yüzey alanı kaç br^2 'dir?

As a result of a 360° revolving of a right-angled triangle around its [AB] edge, how many unit^2 is the surface area of the figure thus formed?

13.



$$[AE] \perp [BC]$$

$$|AE| = 4 \text{ br}$$

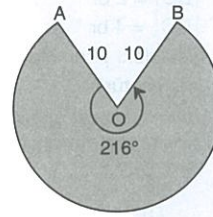
$$|BC| = 12 \text{ br}$$

Şekildeki ABC üçgeninin [BC] kenarı etrafında 180° döndürülmesi ile oluşan şeklin hacmi kaç br^3 'tür?

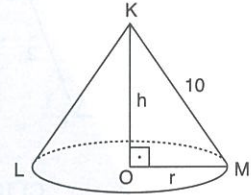
As a result of an 180° revolving of the ABC triangle adjoining around the [BC] edge, how many unit^3 is the volume of the solid formed?

- A) 32π B) 48π C) 64π D) 72π E) 96π

14.



Şekil I / Figure I



Şekil II / Figure II

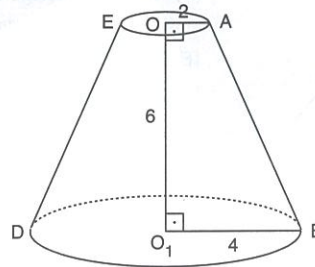
$$|AO| = |OD| = |KM| = 10 \text{ br}$$

Şekil I'deki daire yanal alan olacak şekilde kıvrılarak Şekil II'deki koni oluşturuluyor. Buna göre Şekil II'deki koninin hacmi kaç br^3 'tür?

A slice of a circle in Figure I is curled so as to form a lateral and thus a cone as in Figure II is formed. Accordingly how many unit^3 is the volume of the cone in Figure II?

- A) 10π B) 90π C) 92π D) 96π E) 108π

15.



$$[AO] \perp [OO_1]$$

$$[OO_1] \perp [O_1B]$$

$$|OA| = 2 \text{ br}$$

$$|OO_1| = 6 \text{ br}$$

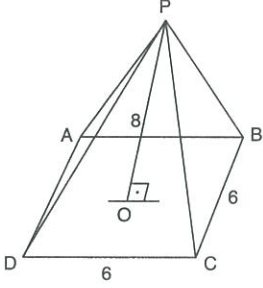
$$|O_1B| = 4 \text{ br}$$

Şekildeki kesik koninin hacmi kaç br^3 tür?

How many unit^3 is the volume of truncated cone in the figure?

- A) 8π B) 24π C) 32π D) 48π E) 56π

1.



(P, ABCD) kare dik piramit
(P, ABCD) square right pyramid

$$|BC| = |DC| = 6 \text{ br}$$

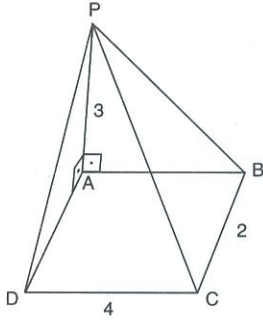
$$|PO| = 8 \text{ br}$$

Şekildeki piramitin hacmi kaç br^3 tür?

How many unit^3 is the volume of the pyramid in the figure?

- A) 148 B) 96 C) 72 D) 56 E) 48

2.



ABCD dikdörtgen
ABCD rectangle

$$[PA] \perp [AD]$$

$$[PA] \perp [AB]$$

$$|PA| = 3 \text{ br}$$

$$|BC| = 2 \text{ br}$$

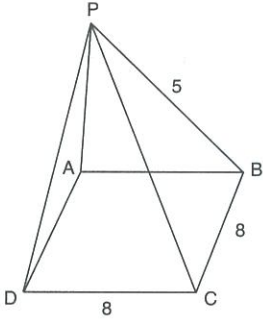
$$|DC| = 4 \text{ br}$$

Şekildeki piramitin hacmi kaç br^3 tür?

How many unit^3 is the volume of the pyramid in the figure?

- A) 6 B) 8 C) 12 D) 24 E) 36

3.



(P, ABCD) kare dik piramit
(P, ABCD) square right pyramid

$$|BC| = |DC| = 8 \text{ br}$$

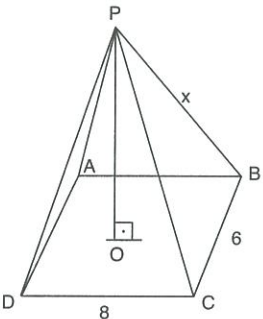
$$|PB| = 5 \text{ br}$$

Şekildeki piramitin yanıl yüzey alanı kaç br^2 dir?

How many unit^2 in the lateral surface area of pyramid in the figure?

- A) 24 B) 32 C) 36 D) 42 E) 48

4.



(P, ABCD) dikdörtgen piramit (rectangle pyramid)

$$|BC| = 6 \text{ br}$$

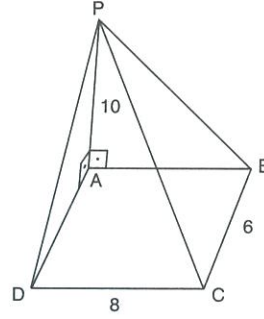
$$|DC| = 8 \text{ br}$$

$$|PO| = 12 \text{ br}$$

$$\Rightarrow |PB| = x = ?$$

- A) 5 B) 6 C) 8 D) 10 E) 13

5.



$$[PA] \perp [AB]$$

$$[PA] \perp [AD]$$

ABCD dikdörtgen
ABCD rectangle

$$|PA| = 10 \text{ br}$$

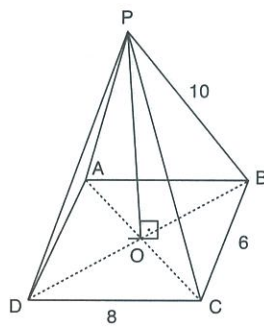
$$|BC| = 6 \text{ br}$$

$$|DC| = 8 \text{ br}$$

$$\Rightarrow |PC| = ?$$

- A) 6 B) 8 C) 10 D) $8\sqrt{2}$ E) $10\sqrt{2}$

6.



(P, ABCD) dikdörtgen piramit (rectangle pyramid)

$$|BC| = 6 \text{ br}$$

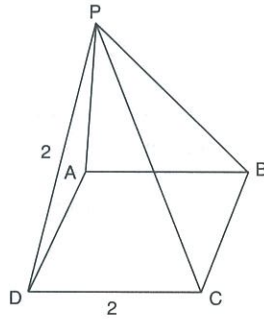
$$|DC| = 8 \text{ br}$$

$$|PB| = 10 \text{ br}$$

$$\Rightarrow |PO| = ?$$

- A) 6 B) 8 C) $5\sqrt{3}$ D) $10\sqrt{2}$ E) 13

7.



(P, ABCD) kare piramit
(square right pyramid)

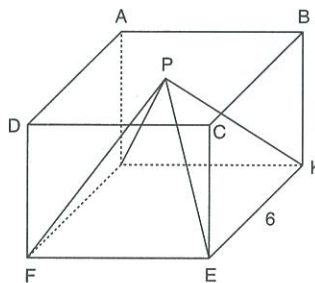
$$|DC| = |PD| = 2 \text{ br}$$

Şekildeki kare dik piramit yüzey alanı kaç br^2 dir?

How many unit^2 is the surface area of the square right pyramid in figure?

- A) 8 B) 16 C) $4 + 2\sqrt{3}$
D) $4 + 4\sqrt{3}$ E) $4 - \sqrt{3}$

8.



Küpün içine yerleştirilmiş en büyük hacimli piramitin hacmi kaç br^3 tür?

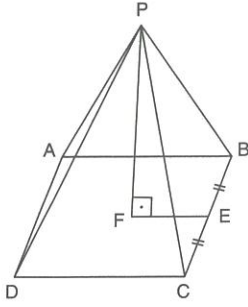
$$|EK| = 6 \text{ br}$$

How many unit^3 is the volume of a pyramid with maximum volume, placed in a cube?

- A) 36 B) 54 C) 72 D) 108 E) 124



9.



$$|EB| = |EC|$$

$$[PF] \perp [FE]$$

$$|PB| = 6 \text{ br}$$

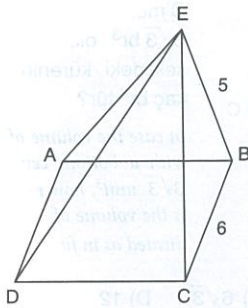
$$|BC| = 4 \text{ br}$$

Şekildeki kare dik piramitin hacmi kaç br^3 'tür?

How many unit^3 is the volume of square right pyramid in the figure?

- A) 64 B) 32 C) $24\sqrt{7}$ D) 28 E) $16\sqrt{7}$

10.



$$|EB| = 5 \text{ br}$$

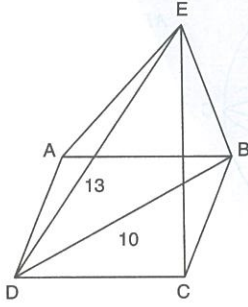
$$|BC| = 6 \text{ br}$$

Şekildeki kare dik piramitin yüzey alanı kaç br^2 'dir?

How many unit^2 is the surface area of square right pyramid in the figure?

- A) 48 B) 60 C) 84 D) 90 E) 96

11.



$$|DE| = 13 \text{ br}$$

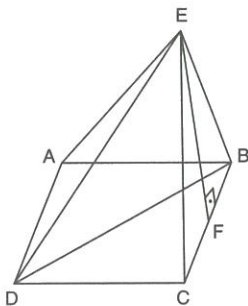
$$|DB| = 10 \text{ br}$$

Şekildeki kare dik piramitin hacmi kaç br^3 'tür?

How many unit^3 is the volume of square right pyramid in the figure?

- A) 650 B) 600 C) 480 D) 400 E) 200

12.



$$[EF] \perp [BC]$$

$$|EF| = 13 \text{ br}$$

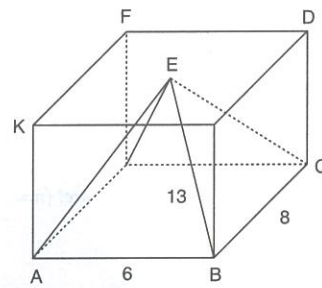
$$\text{Ç}(ABCD) = 40 \text{ br}$$

Şekildeki kare dik piramitin hacmi kaç br^3 'tür?

How many unit^3 is the volume of square right pyramid in the figure?

- A) 1300 B) 1200 C) $\frac{1300}{3}$ D) 360 E) 260

13.



$$|AB| = 6 \text{ br}$$

$$|BC| = 8 \text{ br}$$

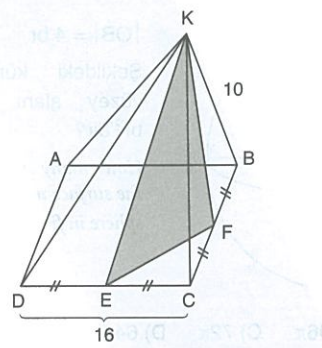
$$|EB| = 13 \text{ br}$$

Dikdörtgen prizmanın içine yerleştirilen piramidin hacmi kaç br^3 'tür?

How many unit^3 is the volume of a pyramid placed in a rectangular prism?

- A) 192 B) 128 C) 92 D) 84 E) 64

14.



ABCD kare

ABCD square

$$|KB| = 10 \text{ br}$$

$$|DC| = 16 \text{ br}$$

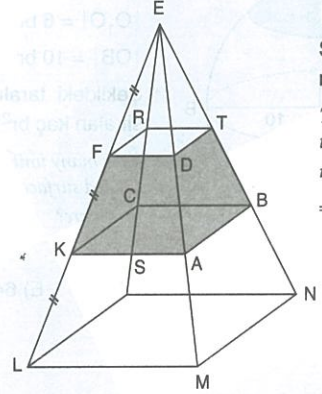
$$|BF| = |FC|$$

$$|DE| = |EC|$$

$$\Rightarrow A(KEF) = ?$$

- A) $32\sqrt{2}$ B) $20\sqrt{2}$ C) $16\sqrt{2}$ D) $8\sqrt{2}$ E) $6\sqrt{2}$

15.



$$|EF| = |FK| = |KL|$$

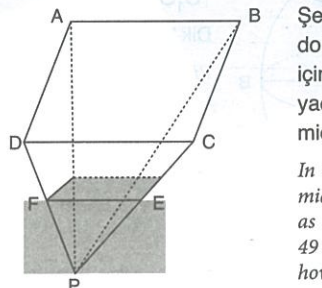
Şekilde taralı kesik piramidin hacmi 35 br^3 'tür.

The volume of the shaded truncated pyramid in figure is 35 unit^3 .

$$\Rightarrow V(KABC, LMTS) = ?$$

- A) 105 B) 95 C) 90 D) 80 E) 75

16.



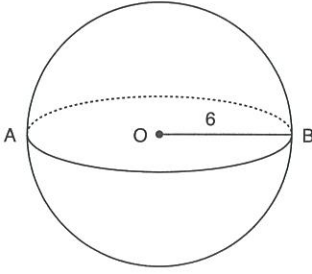
Şekildeki yarıya kadar su dolu dik piramidin dolması için 49 br^3 daha suya ihtiyaç vardır. Buna göre piramidin hacmi kaç br^3 'tür?

In order to fill the right pyramid completely that is half-full as shown in figure requires 49 unit^3 of water more. Thus, how many unit^3 is the volume of this pyramid?

- A) 98 B) 70 C) 63 D) 56 E) 52



1.



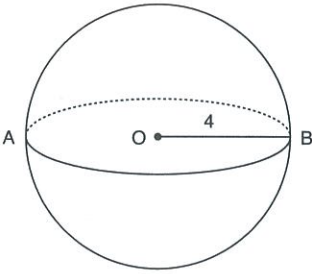
$$|OB| = 6 \text{ br}$$

Şekildeki kürenin hacmi kaç br^3 'tür? ($\pi = 3$)

How many unit^3 is the volume of sphere in the figure? ($\pi = 3$)

- A) 1152 B) 952 C) 864 D) 642 E) 384

2.



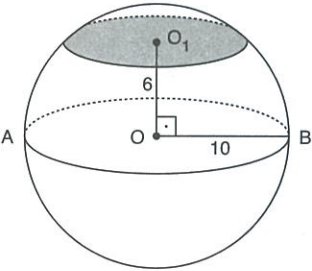
$$|OB| = 4 \text{ br}$$

Şekildeki kürenin yüzey alanı kaç br^2 'dir?

How many unit^2 is the surface area of the sphere in figure?

- A) 128π B) 96π C) 72π D) 64π E) 56π

3.



$$[O_1O] \perp [OB]$$

$$|O_1O| = 6 \text{ br}$$

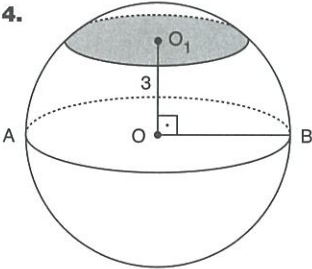
$$|OB| = 10 \text{ br}$$

Şekildeki taralı kesit alan kaç br^2 'dir?

How many unit^2 is the shaded surface area in the figure?

- A) 16π B) 25π C) 36π D) 49π E) 64π

4.



$$[O_1O] \perp [OB]$$

$$|O_1O| = 3 \text{ br}$$

Dik kesit alanı 9π dir.

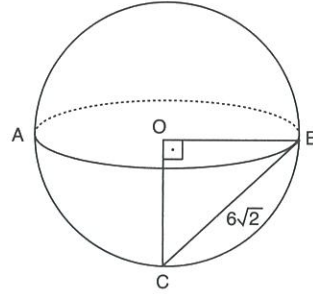
Right cross sectional area is 9π .

Şekildeki kürenin hacmi kaç br^3 'tür?

How many unit^3 is the volume of sphere in figure?

- A) $72\sqrt{2}\pi$ B) $64\sqrt{2}\pi$ C) $56\sqrt{2}\pi$
D) $48\sqrt{2}\pi$ E) $36\sqrt{2}$

5.



$$[BO] \perp [OC]$$

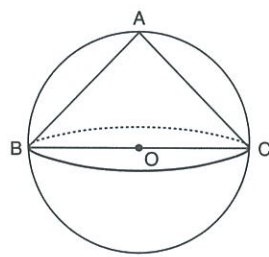
$$|BC| = 6\sqrt{2} \text{ br}$$

O merkezli kürenin alanı kaç br^2 dir?

How many unit^2 is the surface area of a sphere with a center O?

- A) 36π B) 48π C) 64π D) 72π E) 144π

6.



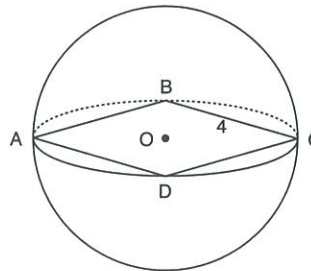
$$|AC| = |BC|$$

O merkezli koninin hacmi $3\sqrt{3} \text{ br}^3$ olduğuna göre şekildeki kürenin hacmi kaç br^3 tür?

In case the volume of a cone with a bottom center O is $3\sqrt{3} \text{ unit}^3$, how many unit^3 is the volume of a sphere indicated as in figure?

- A) $4\sqrt{3}$ B) 6 C) $6\sqrt{3}$ D) 12 E) $12\sqrt{3}$

7.



ABCD kare

ABCD square

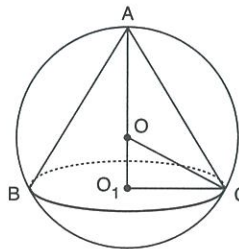
$$|BC| = 4 \text{ br}$$

Şekildeki kürenin yüzey alanı kaç br^2 'dir?

How many unit^2 is the surface area of the sphere in figure?

- A) 24π B) 26π C) 28π D) 30π E) 32π

8.



O merkezli küre ile O_1 merkezli çember şekildedir.

A sphere with a center O and a circle with a center O_1 are as in the figure.

$$|O_1C| = 3 \text{ br}$$

$$|AO_1| = 9 \text{ br}$$

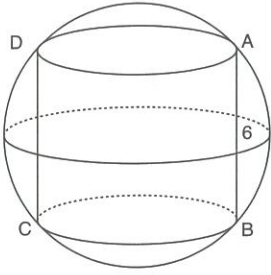
Buna göre, O merkezli kürenin hacmi kaç br^3 tür?

Accordingly how many unit^3 is the volume of the sphere with a center O?

- A) $\frac{250\pi}{3}$ B) 150π C) $\frac{500\pi}{3}$
D) 250π E) 1500π



9.



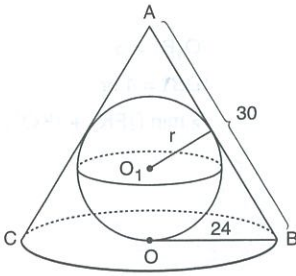
$$|AB| = 6 \text{ br}$$

Alanı 100π olan kürenin içine yerleştirilmiş silindirin alanı kaç br^2 'dir?

How many unit^2 is the surface area of a cylinder placed in a sphere having a surface area of 100π ?

- A) 32π B) 48π C) 60π D) 72π E) 80π

10.



O_1 merkezli küre

A sphere with a center of O_1

O merkezli silindir

A cylinder with a center of O

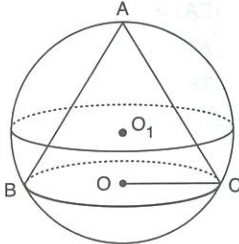
$$|AB| = 30 \text{ br}$$

$$|OB| = 24 \text{ br}$$

$$\Rightarrow r = ?$$

- A) 14 B) $\frac{72}{7}$ C) 10 D) 8 E) 6

11.



ABC eşkenar üçgen

ABC is an equilateral triangle

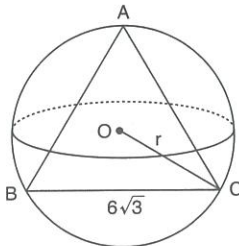
$$\angle(ABC) = 18 \text{ br}$$

$$\Rightarrow \frac{\text{Kürenin hacmi}}{\text{Koninin hacmi}} = ?$$

$$\frac{\text{Volume of the sphere}}{\text{Volume of the cone}} = ?$$

- A) $\frac{24}{9}$ B) $\frac{28}{9}$ C) $\frac{29}{9}$ D) $\frac{10}{3}$ E) $\frac{32}{9}$

12.



O merkezli kürenin içine yerleştirilmiş eşkenar üçgen şeklindeki gibidir.

An equilateral triangle placed in a sphere with a center O is as in figure.

$$|BC| = 6\sqrt{3} \text{ br}$$

$$\Rightarrow |OC| = r = ?$$

- A) 3 B) $3\sqrt{3}$ C) 6 D) $6\sqrt{3}$ E) 12

PUZA YAYINLARI

13. Bir ayrıtının uzunluğu 6 br olan düzgün dörtyüzlünün hacmi kaç br^3 'tür?

How many unit^3 is the volume of a regular tetrahedron having an edge of 6 units?

- A) 18 B) $18\sqrt{2}$ C) 27 D) $18\sqrt{3}$ E) $24\sqrt{2}$

14. Tüm alanı $36\sqrt{3} \text{ br}^2$ olan düzgün dörtyüzlünün yüksekliği kaç br'dir?

How many unit is the height of a regular tetrahedron having a total surface area of $36\sqrt{3} \text{ unit}^2$?

- A) $2\sqrt{6}$ B) 6 C) $3\sqrt{6}$ D) $6\sqrt{2}$ E) 12

PUZA YAYINLARI

15. Bir ayrıtı 3 br olan düzgün sekizyüzlünün hacmi kaç br^3 'tür?

How many unit^3 is the volume of a regular tetrahedron having an edge of 3 units?

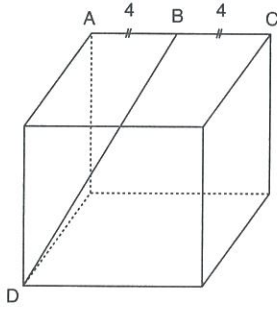
- A) $6\sqrt{2}$ B) $9\sqrt{2}$ C) $9\sqrt{3}$ D) 18 E) $18\sqrt{2}$

16. Tüm alanı $8\sqrt{3} \text{ br}^2$ olan düzgün sekizyüzlünün bir ayrıtının uzunluğu kaç br'dir?

How many unit is the length of the edge regular octahedron having a total surface area of $8\sqrt{3} \text{ unit}^2$?

- A) 2 B) $2\sqrt{2}$ C) 3 D) $2\sqrt{3}$ E) 4

1.



- A) 13 B) 12 C) $7\sqrt{2}$ D) 10 E) $2\sqrt{13}$

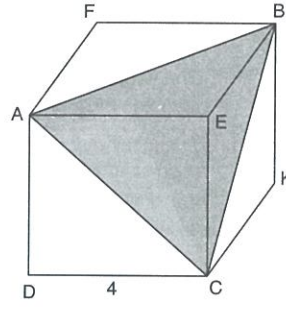
Bir ayrıtı 8 br olan küp
şekildeki gibi verilmiştir.

A cube with an edge of 8
units is as in figure

$$|AB| = |BC| = 4 \text{ br}$$

$$\Rightarrow |DB| = x = ?$$

5.



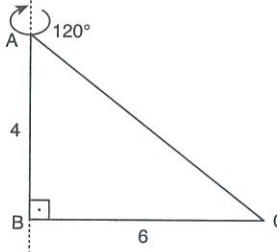
- A) 64 B) 32 C) 16 D) 12 E) 8

Bir ayrıtı 4 br olan küp
A cube with an edge of 4
unit

$$|DC| = 4 \text{ br}$$

$$\Rightarrow V(E, ABC) = ?$$

2.



As a result of a 120° revolving of the right triangle adjoining
around the $[AB]$ line segment, how many unit^3 is the volume of
the solid formed?

- A) 32π B) 16π C) $\frac{32\pi}{3}$ D) 8π E) $\frac{8\pi}{3}$

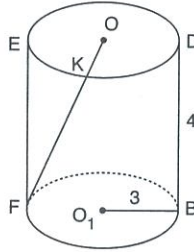
$$[AB] \perp [BC]$$

$$|AB| = 4 \text{ br}$$

$$|BC| = 6 \text{ br}$$

Şekildeki dik üçgenin
[AB] doğru parçası et-
rafında 120° döndürül-
mesi ile oluşan şeklin
hacmi kaç br^3 'tür?

6.



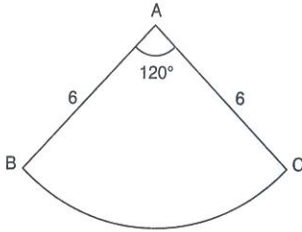
- A) 7 B) 9 C) $4 + 6\pi$
D) $4 + 12\pi$ E) 16π

$$|O_1B| = 3 \text{ br}$$

$$|DB| = 4 \text{ br}$$

$$\Rightarrow \min\{|FK| + |KO|\} = ?$$

3.



A slice of circle in figure is curled and formed a right cone. How
many unit^3 is the volume of this cone formed? ($\pi = 3$)

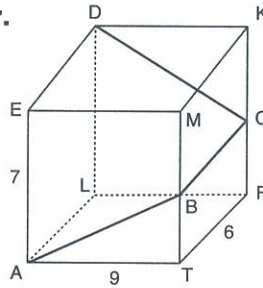
- A) $16\sqrt{3}$ B) $16\sqrt{2}$ C) 16 D) $8\sqrt{3}$ E) $8\sqrt{2}$

$$|AB| = |BC| = 6 \text{ br}$$

$$m(\widehat{BAC}) = 120^\circ$$

Şekildeki daire dilimi
kvrılarak bir dik koni
oluşturuluyor. Oluştu-
rulan bu koninin hacmi
kaç br^3 'tür? ($\pi = 3$)

7.



- A) 25 B) 23 C) 22 D) 18 E) 17

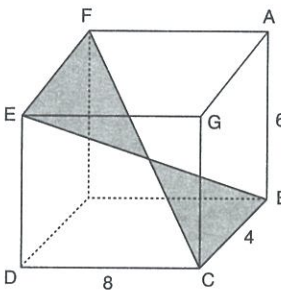
$$|EA| = 7 \text{ br}$$

$$|AT| = 9 \text{ br}$$

$$|TF| = 6 \text{ br}$$

$$\Rightarrow \min(|AB| + |BC| + |CD|) = ?$$

4.



- A) 40 B) 32 C) 30 D) 20 E) 15

Dikdörtgen prizma

Rectangular prism

$$|AB| = 6 \text{ br}$$

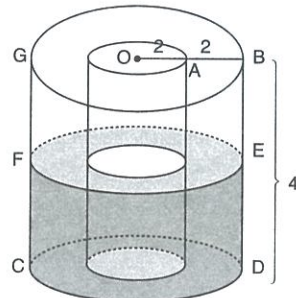
$$|BC| = 4 \text{ br}$$

$$|DC| = 8 \text{ br}$$

Şekildeki taralı bölgenin
alanı kaç br^2 'dir?

How many unit^2 is the
surface area of the shaded
sector in figure?

8.



- A) 48π B) 32π C) 30π D) 16π E) 8π

$$|OA| = |AB| = 2 \text{ br}$$

$$|BD| = 4 \text{ br}$$

İki silindirin arasın-
daki yüksekliği 4 br
olan suyun hacmi kaç
 br^3 'tür?

How many unit^3 is the
volume of the water hav-
ing a height of 4 units
between two cylinders?



KATI CİSİM SOLID OBJECT

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	E	E	E	A	B	E	D	C	B	A	A	A	C	B	C

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	E	D	A	C	A	B	C	A	D	D	C	B	E	E	A

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	E	A	B	D	C	D	E	E	A	D	D	D	A	E	C

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	A	D	C	C	D	B	E	E	B	B	B	C	D	E	

TEST 5

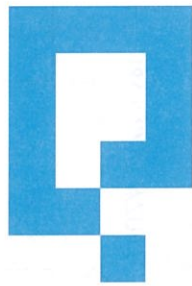
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	B	E	E	E	C	D	C	E	C	E	D	A	D	C	D

TEST 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	E	A	E	E	E	A	E	D	E	C	B	A	B	A

TEST 7

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	B	B	D	B	A	A	A	B	D	B	C	E	A	C	B

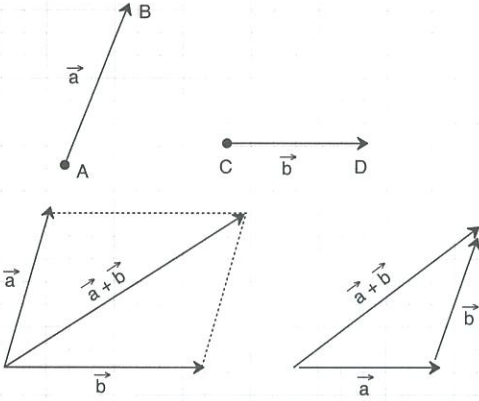


VEKTÖRLER

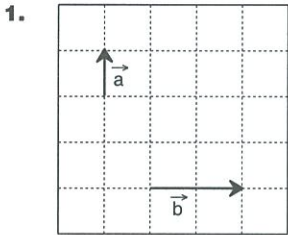
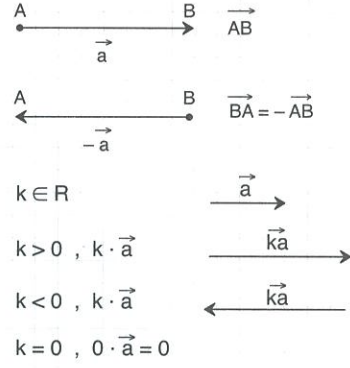
VECTORS



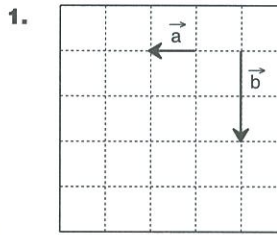
ÖZELLİK|Property 1



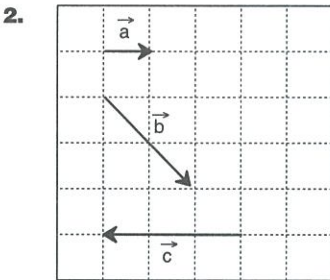
ÖZELLİK|Property 2



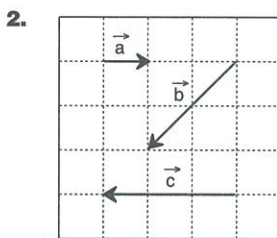
$$\Rightarrow \vec{a} + \vec{b} = ?$$



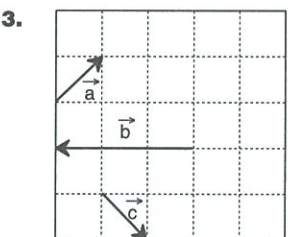
$$\Rightarrow 2\vec{a} - \vec{b} = ?$$



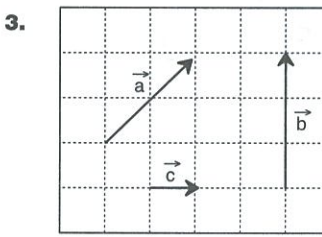
$$\Rightarrow \vec{a} + \vec{b} + \vec{c} = ?$$



$$\Rightarrow 3\vec{a} + \frac{\vec{b}}{2} - \frac{\vec{c}}{3} = ?$$



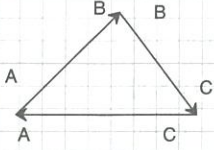
$$\Rightarrow \vec{a} + \vec{b} + \vec{c} = ?$$



$$\Rightarrow \frac{\vec{a}}{2} - \frac{\vec{b}}{3} + \vec{c} = ?$$



ÖZELLİK|Property 3



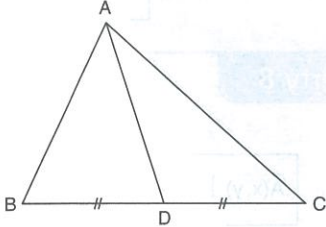
$$\vec{AB} + \vec{BC} + \vec{CA} = \vec{AA} = 0$$

$$\vec{AB} + \vec{BC} + \vec{CD} = \vec{AC} + \vec{CD} = \vec{AD}$$

$$\vec{AB} + \vec{BA} = \vec{AA} = 0$$

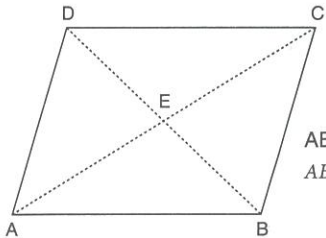
1. $\vec{GA} + \vec{AD} + \vec{DC} = ?$
 $\vec{AB} - \vec{CB} = ?$
 $\vec{AB} - \vec{AD} = ?$
 $\vec{BE} + \vec{EB} = ?$
 $\vec{AB} + \vec{BC} - \vec{DC} = ?$

2.



$$\begin{array}{ll} \vec{AB} + \vec{BD} = ? & \vec{AB} - \vec{AC} = ? \\ \vec{BA} + \vec{AC} = ? & \vec{AB} + \vec{AC} = ? \\ \vec{DC} + \vec{DA} = ? & \vec{BC} + \vec{AB} = ? \end{array}$$

3.



ABCD paralelkenar
 ABCD paralelogram

$$\begin{array}{ll} \vec{AB} - \vec{AD} = ? & \vec{AE} + \vec{DE} = ? \\ \vec{BA} - \vec{BC} = ? & \vec{BD} + \vec{AC} = ? \end{array}$$

ÖZELLİK|Property 4



$$\vec{AB} = \vec{B} - \vec{A} = (x_2 - x_1, y_2 - y_1)$$

1. $A(4, 2) \quad B(3, -1) \Rightarrow \vec{AB} = ?$
 $A(3, -2) \quad B(4, 1) \Rightarrow \vec{AB} = ?$

$$(-1, -3), (1, 3)$$

2. $\vec{AB}(4, -2) \quad A(3, -1) \Rightarrow B(x, y) = ?$
 $\vec{AB}(-4, -6) \quad A(2, -2) \Rightarrow B(x, y) = ?$

$$(7, -3), (-2, -8)$$

3. $\vec{AB}(-6, 3) \quad B(2, -3) \Rightarrow A(x, y) = ?$
 $\vec{AB}(-4, 3) \quad B(1, 4) \Rightarrow A(x, y) = ?$

$$(8, -6), (5, 1)$$



ÖZELLİK|Property 5

$$\left. \begin{array}{l} \vec{A}(x_1, y_1) \\ \vec{B}(x_2, y_2) \end{array} \right\} \vec{A} = \vec{B} \Leftrightarrow x_1 = x_2 \text{ ve } y_1 = y_2$$

1. $\vec{A}(3, x)$ $\vec{B}(2x, -5y)$ $\vec{A} = \vec{B} \Rightarrow y = ?$

$$-\frac{3}{10}$$

2. $A(1, -2)$ $B(-2, 3)$ $C(4, 1)$ $D(x, y)$
 $\vec{AB} = \vec{CD} \Rightarrow x + y = ?$

$$7$$

3. $A(-5, 1)$ $B(3, 4)$ $\vec{C}(x, y)$ $\vec{AB} = \vec{C}$
 $\Rightarrow (x, y) = ?$

$$(8, 3)$$

ÖZELLİK|Property 6

$$\left. \begin{array}{l} \vec{A}(x_1, y_1) \\ \vec{B}(x_2, y_2) \end{array} \right\} \begin{array}{l} \vec{A} + \vec{B} = (x_1 + x_2, y_1 + y_2) \\ \vec{A} - \vec{B} = (x_1 - x_2, y_1 - y_2) \end{array}$$

1. $\vec{A}(8, 4)$ $\vec{B}(2, -7)$
 $\Rightarrow \vec{A} + \vec{B} = ?$
 $\Rightarrow \vec{A} - \vec{B} = ?$

$$(10, -3), (6, 11)$$

2. $A(1, 2)$ $B(3, -2)$ $C(4, 1)$ $D(-2, 1)$
 $\Rightarrow \vec{AC} + \vec{BD} = ?$
 $\Rightarrow \vec{AC} - \vec{BD} = ?$

$$(-2, 2), (8, -4)$$

3. $\vec{AB}(3, -1)$ $B(3, -2)$ $C(5, 1)$
 $\Rightarrow \vec{AC} + \vec{BC} = ?$
 $\Rightarrow \vec{AC} - \vec{BC} = ?$

$$(7, 5), (3, -1)$$

ÖZELLİK|Property 7

$$\begin{array}{l} \vec{A}(x, y) \\ * k(x, y) = (kx, ky) \\ * -k(x, y) = (-kx, -ky) \\ * k = 0 \quad k \cdot (x, y) = 0(x, y) = (0, 0) \end{array}$$

1. $\vec{A}(-1, 2)$ $\vec{B}(-3, -2)$ $\Rightarrow 2\vec{A} + 3\vec{B} = ?$

$$(-11, -2)$$

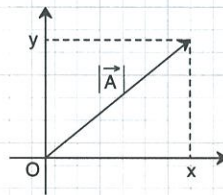
2. $A(3, 2)$ $B(-1, 5)$ $\vec{C}(-2, 1)$
 $\Rightarrow 2\vec{AB} + \vec{C} = ?$

$$(-10, 7)$$

3. $A(-1, 3)$ $B(-3, 4)$ $C(x, y)$ $2(\vec{AC}) = 3(\vec{AB})$
 $\Rightarrow C(x, y) = ?$

$$(-4, 9/2)$$

ÖZELLİK|Property 8



$$\vec{A}(x, y) \Rightarrow |\vec{A}| = \|\vec{A}\| = \sqrt{x^2 + y^2}$$

1. $\vec{A}(3, -4)$ $\Rightarrow \|\vec{A}\| = ?$

$$5$$

2. $\|\vec{A}\| = 10$ $\vec{A}(x, -6)$
 $\Rightarrow \sum x = ?$

$$0$$

3. $A(-4, -5)$ $B(-9, -10)$
 $\Rightarrow \|\vec{AB}\| = ?$

$$5\sqrt{2}$$



ÖZELLİK|Property 9

$$\vec{A}(x,y) \Rightarrow \|\vec{A}\| = \sqrt{x^2 + y^2}$$

$\vec{A}$ Vektörünün aynı yönlü birim vektörü
unit vector with the same direction of $\vec{A}$

$$I_A = \frac{\vec{A}}{\|\vec{A}\|}$$

$\vec{A}$ vektörünün zıt yönlü birim vektörü
unit vector with the opposite direction of $\vec{A}$

$$-I_A = \frac{-\vec{A}}{\|\vec{A}\|}$$

1. $\vec{A}(-2, 4)$ vektörüyle aynı yönlü birim vektörü nedir?

What is unit vector with the same direction to vector $\vec{A}(-2, 4)$?

$$\left(\frac{-1}{\sqrt{5}}, \frac{2}{\sqrt{5}} \right)$$

2. $\vec{A}(-3, 4)$ vektörüyle zıt yönlü birim vektörü nedir?

What is unit vector with the opposite direction to vector $\vec{A}(-3, 4)$?

$$\left(\frac{3}{5}, -\frac{4}{5} \right)$$

3. $A(3, -2), B(3, 1)$ $\vec{AB}$ vektörüyle aynı yönlü birim vektörü nedir?

What is unit vector with the same direction to vector $\vec{AB}$?

$$(0, 1)$$

ÖZELLİK|Property 10

$$\vec{A}(x_1, y_1) \parallel \vec{B}(x_2, y_2) \Rightarrow \frac{y_1}{x_1} = \frac{y_2}{x_2}$$

1. $\vec{A}(3, 4)$ $\vec{B}(-6, x)$ $\vec{A} \parallel \vec{B} \Rightarrow x = ?$

$$-8$$

2. $A(1, -3)$ $B(2, 6)$ $C(3, -x)$ $\vec{AB} \parallel \vec{AC} \Rightarrow x = ?$

$$-15$$

3. $\vec{A}(x-1, 3)$ $\vec{B}(5, x+1)$ $\vec{A} \parallel \vec{B} \Rightarrow \sum x = ?$

$$0$$

ÖZELLİK|Property 11

$$\vec{A}(x_1, y_1) \perp \vec{B}(x_2, y_2) \Rightarrow \frac{y_1}{x_1} \cdot \frac{y_2}{x_2} = -1$$

1. $\vec{A}(3, -2)$ $\vec{B}(2, x)$ $\vec{A} \perp \vec{B} \Rightarrow x = ?$

$$3$$

2. $A(3, 1)$ $B(2, x)$ $\vec{C}(-5, 7)$ $\vec{AB} \perp \vec{C} \Rightarrow x = ?$

$$\frac{2}{7}$$

3. $\vec{AB}(-1, 3)$ $A(3, 1)$ $C(x, 2)$ $\vec{BC} \perp \vec{AC} \Rightarrow \sum x = ?$

$$5$$

ÖZELLİK|Property 12

$$\vec{A} = x\vec{e}_1 + y\vec{e}_2$$

$$\vec{A} = x(1, 0) + y(0, 1)$$

$$\vec{A} = (x, 0) + (0, y)$$

$$\vec{A} = (x, y)$$

1. $\vec{A}(1, -2) \Rightarrow \vec{A} = x\vec{e}_1 + y\vec{e}_2 = ?$

$$\vec{e}_1 - 2\vec{e}_2$$

2. $\vec{A} = 2\vec{e}_1 - 4\vec{e}_2 \Rightarrow \vec{A} = ?$

$$(2, -4)$$

3. $\vec{A}(4, -2)$ $\vec{B}(-5, 3)$ $\vec{C}(8, 1)$ $k\vec{A} + m\vec{B} = \vec{C} \Rightarrow k + m = ?$

$$\frac{49}{2}$$



ÖZELLİK|Property 13

$$\vec{A}(x_1, y_1) \quad \vec{B}(x_2, y_2)$$

$$\vec{A} \cdot \vec{B} = \langle \vec{A}, \vec{B} \rangle = x_1 \cdot x_2 + y_1 \cdot y_2$$

1. $\vec{A}(3, 1) \quad \vec{B}(-2, 4) \Rightarrow \vec{A} \cdot \vec{B} = ?$

-2

2. $\vec{A}(4, 5) \quad \vec{B}(x, -4) \quad \langle \vec{A}, \vec{B} \rangle = 4 \Rightarrow x = ?$

6

3. $A(x, 2) \quad B(4, 2) \quad \vec{C}(-1, 1) \quad \langle \vec{AB}, \vec{C} \rangle = 4 \Rightarrow x = ?$

8

ÖZELLİK|Property 14

$$\vec{A} \cdot \vec{B} = \langle \vec{A}, \vec{B} \rangle = |\vec{A}| \cdot |\vec{B}| \cdot \cos \alpha$$

* $\vec{A} \perp \vec{B} \quad \cos 90^\circ = 0 \Rightarrow \langle \vec{A}, \vec{B} \rangle = 0$

* $\vec{A} \text{ and } \vec{B} \text{ opposite} \quad \cos 180^\circ = -1 \Rightarrow \langle \vec{A}, \vec{B} \rangle = -|\vec{A}| \cdot |\vec{B}|$

* $\vec{A} \text{ and } \vec{B} \text{ same direction} \quad \cos 0^\circ = 1 \Rightarrow \langle \vec{A}, \vec{B} \rangle = |\vec{A}| \cdot |\vec{B}|$

1. $|\vec{a}| = 4br$
 $|\vec{b}| = 6br$
 $\Rightarrow \vec{a} \cdot \vec{b} = ?$

 $12\sqrt{3}$

2. $\Rightarrow \langle \vec{AB}, \vec{AC} \rangle = ?$

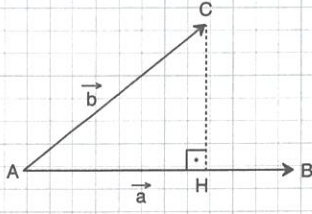
0

3. $\Rightarrow \langle \vec{DC}, \vec{CB} \rangle = ?$

-110



ÖZELLİK|Property 15



$$\vec{AH} = \frac{\langle \vec{a}, \vec{b} \rangle}{|\vec{a}|^2} \cdot \vec{a}$$

$$|\vec{AH}| = \frac{\langle \vec{a}, \vec{b} \rangle}{|\vec{a}|}$$

1. $\vec{A}(-8, 6)$ vektörünün $\vec{B}(-7, 24)$ vektörü üzerindeki dik izdüşüm vektörü nedir?

What is the orthogonal projection vector over the $\vec{B}(-7, 24)$ vector of $\vec{A}(-8, 6)$ vector?

$$\left(-\frac{56}{25}, \frac{192}{25}\right)$$

2. $\vec{A}(4, -1)$ vektörünün $\vec{B}(3, 4)$ vektörü üzerindeki dik izdüşüm vektörünün uzunluğu nedir?

What is the orthogonal projection length over the $\vec{B}(3, 4)$ vector of $\vec{A}(4, -1)$ vector?

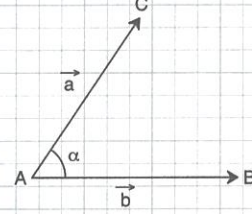
$$\frac{8}{5}$$

3. $\vec{A}(6, 1)$ vektörünün $y = 2x$ doğrusu üzerine dik izdüşüm vektörünün uzunluğu nedir?

What is the orthogonal projection length over the $y=2x$ line of $\vec{A}(6, 1)$ vector?

$$\frac{8\sqrt{5}}{5}$$

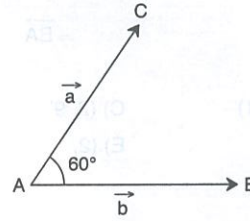
ÖZELLİK|Property 16



$$|\vec{a} + \vec{b}|^2 = |\vec{a}|^2 + |\vec{b}|^2 + 2|\vec{a}||\vec{b}|\cos\alpha$$

$$|\vec{a} - \vec{b}|^2 = |\vec{a}|^2 + |\vec{b}|^2 - 2|\vec{a}||\vec{b}|\cos\alpha$$

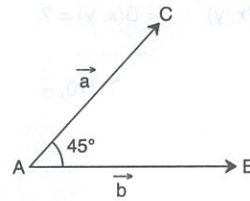
- 1.



$$\begin{aligned} |\vec{a}| &= 5br \\ |\vec{b}| &= 3br \\ \Rightarrow |\vec{a} + \vec{b}| &= ? \end{aligned}$$

$$7$$

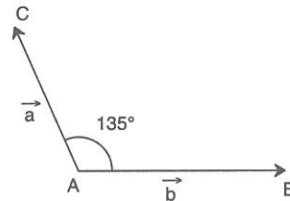
- 2.



$$\begin{aligned} |\vec{a}| &= 4\sqrt{2}br \\ |\vec{b}| &= 6br \\ \Rightarrow |\vec{a} - \vec{b}| &= ? \end{aligned}$$

$$2\sqrt{5}$$

- 3.



$$\begin{aligned} |\vec{a}| &= 4br \\ |\vec{b}| &= 6\sqrt{2}br \\ \Rightarrow |\vec{a} - \vec{b}| &= ? \end{aligned}$$

$$2\sqrt{34}$$



1. $A(2, -1)$ $B(4, -3)$ $\Rightarrow \vec{AB} = ?$

- A) $(2, -4)$ B) $(2, -2)$ C) $(6, -2)$
D) $(2, 2)$ E) $(-6, 2)$

2. $A(4, -5)$ $B(-2, -4)$ $\Rightarrow \vec{BA} = ?$

- A) $(6, -1)$ B) $(6, 1)$ C) $(2, 9)$
D) $(-6, 1)$ E) $(2, 1)$

3. $\vec{AB}(-7, 5)$ $A(3, 2)$ $B(x, y)$ $\Rightarrow B(x, y) = ?$

- A) $(-10, 3)$ B) $(4, 3)$ C) $(10, -3)$
D) $(-4, 7)$ E) $(4, -7)$

4. $\vec{BA}(-4, 6)$ $A(-2, 3)$ $B(x, y)$ $\Rightarrow B(x, y) = ?$

- A) $(-2, -9)$ B) $(3, -2)$ C) $(2, -3)$
D) $(-2, 9)$ E) $(-2, -3)$

5. $\vec{A}(4, -3)$ $\vec{B}(-6, 7)$ $\Rightarrow \vec{A} + \vec{B} = ?$

- A) $(-2, 5)$ B) $(2, 4)$ C) $(10, 10)$
D) $(-10, -10)$ E) $(-2, 4)$

6. $\vec{A}(-11, 5)$ $\vec{B}(x, 2y - 1)$ $\vec{A} - \vec{B} = (-8, 2)$
 $\Rightarrow x + y = ?$

- A) -2 B) -1 C) 2 D) 3 E) 5

7. $A(5, -2)$ $B(3, -7)$ $C(-2, 3)$ $\Rightarrow \vec{AB} + \vec{AC} = ?$

- A) $(5, 10)$ B) $(-7, 5)$ C) $(5, 6)$
D) $(0, -9)$ E) $(-9, 0)$

8. $\vec{AB}(3, -2)$ $A(-1, 3)$ $C(1, -2)$ $\Rightarrow \vec{AC} - \vec{BC} = ?$

- A) $(3, -1)$ B) $(3, -2)$ C) $(1, -2)$
D) $(1, -8)$ E) $(3, -8)$



9. $\vec{A}(2, -1)$ $\vec{B}(7, -2)$ $\Rightarrow 2\vec{A} + 3\vec{B} = ?$

- A) $(13, -2)$ B) $(5, -3)$ C) $(-6, 8)$
D) $(25, -4)$ E) $(25, -8)$

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13. $A(-1, 3)$ $B(5, -5)$ $\Rightarrow |\vec{AB}| = ?$

- A) $5\sqrt{2}$ B) 10 C) $10\sqrt{2}$ D) $10\sqrt{3}$ E) 15

10. $A(-3, 7)$ $B(2, 4)$ $C(-1, 5)$ $\Rightarrow 3\vec{AB} - 5\vec{BC} = ?$

- A) $(0, -14)$ B) $(-30, 4)$ C) $(30, -4)$
D) $(30, -14)$ E) $(0, -4)$

14. $\vec{A}(x, y)$ $|\vec{A}| = 1$

$\vec{A}$ vektörü aşağıdakilerden hangisi olabilir?

Which of the following can be vector of $\vec{A}$?

- A) $(2, 4)$ B) $(-1, 1)$ C) $(1, 1)$
D) $(0, -1)$ E) $(3, 4)$

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11. $\vec{A}(-2, 1)$ $\Rightarrow |\vec{A}| = ?$

- A) $\sqrt{2}$ B) $\sqrt{5}$ C) 3 D) $2\sqrt{3}$ E) $2\sqrt{5}$

15. $\vec{A}(4, -5)$ $\vec{B}(3, -3)$ $\Rightarrow |\vec{A} - \vec{B}| = ?$

- A) $\sqrt{3}$ B) $\sqrt{5}$ C) 3 D) 5 E) 12

12. $A(4, 1)$ $B(1, -3)$ $\Rightarrow |\vec{AB}| = ?$

- A) 3 B) 4 C) 5 D) $4\sqrt{2}$ E) $4\sqrt{3}$

16. $\vec{A}\left(x, \frac{4}{5}\right)$ $|\vec{A}| = 1$ $\Rightarrow \sum x = ?$

- A) $-\frac{3}{5}$ B) 0 C) $\frac{3}{5}$ D) 1 E) $\frac{4}{5}$

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1. $\vec{A}(2x-1, 2y-6)$ $\vec{B}(7, 2x)$ $\vec{A} = \vec{B} \Rightarrow x+y=?$

- A) 3 B) 7 C) 9 D) 11 E) 13

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5. $\vec{A}(-2, -6)$ $\vec{B}(3, x-1)$ $\vec{A} \parallel \vec{B} \Rightarrow x=?$

- A) -10 B) -8 C) 8 D) 10 E) 12

2. $A(7, 6)$ $B(12, 1)$ $\vec{C}(x, y)$ $\vec{AB} = \vec{C} \Rightarrow x+y=?$

- A) -10 B) -5 C) 0 D) 5 E) 10

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6. $A(-2, 1)$ $B(-6, 3)$ $C(4, 1)$ $D(8, y)$
 $\vec{AB} \parallel \vec{CD} \Rightarrow y=?$

- A) -2 B) -1 C) 0 D) 1 E) 2

3. $A(0, 4)$ $B(1, 2)$ $C(4, x)$ $D(y, 4)$
 $\vec{AC} = \vec{DB} \Rightarrow x \cdot y=?$

- A) -1 B) -2 C) -3 D) -4 E) -6

7. $\vec{A}(-2, 4)$ $\vec{B}(x, -8)$ $\vec{A} \perp \vec{B} \Rightarrow x=?$

- A) -16 B) -4 C) 1 D) 4 E) 16

4. $A(2, 3)$ $B(0, 4)$ $C(x, y)$
 $\vec{AB} = 3(\vec{BC}) \Rightarrow \frac{x}{y}=?$

- A) -1 B) $-\frac{2}{13}$ C) $\frac{1}{3}$ D) $\frac{3}{7}$ E) 1

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8. $A(3, -1)$ $B(x, 3)$ $C(7, 1)$ $D(3, y)$
 $\vec{AB} \perp \vec{CD} \quad x = ay + b \Rightarrow a + b = ?$

- A) -2 B) 1 C) 2 D) 3 E) 5



9. $\vec{A} = 3\vec{e}_1 - 2\vec{e}_2 \Rightarrow A = ?$

- A) (3, 2) B) (-3, 2) C) (0, 5)
D) (1, 0) E) (3, -2)

10. $\vec{A} = (-2, 5)$ $\vec{B} = 4\vec{e}_1 + 2\vec{e}_2$ $\vec{C} = 2\vec{A} + \vec{B}$
 $\Rightarrow \vec{C} = ?$

- A) (2, 3) B) (2, 7) C) (0, 7)
D) (0, 8) E) (0, 12)

11. $2\vec{A} + 3\vec{B} + \vec{C} = 7\vec{e}_1 - 5\vec{e}_2$
 $2\vec{A} + \vec{B} + 3\vec{C} = 5\vec{e}_1 - 3\vec{e}_2 \Rightarrow \vec{A} + \vec{B} + \vec{C} = ?$

- A) (3, -2) B) (5, 2) C) (4, -2)
D) (3, -1) E) (2, -1)

12. $\vec{K}(2, 4)$ $\vec{U}(1, 2)$ $\vec{V}(0, 1)$ $\vec{K} = a\vec{U} + b\vec{V} \Rightarrow a + b = ?$

- A) -2 B) -1 C) 0 D) 1 E) 2

13. $\vec{A}(-1, 3)$ $\vec{B}(1, 2)$ $\vec{C}(-2, 1)$ $\vec{C} = x\vec{A} + y\vec{B} \Rightarrow x + y = ?$

- A) -3 B) -2 C) -1 D) 0 E) 1

14. $k > 0$

$\vec{A} = \frac{3}{5}\vec{e}_1 - k\vec{e}_2$ $|\vec{A}| = 1$

$\vec{B} = 5\vec{A} \Rightarrow \vec{B} = ?$

- A) (-3, -2) B) (-3, 4) C) (3, -5)
D) (3, 4) E) (3, -4)

15. $\vec{AB}(2, 3)$ $\vec{BC}(4, -3)$ $\vec{DE}(6, -1)$ $\vec{EA}(0, 4) \Rightarrow \vec{DC} = ?$

- A) (7, -1) B) (12, 3) C) (6, 4)
D) (5, -3) E) (8, -3)

16. $\vec{AB} = -3\vec{e}_1 + 5\vec{e}_2$

$\vec{AC} = \vec{e}_1 + 2\vec{e}_2 \Rightarrow |\vec{BC}| = ?$

- A) 5 B) $5\sqrt{2}$ C) $5\sqrt{3}$ D) 10 E) 12



1. $\vec{A}(-1,2)$ $\vec{B}(3,7)$ $\Rightarrow \vec{A} \cdot \vec{B} = ?$
- A) 11 B) 9 C) 7 D) 6 E) 4

2. $\vec{A}(x,-5)$ $\vec{B}(-2,3)$ $\vec{A} \cdot \vec{B} = -9$ $\Rightarrow x = ?$
- A) -3 B) -2 C) 1 D) 2 E) 3

3. $\vec{A} = (x-2)\vec{e}_1 + (x+3)\vec{e}_2$
 $\vec{B} = (x+2)\vec{e}_1 + (3-x)\vec{e}_2$ $\Rightarrow \vec{A} \cdot \vec{B} = ?$
- A) $2x^2$ B) $2x^2 + 5$ C) 5
 D) 9 E) $2x + 3$

4. $\vec{AB}(1,2)$ $\vec{BC}(-2,3)$ $\vec{DE}(-2,3)$ $\vec{EA}(3,1)$
 $\Rightarrow \vec{AC} \cdot \vec{DA} = ?$
- A) 19 B) 15 C) 11 D) 8 E) 7

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5. $\Rightarrow \vec{A} \cdot \vec{B} = ?$
-

- A) 3 B) 6 C) $3\sqrt{3}$ D) $6\sqrt{3}$ E) 12

6. $\Rightarrow \vec{A} \cdot \vec{B} = ?$
-

- A) 12 B) $6\sqrt{2}$ C) 6 D) $-6\sqrt{2}$ E) -12

7. $\vec{A} \cdot \vec{B} = -20\sqrt{3}$ br $\Rightarrow x = ?$
-

- A) -3 B) -4 C) -5 D) -6 E) -8

8. $\Rightarrow \cos \alpha = ?$
-

- A) $-\frac{63}{65}$ B) $-\frac{5}{12}$ C) $\frac{33}{65}$ D) $\frac{63}{65}$ E) 1

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9. $|\vec{U}| = 4br$ $|\vec{V}| = 6br$ $\vec{U} \perp \vec{V}$
 $\Rightarrow (\vec{U} + \vec{V}) \cdot (\vec{U} + 2\vec{V}) = ?$

- A) 160 B) 112 C) 88 D) 78 E) 56

10. $|\vec{A}| = 2br$ $|\vec{B}| = 4br$ $\vec{A} \perp \vec{B}$
 $\Rightarrow (2\vec{A} - \vec{B}) \cdot (\vec{A} + \vec{B}) = ?$

- A) -16 B) -8 C) 0 D) 4 E) 16

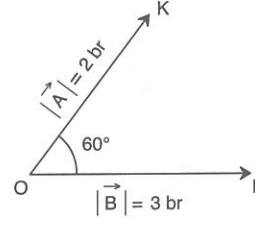
11. $[AB] \perp [AC]$
 $[AD] \perp [BC]$
 $|BD| = 2br$
 $|DC| = 8br$
 $\Rightarrow \vec{BA} \cdot (\vec{BD} + \vec{AC}) = ?$

- A) 2 B) 4 C) $2\sqrt{5}$ D) -4 E) -2

12. $[AB] \perp [AC]$
 $[AD] \perp [BC]$
 $|BD| = 4br$
 $|DC| = 9br$
 $\Rightarrow \vec{BA} \cdot (\vec{AD} + \vec{DC}) = ?$

- A) -36 B) -2 C) 0 D) 13 E) 36

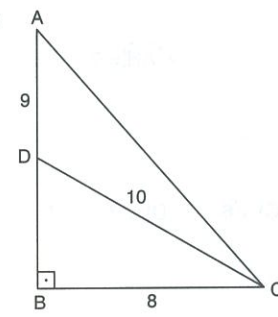
13.



- A) 18 B) 15 C) 12 D) 10 E) 8

$\Rightarrow 2\vec{A} \cdot 3\vec{B} = ?$

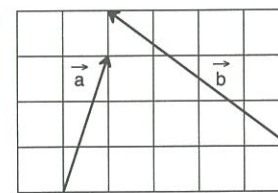
14.



$[AB] \perp [BC]$
 $|AD| = 9br$
 $|DC| = 10br$
 $|BC| = 8br$
 $\Rightarrow \vec{CA} \cdot \vec{BD} = ?$

- A) -255 B) -90 C) 55 D) 90 E) 255

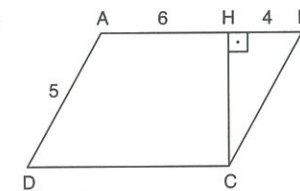
15.



$\Rightarrow \vec{a} \cdot \vec{b} = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9

16.

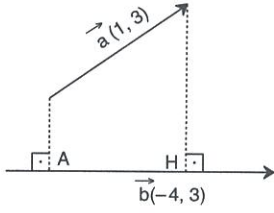


ABCD paralelkenar
 $ABCD$ parallelogram
 $[AB] \perp [HC]$
 $\Rightarrow \vec{BA} \cdot (\vec{DA} + \vec{HC}) = ?$

- A) -60 B) -40 C) -24 D) -12 E) -10



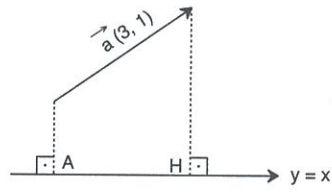
1.



$$\Rightarrow |\vec{AH}| = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

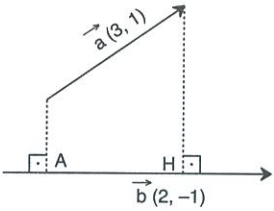
5.



$$\Rightarrow |\vec{AH}| = ?$$

- A) 2 B) $\sqrt{5}$ C) $\sqrt{6}$ D) $\sqrt{7}$ E) $2\sqrt{2}$

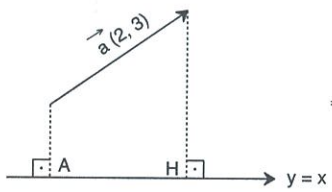
2.



$$\Rightarrow |\vec{AH}| = ?$$

- A) 2 B) $\sqrt{5}$ C) $\sqrt{6}$ D) $\sqrt{7}$ E) $2\sqrt{2}$

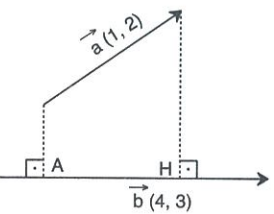
6.



$$\Rightarrow |\vec{AH}| = ?$$

- A) 1 B) $\sqrt{5}$ C) $\sqrt{7}$ D) $\frac{5\sqrt{2}}{2}$ E) $7\sqrt{5}$

3.



$$\Rightarrow \vec{AH} = ?$$

- A) $(-\frac{4}{5}, \frac{3}{5})$ B) $(\frac{8}{5}, \frac{6}{5})$ C) $(\frac{4}{5}, \frac{3}{5})$
D) $(\frac{7}{5}, \frac{4}{5})$ E) $(\frac{2}{5}, -\frac{4}{5})$

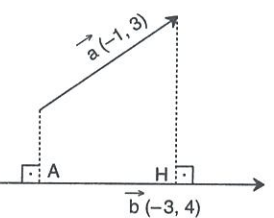
7.

$$|\vec{a}| = 4br \quad |\vec{b}| = 2br \quad \vec{a} \perp \vec{b}$$

$$\Rightarrow |\vec{a} - \vec{b}| = ?$$

- A) $\sqrt{5}$ B) $2\sqrt{5}$ C) 4 D) 5 E) 6

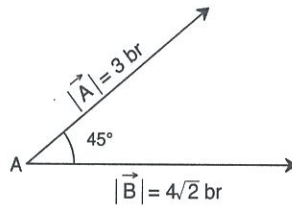
4.



$$\Rightarrow \vec{AH} = ?$$

- A) $(-\frac{9}{5}, \frac{12}{5})$ B) $(\frac{3}{5}, \frac{4}{5})$ C) $(\frac{1}{5}, \frac{4}{5})$
D) $(-\frac{1}{3}, \frac{3}{5})$ E) $(-3, 4)$

8.

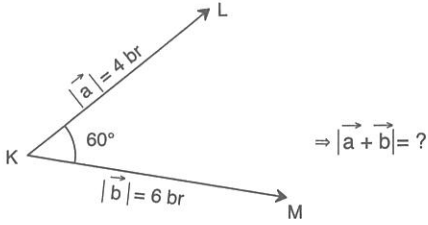


$$\Rightarrow |\vec{A} - \vec{B}| = ?$$

- A) $2\sqrt{2}$ B) 4 C) 5 D) $\sqrt{17}$ E) $\sqrt{35}$



9.

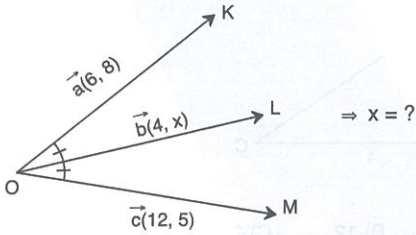


- A) $3\sqrt{6}$ B) 8 C) $\sqrt{65}$ D) $2\sqrt{19}$ E) $6\sqrt{2}$

10. $|\vec{a}| = 8br$ $|\vec{b}| = 6br$ $|\vec{a} - \vec{b}| = 8br$ $\Rightarrow \vec{a} \cdot \vec{b} = ?$

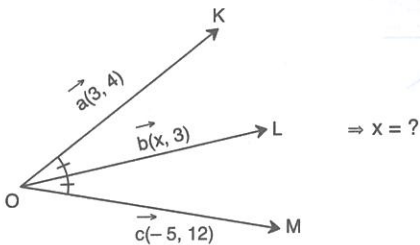
- A) 12 B) 18 C) 24 D) 36 E) 48

11.



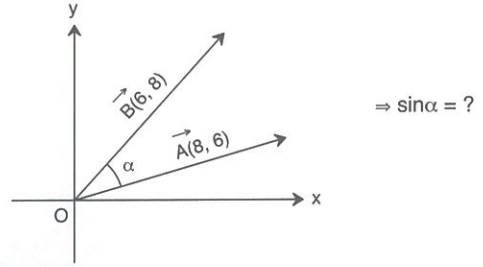
- A) $\frac{28}{9}$ B) $\frac{11}{13}$ C) $\frac{9}{11}$ D) $\frac{7}{9}$ E) $\frac{5}{7}$

12.



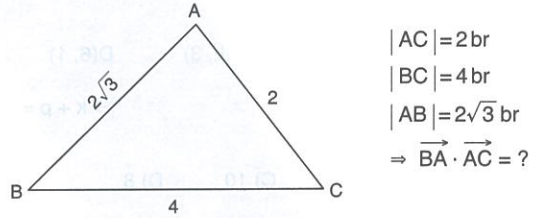
- A) $\frac{1}{4}$ B) $\frac{3}{8}$ C) $\frac{5}{8}$ D) 3 E) 4

13.



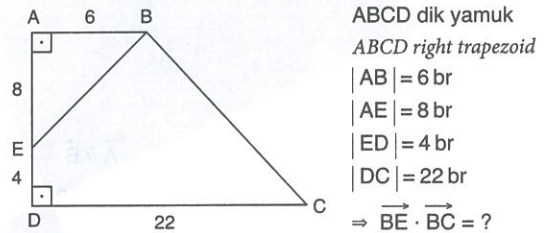
- A) $\frac{1}{5}$ B) $\frac{5}{24}$ C) $\frac{7}{24}$ D) $\frac{7}{25}$ E) $\frac{24}{25}$

14.



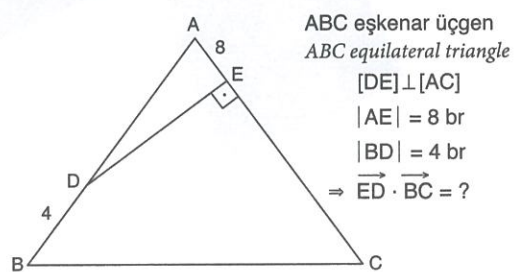
- A) $-2\sqrt{3}$ B) -2 C) 0 D) 1 E) $2\sqrt{3}$

15.



- A) -200 B) -100 C) 0 D) 100 E) 200

16.



- A) -240 B) -120 C) 120 D) 200 E) 240



1. $\vec{A}(6, m)$ $\vec{B}(n, 7)$ $\vec{AB}(0, 2)$
 $\Rightarrow m + n = ?$
- A) 11 B) 10 C) 9 D) 8 E) 7

2. $A(2, 3)$ $B(-4, p)$ $C(k, 3)$ $D(6, 1)$
 $\vec{AB} = \vec{CD}$ $\Rightarrow k + p = ?$
- A) 15 B) 13 C) 10 D) 8 E) 7

3. $\vec{A}(2 - x, 4)$ $\vec{B}(2, 8)$ $\vec{A} \parallel \vec{B}$
 $\Rightarrow x = ?$
- A) -1 B) 1 C) 2 D) 3 E) 4

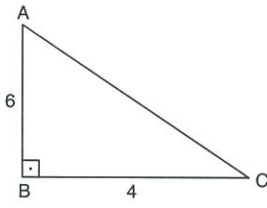
4. $\vec{A}(x, 2)$ $\vec{B}(3, -5)$
 $|\vec{A} + \vec{B}| = |\vec{A} - \vec{B}|$ $\Rightarrow x = ?$
- A) -2 B) -1 C) $\frac{1}{2}$ D) $\frac{1}{4}$ E) $\frac{10}{3}$

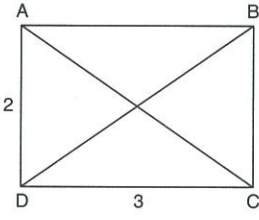
PUZA YAYINLARI

5. $\vec{A}(1, 3)$ $\vec{B}(a, -2)$ $\vec{A} \cdot \vec{B} = 2$
 $\Rightarrow a = ?$
- A) 4 B) 5 C) 6 D) 7 E) 8

6. $\vec{A}(3, 1)$ $\vec{B}(-1, 2)$ $\vec{C}(2, 10)$ $x\vec{A} + y\vec{B} = \vec{C}$
 $\Rightarrow x + y = ?$
- A) 5 B) 6 C) 7 D) 8 E) 9

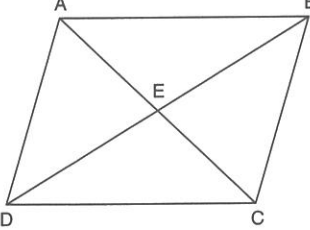
PUZA YAYINLARI

7.  $[AB] \perp [BC]$
 $|AB| = 6 \text{ br}$
 $|BC| = 4 \text{ br}$
 $\Rightarrow \vec{AB} \cdot \vec{AC} = ?$
- A) 6 B) 12 C) 24 D) 36 E) 72

8.  $ABCD$ dikdörtgen
 $ABCD$ rectangle
 $|AD| = 2 \text{ br}$
 $|DC| = 3 \text{ br}$
 $\Rightarrow \vec{DB} \cdot \vec{AC} = ?$
- A) -5 B) -4 C) 4 D) 5 E) 13

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9.  ABCD eşkenar dörtgen
 ABCD rhombus
 $|AC| = 8 \text{ br}$
 $|BD| = 6 \text{ br}$
 $\Rightarrow \vec{EC} \cdot (\vec{AB} + \vec{BE}) = ?$

- A) 9 B) 12 C) 15 D) 16 E) 20

10. $\vec{x} = (a-1)\vec{e}_1 + a\vec{e}_2$
 $\vec{y} = (a+2)\vec{e}_1 - a\vec{e}_2$
 $\vec{x} \perp \vec{y}$
 $\Rightarrow a = ?$

- A) -2 B) -1 C) 0 D) 1 E) 2

11. $\vec{2x} - \vec{y} = (-1, 3)$
 $\vec{x} + 2\vec{y} = (7, 4)$
 $\Rightarrow \vec{x} \cdot \vec{y} = ?$

- A) -2 B) -4 C) 3 D) 5 E) 7

12. A(5, -4) B(2, 3) C(9, x)
 $\vec{AB} \perp \vec{BC}$
 $\Rightarrow x = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

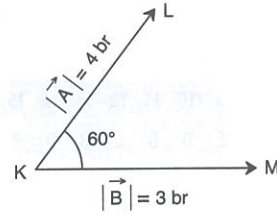
PUZA YAYINLARI

13. $\vec{A} + \vec{B} = (5, 2)$

$|\vec{A}|^2 + |\vec{B}|^2 = 13$
 $\Rightarrow \langle \vec{A}, \vec{B} \rangle = ?$

- A) 2 B) 3 C) 5 D) 7 E) 8

14.

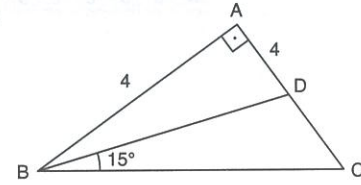


$\Rightarrow 4\vec{A} \cdot 3\vec{B} = ?$

- A) 144 B) 72 C) 36 D) 18 E) 9

PUZA YAYINLARI

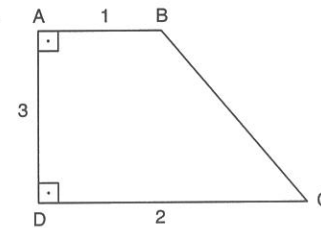
15.



$[AB] \perp [AC]$
 $|AB| = |AD| = 4 \text{ br}$
 $m(\widehat{DBC}) = 15^\circ$
 $\Rightarrow \vec{AB} \cdot (\vec{BD} + \vec{BC}) = ?$

- A) -2 B) -4 C) -8 D) -16 E) -32

16.



ABCD dik yamuk
 ABCD right trapezoid
 $|AB| = 1 \text{ br}$
 $|AD| = 3 \text{ br}$
 $|DC| = 2 \text{ br}$
 $\Rightarrow \langle \vec{DC}, \vec{BC} \rangle = ?$

- A) -2 B) -1 C) 1 D) 2 E) 4

PUZA YAYINLARI



VEKTÖRLER VECTORS

Yanıt Anahtarı Answer Key

TEST 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	A	D	C	E	B	E	B	E	D	B	C	B	D	B	B

TEST 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D	C	E	B	D	B	A	D	E	E	A	E	D	E	B	A

TEST 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	A	C	A	B	A	C	A	C	B	B	C	A	D	A	B

TEST 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	B	B	A	E	D	B	D	D	B	A	B	D	C	C	A

TEST 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	B	B	E	E	B	D	D	D	E	D	E	E	B	E	D