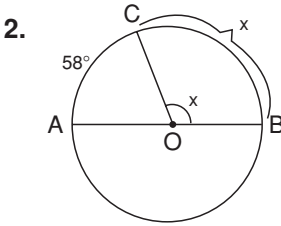


$s(\widehat{AB}) = 70^\circ$ dir. (Merkez açı gördüğü yaya eşittir)
 $x = \frac{s(\widehat{AB})}{2} = \frac{70^\circ}{2} = 35^\circ$ dir.

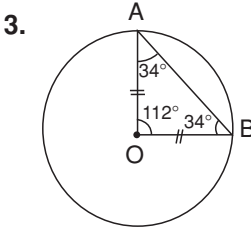
(Çevre açısı gördüğü yayın yarısına eşittir.)

Cevap: A



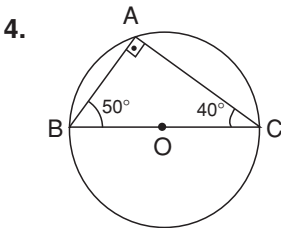
$s(\widehat{ACB}) = 180^\circ$ dir.
 $s(\widehat{BC}) = x = 180^\circ - 58^\circ$
 $x = 122^\circ$ dir.

Cevap: D



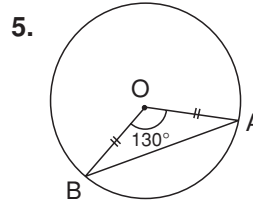
O merkez olduğundan
 $|AO| = |OB| = r$ dir. (r: yarıçap)
 $s(\widehat{OAB}) = s(\widehat{OBA}) = 34^\circ$ olur.
 $s(\widehat{AOB}) = 180^\circ - 2 \cdot 34^\circ = 112^\circ$ dir.
 $s(\widehat{AOB}) = s(\widehat{AB}) = 112^\circ$ dir.

Cevap: C



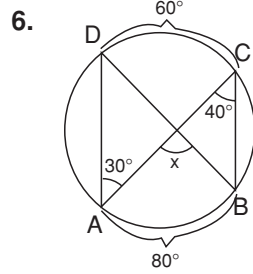
$s(\widehat{BAC}) = 90^\circ$ dir. (Çapı gören çevre açısı 90° dir.)
 $s(\widehat{ACB}) = 180^\circ - (90^\circ + 50^\circ) = 40^\circ$

Cevap: A



$|OB| = |OA|$ dir. (O: Merkez)
 $\Rightarrow s(\widehat{OAB}) = s(\widehat{OBA}) = \frac{180^\circ - 130^\circ}{2} = 25^\circ$ dir.

Cevap: C



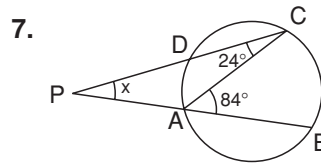
$s(\widehat{AB}) = 2 \cdot s(\widehat{ACB}) = 2 \cdot 40^\circ = 80^\circ$
 $s(\widehat{OC}) = 2 \cdot s(\widehat{DAC}) = 2 \cdot 30^\circ = 60^\circ$

$x = \frac{s(\widehat{AB}) + s(\widehat{DC})}{2}$

(Kiriş açısı gördüğü yaylar toplamının yarısına eşittir.)

$x = \frac{80^\circ + 60^\circ}{2} = 70^\circ$

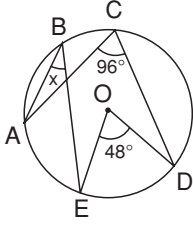
Cevap: B



\widehat{PAC} 'inde;
 $x + 24^\circ = 84^\circ \Rightarrow x = 60^\circ$ bulunur.

Cevap: A

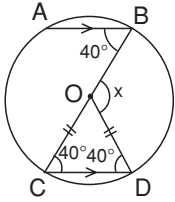
8.



$$\begin{aligned} s(\widehat{AE}) &= 2 \cdot s(\widehat{ABE}) \\ &= 2 \cdot x \text{ tir.} \\ s(\widehat{AED}) &= 2 \cdot s(\widehat{ACD}) \\ &= 2 \cdot 96^\circ = 192^\circ \text{ dir.} \\ s(\widehat{ED}) &= s(\widehat{EOD}) = 48^\circ \text{ dir.} \\ \Rightarrow s(\widehat{AED}) &= s(\widehat{AE}) + s(\widehat{ED}) \\ 192^\circ &= 2x + 48^\circ \\ 144^\circ &= 2x \\ \boxed{x = 72^\circ} \end{aligned}$$

Cevap: D

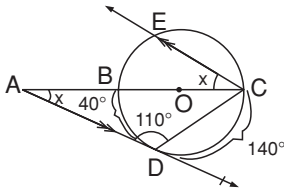
9.



$$\begin{aligned} [AB] \parallel [CD] \text{ olduğundan} \\ s(\widehat{ABC}) &= s(\widehat{BCD}) = 40^\circ \text{ dir. (İç ters açılar)} \\ |OC| &= |OD| \text{ dir. (Yarıçap uzunluğu)} \\ s(\widehat{OCD}) &= s(\widehat{ODC}) = 40^\circ \text{ olur.} \\ x &= s(\widehat{OCD}) + s(\widehat{ODC}) \\ x &= 40^\circ + 40^\circ \\ x &= 80^\circ \end{aligned}$$

Cevap: A

10.



$$\begin{aligned} [EC] \parallel [AD] \text{ olduğundan } s(\widehat{ECA}) &= s(\widehat{CAD}) = x \text{ tir.} \\ (\text{iç ters açılar}) \\ s(\widehat{CDF}) &= 180^\circ - 110^\circ = 70^\circ \\ \Rightarrow s(\widehat{CD}) &= 2 \cdot s(\widehat{CDF}) = 2 \cdot 70^\circ = 140^\circ \text{ olur.} \\ \Rightarrow s(\widehat{BOC}) &= 180^\circ \Rightarrow s(\widehat{BD}) = 180^\circ - 140^\circ \\ \boxed{s(\widehat{BD}) = 40^\circ} &\text{ olur.} \end{aligned}$$

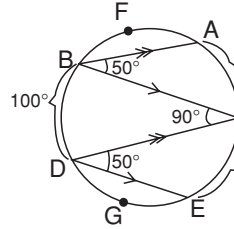
$$x = \frac{s(\widehat{CD}) - s(\widehat{BD})}{2}$$

(Dış açı gördüğü yayları farkının yarısına eşittir.)

$$x = \frac{140^\circ - 40^\circ}{2} = 50^\circ \text{ olur.}$$

Cevap: C

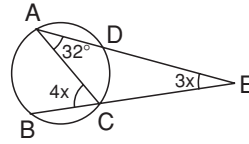
11.



$$\begin{aligned} s(\widehat{CE}) &= 2 \cdot s(\widehat{CDE}) = 2 \cdot 50^\circ = 100^\circ \\ [BC] \parallel [DE] &\Rightarrow s(\widehat{CDE}) = s(\widehat{BCD}) = 50^\circ \text{ dir.} \\ (\text{iç ters açılar}) \\ s(\widehat{BD}) &= 2 \cdot s(\widehat{BCD}) = 2 \cdot 50^\circ = 100^\circ \text{ dir.} \\ [AB] \parallel [DC] &\Rightarrow s(\widehat{BCD}) = s(\widehat{ABC}) = 50^\circ \text{ dir.} \\ s(\widehat{AC}) &= 2 \cdot s(\widehat{ABC}) = 2 \cdot 50^\circ = 100^\circ \text{ olur.} \\ s(\widehat{AFB}) &= s(\widehat{DGE}) \text{ dir.} \\ 2 \cdot s(\widehat{AFB}) + 3 \cdot 100^\circ &= 360^\circ \\ 2 s(\widehat{AFB}) &= 60^\circ \\ \boxed{s(\widehat{AFB}) = 30^\circ} &\text{ olur.} \end{aligned}$$

Cevap: A

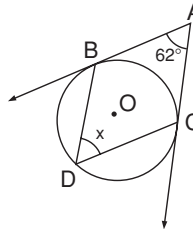
12.



$$\begin{aligned} \widehat{ACE}'\text{ninde;} \\ 3x + 32^\circ &= 4x \\ x &= 32^\circ \end{aligned}$$

Cevap: A

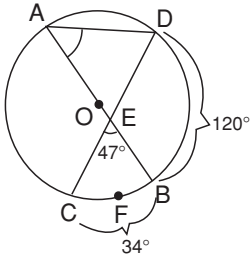
13.



$$\begin{aligned} s(\widehat{BC}) &= 2 \cdot s(\widehat{BDC}) = 2x \text{ olur.} \\ s(\widehat{A}) + s(\widehat{BC}) &= 180^\circ \text{ dir.} \\ 62^\circ + 2x &= 180^\circ \\ 2x &= 118^\circ \quad x = 59^\circ \end{aligned}$$

Cevap: A

14.



$$47^\circ = \frac{s(\widehat{AD}) + s(\widehat{CFB})}{2} = \frac{s(\widehat{AD}) + 34^\circ}{2}$$

$$94^\circ = s(\widehat{AD}) + 34^\circ \Rightarrow s(\widehat{AD}) = 60^\circ$$

|AB| çap olduğundan;

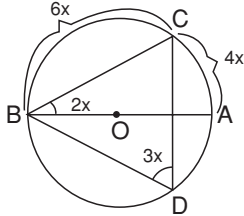
$$s(\widehat{ADB}) = 180^\circ = s(\widehat{AD}) + s(\widehat{DB})$$

$$180^\circ = 60^\circ + s(\widehat{DB})$$

$$s(\widehat{DB}) = 120^\circ \text{ bulunur.}$$

$$s(\widehat{DAB}) = \frac{s(\widehat{DB})}{2} = \frac{120^\circ}{2} = 60^\circ$$

15.



$$s(\widehat{CA}) = 2 \cdot s(\widehat{ABC}) = 2 \cdot 2x = 4x$$

$$s(\widehat{BC}) = 2 \cdot s(\widehat{DC}) = 2 \cdot 3x = 6x$$

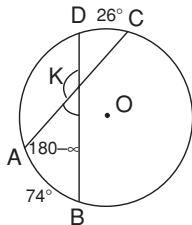
|AB| çap olduğundan $s(\widehat{ABC}) = 180^\circ$ 'dir.

$$6x + 4x = 180^\circ$$

$$10x = 180^\circ$$

$$x = 18^\circ \text{ bulunur.}$$

16.



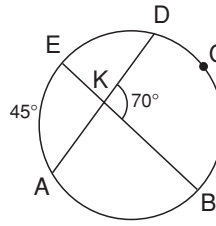
$$s(\widehat{AKD}) = \infty \text{ olsun}$$

$$s(\widehat{AKB}) = 180^\circ - \infty \text{ olur.}$$

$$180^\circ - \infty = \frac{26^\circ + 74^\circ}{2}$$

$$180^\circ - \infty = 50^\circ \Rightarrow \infty = 130^\circ \text{ olur.}$$

17.



$$s(\widehat{DKB}) = \frac{s(\widehat{DCB}) + s(\widehat{EA})}{2}$$

$$70^\circ = \frac{s(\widehat{DCB}) + 45^\circ}{2}$$

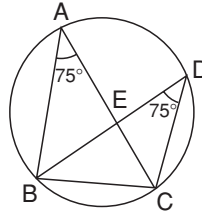
$$140^\circ = s(\widehat{DCB}) + 45^\circ$$

$$s(\widehat{DCB}) = 95^\circ \text{ olur.}$$

Cevap: D

Cevap: D

18.



$$s(\widehat{BC}) = 2 \cdot s(\widehat{BDC})$$

$$= 2 \cdot 75^\circ = 150^\circ \text{ bulunur.}$$

$$s(\widehat{BC}) = 2 \cdot s(\widehat{BAC})$$

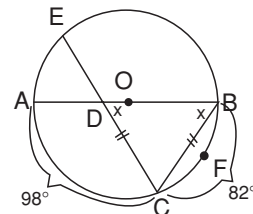
$$150^\circ = 2 \cdot s(\widehat{BAC}) \Rightarrow s(\widehat{BAC}) = 75^\circ \text{ dir.}$$

Uyarı: Aynı yayı gören çevre açıları eşittir.

Cevap: B

Cevap: C

19.



|AB| çap olduğundan $s(\widehat{ACB}) = 180^\circ$ 'dir.

$$s(\widehat{ACB}) = s(\widehat{BFC}) + s(\widehat{AC})$$

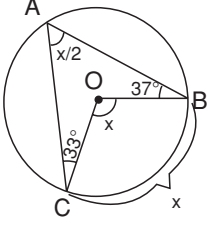
$$180^\circ = 82^\circ + s(\widehat{AC}) \Rightarrow s(\widehat{AC}) = 98^\circ \text{ dir.}$$

$$s(\widehat{CDB}) = s(\widehat{DBO}) = \frac{s(\widehat{AC})}{2} = \frac{98^\circ}{2} = 49^\circ \text{ dir.}$$

Cevap: A

Cevap: D

20.



$$s(\widehat{BOC}) = x = s(\widehat{BC}) \text{ dir.}$$

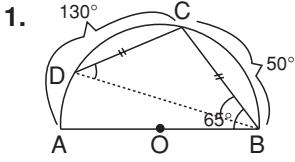
$$s(\widehat{A}) = \frac{s(\widehat{BC})}{2} = c \text{ dir.}$$

$$\frac{s(\widehat{BC})}{2} + 33^\circ + 37^\circ = x$$

$$70^\circ = \frac{x}{2} \Rightarrow \boxed{x = 140^\circ} \text{ dir.}$$

Cevap: D

OKS DERGİSİ



$$\begin{aligned} s(\widehat{ADC}) &= 2 \cdot s(\widehat{ABC}) \\ &= 2 \cdot 65^\circ \\ &= 130^\circ \text{ bulunur.} \\ s(\widehat{CB}) &= 180^\circ - s(\widehat{ADC}) \\ &= 180^\circ - 130^\circ \\ &= 50^\circ \text{ olur.} \end{aligned}$$

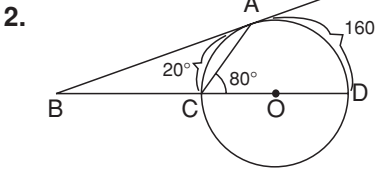
[DB]'yi çizelim:

$$|DC| = |BC| \Rightarrow s(\widehat{CDB}) = s(\widehat{CBD})$$

$$s(\widehat{CDB}) = \frac{s(\widehat{CB})}{2}$$

$$s(\widehat{CDB}) = \frac{50}{2} = 25^\circ \text{ olur.}$$

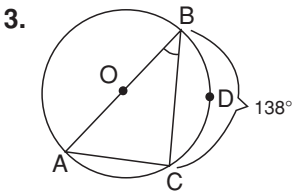
$$\begin{aligned} s(\widehat{DCB}) &= 180^\circ - 2 \cdot s(\widehat{CDB}) \\ &= 180^\circ - 2 \cdot 25^\circ \\ &= 180^\circ - 50^\circ = 130^\circ \end{aligned}$$



$$\begin{aligned} s(\widehat{AD}) &= 2 \cdot s(\widehat{ACD}) = 2 \cdot 80^\circ = 160^\circ \text{ dir.} \\ s(\widehat{AC}) &= 180^\circ - s(\widehat{AD}) = 180^\circ - 160^\circ = 20^\circ \text{ dir.} \end{aligned}$$

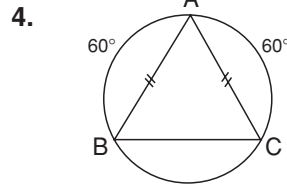
$$s(\widehat{ABC}) = x = \frac{s(\widehat{AD}) - s(\widehat{AC})}{2}$$

$$x = \frac{160^\circ - 20^\circ}{2} = 70^\circ$$



$$\begin{aligned} |AB| \text{ çap olduğundan } s(\widehat{ACB}) &= 180^\circ \text{ dir.} \\ s(\widehat{AC}) &= 180^\circ - s(\widehat{BDC}) = 180^\circ - 138^\circ \\ &= 42^\circ \text{ bulunur.} \end{aligned}$$

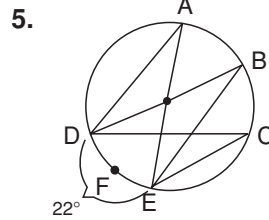
$$s(\widehat{ABC}) = \frac{s(\widehat{AC})}{2} = \frac{42^\circ}{2} = 21^\circ$$



$$\begin{aligned} |AB| = |AC| &\Rightarrow s(\widehat{AB}) = s(\widehat{AC}) \\ s(\widehat{BC}) &= 360^\circ - (60^\circ + 60^\circ) \\ &= 360^\circ - 120^\circ = 240^\circ \end{aligned}$$

$$\begin{aligned} s(\widehat{BAC}) &= \frac{s(\widehat{BC})}{2} \\ &= \frac{240^\circ}{2} = 120^\circ \end{aligned}$$

Cevap: C

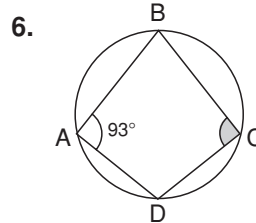


$$\begin{aligned} s(\widehat{A}) = s(\widehat{B}) = s(\widehat{C}) &= c \\ (\text{Aynı yayı gören çevre açıları eşittir}) \end{aligned}$$

$$s(\widehat{A}) = s(\widehat{B}) = s(\widehat{C}) = \frac{s(\widehat{DFE})}{2} = 11^\circ$$

$$\begin{aligned} s(\widehat{A}) + s(\widehat{B}) + s(\widehat{C}) &= 3 \cdot 11^\circ \\ &= 33^\circ \end{aligned}$$

Cevap: C



$$\begin{aligned} s(\widehat{BAD}) + s(\widehat{BCD}) &= 180^\circ \text{ dir.} \\ (\text{Kirişler dörtgende karşılıklı açılar toplamı } 180^\circ \text{ dir.}) \end{aligned}$$

$$\begin{aligned} 93^\circ + s(\widehat{BCD}) &= 180^\circ \\ s(\widehat{BCD}) &= 87^\circ \end{aligned}$$

Cevap: B

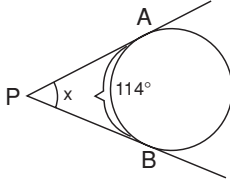
OKS DERGİSİ

Cevap: C

Cevap: A

Cevap: A

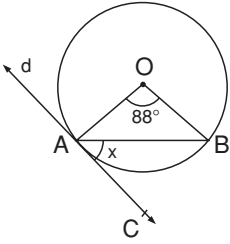
7.



$$x + 114^\circ = 180^\circ \Rightarrow x = 66^\circ \text{ bulunur.}$$

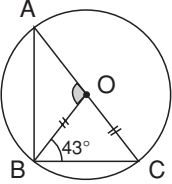
Cevap: A

8.



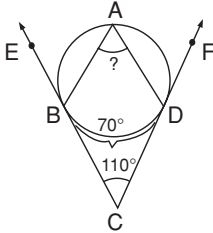
$$\begin{aligned} s(\widehat{AB}) &= 88^\circ \text{ dir.} \\ s(\widehat{AB}) &= 2 \cdot s(\widehat{BAC}) \\ 88^\circ &= 2 \cdot x \Rightarrow \boxed{x = 44^\circ} \text{ bulunur.} \end{aligned}$$

9.



$$\begin{aligned} |OB| &= |OC| \text{ dir. (O: merkez)} \\ s(\widehat{OBC}) &= s(\widehat{OCB}) = 43^\circ \text{ dir.} \\ s(\widehat{BOC}) &= 180^\circ - 2 \cdot 43^\circ \\ &= 180^\circ - 86^\circ \\ &= 94^\circ \text{ olur.} \\ s(\widehat{BOA}) &= 180^\circ - s(\widehat{BOC}) \\ &= 180^\circ - 94^\circ = 86^\circ \text{ dir.} \end{aligned}$$

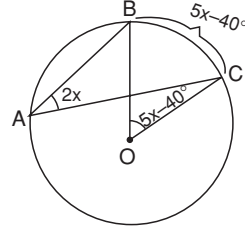
10.



$$\begin{aligned} s(\widehat{BCD}) + s(\widehat{BD}) &= 180^\circ \\ 110^\circ + s(\widehat{BD}) &= 180^\circ \\ s(\widehat{BD}) &= 70^\circ \text{ bulunur.} \\ s(\widehat{BAD}) &= \frac{s(\widehat{BD})}{2} = \frac{70^\circ}{2} = 35^\circ \text{ dir.} \end{aligned}$$

Cevap: D

11.

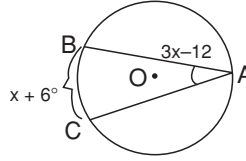


$$\begin{aligned} s(\widehat{BC}) &= s(\widehat{BOC}) \text{ dir. (Merkez açısı)} \\ s(\widehat{BC}) &= 5x - 40^\circ \text{ olur.} \\ s(\widehat{BAC}) &= \frac{s(\widehat{BC})}{2} \\ 2x &= \frac{5x - 40^\circ}{2} \Rightarrow 4x = 5x - 40^\circ \end{aligned}$$

$$\boxed{x = 40^\circ}$$

Cevap: C

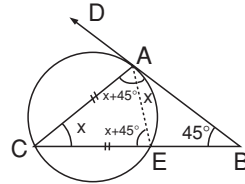
12.



$$\begin{aligned} s(\widehat{A}) &= \frac{s(\widehat{BC})}{2} \text{ dir.} \\ 3x - 12^\circ &= \frac{x + 6}{2} \Rightarrow 6x - 24^\circ = x + 6 \\ 5x &= 30^\circ \\ \boxed{x = 6^\circ} &\text{ bulunur.} \\ s(\widehat{BAC}) &= 3x - 12^\circ \\ &= 36 - 12 = 6^\circ \end{aligned}$$

Cevap: A

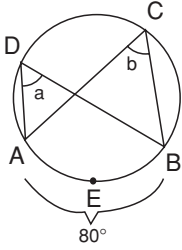
13.



$$\begin{aligned} [AE]'yi \text{ çizelim:} \\ s(\widehat{EAB}) &= s(\widehat{ACE}) = x \text{ olur. (Aynı yayı gören çevre} \\ &\text{açıları eşittir.)} \\ s(\widehat{AEC}) &= s(\widehat{EAC}) = x + 45^\circ \text{ dir.} \\ \widehat{ACE}'ninde; \\ x + (x + 45^\circ) + (x + 45^\circ) &= 180^\circ \\ 3x + 90^\circ &= 180^\circ \\ 3x &= 90^\circ \\ \boxed{x = 30^\circ} &\text{ olur.} \end{aligned}$$

Cevap: A

14.

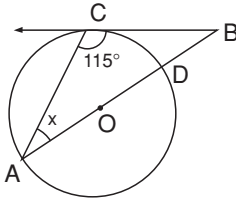


$$a = b = \frac{s(\widehat{AEC})}{2}, \text{dir.}$$

$$a = b = \frac{80^\circ}{2} = 40^\circ \text{dir.}$$

$$a + b = 40^\circ + 40^\circ = 80^\circ$$

15.



$$s(\widehat{ACD}) = \frac{s(\widehat{CDA})}{2}$$

$$115^\circ = \frac{s(\widehat{CDA})}{2} \Rightarrow s(\widehat{CDA}) = 230^\circ \text{dir.}$$

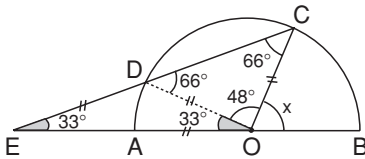
$$s(\widehat{CDA}) = s(\widehat{CD}) + s(\widehat{DA})$$

$$230^\circ = s(\widehat{CD}) + 180^\circ$$

$$s(\widehat{CD}) = 50^\circ \text{ olur.}$$

$$s(\widehat{CAB}) = x = \frac{s(\widehat{CD})}{2} = \frac{50^\circ}{2} = 25^\circ$$

16.



[DO]'yu çizelim:

$$|DO| = |DC| = |DA| = |ED| \text{ olur. (yarıçap)}$$

$$s(\widehat{DEO}) = s(\widehat{DOE}) \text{ dir.}$$

$$|DC| = |DO| \Rightarrow s(\widehat{ODC}) = s(\widehat{OCD}) = 66^\circ \text{ olur.}$$

$$s(\widehat{DEO}) + s(\widehat{DOE}) = 66^\circ$$

$$2s(\widehat{DEO}) = 66^\circ$$

$$s(\widehat{DEO}) = 33^\circ \text{ olur.}$$

Cevap: B

Cevap: A

$$s(\widehat{DOC}) = 180^\circ - 2 \cdot 66^\circ$$

$$= 180^\circ - 132^\circ = 48^\circ \text{ olur.}$$

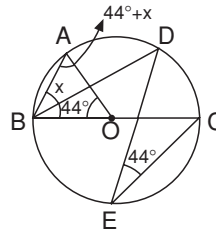
$$s(\widehat{COB}) = x = 180^\circ - (48^\circ + 33^\circ)$$

$$x = 180^\circ - 81^\circ$$

$$x = 99^\circ \text{ olur.}$$

Cevap: C

17.



$$s(\widehat{DEC}) = s(\widehat{DBC}) = 44^\circ \text{ dir. (Aynı yayı görüyorlar)}$$

$$|OB| = |OA| \text{ dir. (Yarıçap)}$$

$$s(\widehat{OBA}) = s(\widehat{OAB}) = 44^\circ + x$$

$$\widehat{ABO} \text{ ninde;}$$

$$44^\circ + (44^\circ + x) + (44^\circ + x) = 180^\circ$$

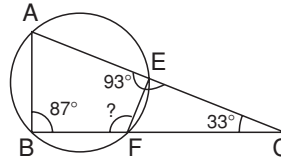
$$132^\circ + 2x = 180^\circ$$

$$2x = 48^\circ$$

$$x = 24^\circ \text{ bulunur.}$$

Cevap: A

18.



ABFE kirişler dörtgeni olduğundan;

$$s(\widehat{ABF}) + s(\widehat{AEF}) = 180^\circ \text{ dir.}$$

$$87^\circ + s(\widehat{AEF}) = 180^\circ$$

$$s(\widehat{AEF}) = 93^\circ \text{ olur.}$$

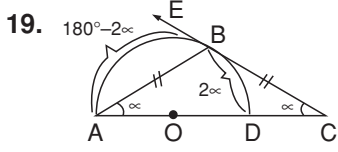
$$s(\widehat{CEF}) = 180^\circ - 93^\circ = 87^\circ \text{ olur.}$$

$$s(\widehat{EFB}) = 33^\circ + 87^\circ$$

$$= 120^\circ \text{ bulunur.}$$

Cevap: C

OKS DERGİSİ



$$s(\widehat{BAC}) = s(\widehat{BCA}) = \infty \text{ olsun.}$$

$$s(\widehat{BD}) = 2s(\widehat{BAD}) = 2\infty \text{ olur.}$$

$$s(\widehat{AB}) = 180^\circ - s(\widehat{BD}) \\ = 180^\circ - 2\infty \text{ olur.}$$

$$s(\widehat{BCD}) = \frac{s(\widehat{AB}) - s(\widehat{BD})}{2}$$

$$\infty = \frac{(180 - 2\infty) - 2\infty}{2}$$

$$2\infty = 180^\circ - 4\infty$$

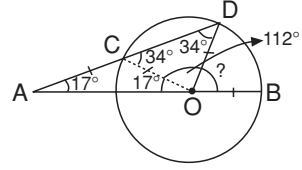
$$6\infty = 180^\circ$$

$$\boxed{\infty = 30^\circ} \text{ bulunur.}$$

$$s(\widehat{BAC}) = \infty = 30^\circ \text{ dir.}$$

Cevap: D

20.



$$|OB| = |OC| \text{ dir. (Yarıçap)}$$

$$|AC| = |OC| \text{ bulunur.}$$

$$|OC| = |OD| \text{ dir.}$$

$$s(\widehat{CAO}) = s(\widehat{COA}) = 17^\circ \text{ dir.}$$

$$s(\widehat{DCO}) = 17^\circ + 17^\circ \\ = 34^\circ \text{ olur.}$$

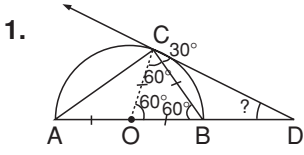
$$s(\widehat{ODC}) = 34^\circ \text{ olur.}$$

$$(|OC| = |OD|)$$

$$s(\widehat{COD}) = 180^\circ - 234^\circ \\ = 180^\circ - 68^\circ \\ = 112^\circ$$

$$s(\widehat{DOB}) = 180^\circ - (17^\circ + 112^\circ) \\ = 180^\circ - 129^\circ \\ = 51^\circ \text{ bulunur.}$$

Cevap: B



[OC]'yi çizelim:

$|OC| = |OA| = |OB| = |BC|$ olur. (Yarıçap)

$\Rightarrow \widehat{OBC}$ eşkenar üçgen olur.

$s(\widehat{OCB}) = s(\widehat{OBC}) = s(\widehat{BOC}) = 60^\circ$ 'dir.

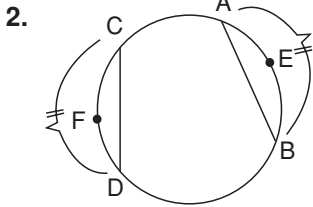
$s(\widehat{BCD}) = 30^\circ$ olur. (Merkezden teğete dik inilir.)

$[OC] \perp [CD]$ 'dir.

\widehat{OCD} 'ninde $\rightarrow 60^\circ + 90^\circ + s(\widehat{ADC}) = 180^\circ$

$s(\widehat{ADC}) = 30^\circ$ olur.

Cevap: D



$s(\widehat{AEB}) = s(\widehat{CFD}) \Rightarrow$

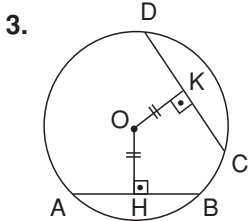
$|AB| = |CD|$ 'dir.

$|AB| = 5x + 8 = 7x = |CD|$

$8 = 2x$

$x = 4$ cm

Cevap: C

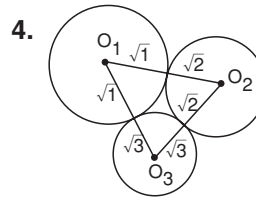


$|OH| = |OK| \Rightarrow |AB| = |DC|$ 'dir.

$7x - 3 = 6x + 9$

$x = 12$ cm

Cevap: C



O_1 merkezli çemberin yarıçapı r_1

O_2 merkezli çemberin yarıçapı r_2

O_3 merkezli çemberin yarıçapı r_3

$|O_1O_2| = r_1 + r_2 = 23$

$|O_1O_3| = r_1 + r_3 = 11$

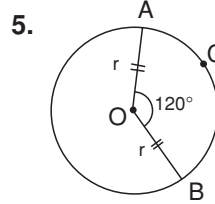
$|O_2O_3| = r_2 + r_3 = 18$

~~$r_1 + r_2 + r_3 = 52$~~

$r_1 + r_2 + r_3 = 26$ olur.

$23 + r_3 = 26 \Rightarrow r_3 = 3$ cm

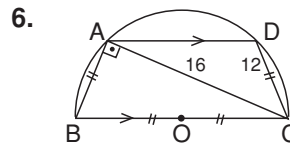
Cevap: B



$|\widehat{ACB}| = \frac{2\pi \cdot r \cdot 120^\circ}{360^\circ}$ 'dir.

$42 = \frac{2 \cdot r \cdot 120^\circ}{360^\circ} \Rightarrow r = 21$ cm olur.

Cevap: D



$|AB| = |DC| = 12$ cm olur. ($[AD] \parallel [BC]$)

$s(\widehat{BAC}) = 90^\circ$ 'dir. (Çapı gören çevre açısı 90° dir.)

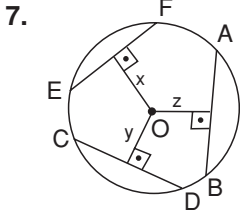
\widehat{BAC} 'ninde;

$|BC|^2 = 12^2 + 16^2 \Rightarrow |BC| = 20$ cm olur.

$|BO| = |OC| = r$ 'dir. $\Rightarrow |BC| = 2r = 20$

$r = 10$ cm

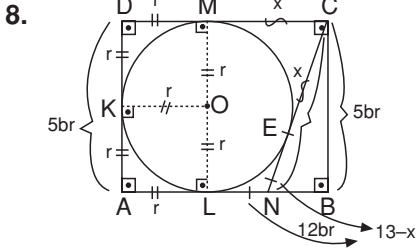
Cevap: C



7.

Büyük kirişe uzaklık yakın olur. Yani kiriş uzunluğuyla, merkezin kirişe uzaklığı ters orantılıdır.
 $x > y > z \Rightarrow |EF| < |CD| < |AB|$

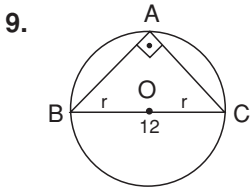
Cevap: B



8.

$|AD| = |CB| = 5br$ olur.
 $\widehat{C\hat{N}B}$ 'ninde;
 $13^2 = 5^2 + |NB|^2$
 $|NB| = 12br$ 'dir.
 O'dan geçen ve $[AB]$ 'ye dik olan $[ML]$ 'yi çizelim:
 $|MO| = |OL| = |OK| = |AL| = r$ olur.
 $5 = |ML| = 2r \Rightarrow r = \frac{5}{2} br$
 $|MC| = x$ olsun.
 $|MC| = |CE| = x$ olur.
 $|EN| = 13 - x = |NL|$ olur.
 $|DC| = r + x = |AB| = r + 13 - x + 12$
 $2x = 25 \Rightarrow x = \frac{25}{2}$ bulunur.
 $|AB| = |OC| = r + x$
 $= \frac{5}{2} + \frac{25}{2} = 15 br$

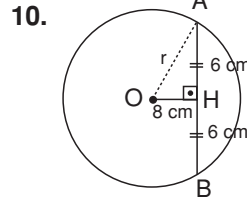
Cevap: A



9.

$|BC| = 2r = 12 \Rightarrow r = 6 cm$ olur.
 ($|BC|$ çaptır: Çapı gören çevre açısı 90° dir.)
 Çevre $2\pi r = 2 \cdot 3 \cdot 6 = 36 cm$

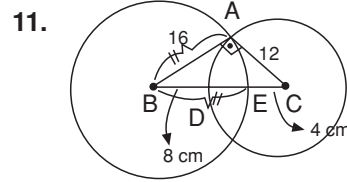
Cevap: C



10.

$|AH| = |HB| = 6 cm$ 'dir.
 (Merkezden kirişe indirilen dikme kirişi iki eş parçaya böler.)
 $[OA]$ 'yı çizelim:
 $|DA|^2 = 6^2 + 8^2 \Rightarrow |OA| = r = 10 cm$
 Çevre $= 2\pi r = 2 \cdot 3 \cdot 10 = 60 cm$

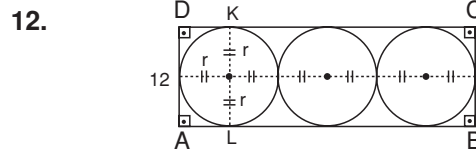
Cevap: A



11.

\widehat{ABC} 'ninde;
 $|BC|^2 = 16^2 + 12^2 \Rightarrow |BC| = 20 cm$ bulunur.
 $|BA| = |BE|$ 'dir.
 $|BA| = |BE| = 16 cm \Rightarrow$
 $|EC| = 20 - 16 = 4 cm$ 'dir.
 $|DC| = |AC| = 12 cm$ 'dir.
 $|BD| = 20 - 12 = 8 cm$
 $|BC| = 20 cm$
 $|DE| = 20 - (8 + 4) = 8 cm$ bulunur.

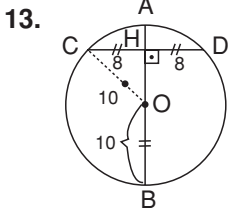
Cevap: A



12.

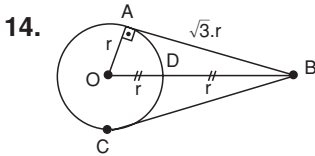
$[KL]$ çemberlerden birinin çapıdır.
 $|KL| = |AD| = 2r = 12 \Rightarrow r = 6 cm$
 $|AB| = 6r = 6 \cdot 6 = 36 cm$ olur.
 $\widehat{C(ABCD)} = 2 \cdot (12 + 36) = 2 \cdot 48 = 96 cm$

Cevap: D



13. [OC]'ni çizelim:
 $|OC| = |OB| = 10$ cm olur. (Yarıçap)
 $|CH| = |HD| = 8$ cm'dir.
 \widehat{CHO} 'ninde;
 $|DH|^2 + 8^2 = 10^2 \Rightarrow |OH| = 6$ cm

Cevap: B



$$\frac{|AB|}{\sqrt{3}} = |OA| \Rightarrow \frac{|AB|}{\sqrt{3}} = r \Rightarrow |AB| = \sqrt{3}.r$$

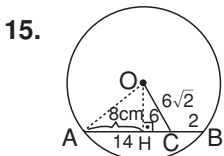
[OA] \perp [AB]'dir. (Merkezden teğet değme noktasına dik inilir.)

\widehat{OAB} 'ninde;
 $|OB|^2 = r^2 + (\sqrt{3}.r)^2 \Rightarrow |OB|^2 = 4r^2$
 $|OB| = 2r$

\widehat{AOB} 'ninde;
 $90^\circ \rightarrow 2r$
 $s(\widehat{AOB}) \rightarrow \frac{2r}{2} \cdot \sqrt{3} \Rightarrow s(\widehat{AOB}) = 60^\circ$ 'dir.

$|AB| = |AC|$ 'dir. (Teğet uzunlukları eşittir.)
 4 ifadede doğrudur.

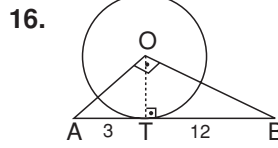
Cevap: D



15. [DH] \perp [AC] olacak şekilde [DH] dikmesini çizelim:
 $|AH| = |HB| = \frac{14 + 2}{2} = 8$ cm olur.

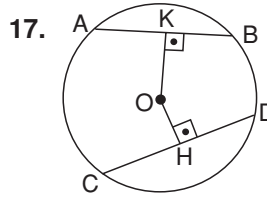
$|HC| = 8 - |BC| = 8 - 2 = 6$ cm olur.
 \widehat{OHC} 'ninde;
 $|DH|^2 + 6^2 = (6\sqrt{2})^2 \Rightarrow |OH| = 6$ cm
 $[DA] = r$ 'yi çizersek;
 $(|OA| = r)^2 = 8^2 + 6^2$
 $|OA| = r = 10$ cm bulunur.

Cevap: D



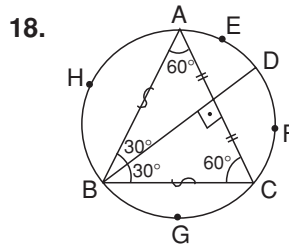
16. [OT]'yi çizelim:
 $[OT] \perp [AB]$ olur. (Merkezden teğet değme noktasına dik inilir.)
 \widehat{ABO} 'ninde;
 $|OT|^2 = |AT| \cdot |TB|$
 $|OT|^2 = 3 \cdot 12$
 $|OT| = 6$ cm bulunur.
 $(|OT| = r)$ 'dir.

Ceva: B



17. $|OH| < |OK| \Rightarrow |CD| > |AB|$ 'dir.
 $4x + 3 > 3x + 5 \Rightarrow x > 2$ bulunur.
 $|CD| = 4x + 3$ 'tür.
 $x > 2 \Rightarrow 4x > 8 \Rightarrow 4x + 3 > 11$
 $|CD| > 11 \Rightarrow |CD| = 12$ olur.

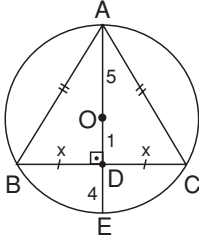
Cevap: A



18. ABC eşkenar üçgen ve $[BD] \perp [AC]$ ise;
 $s(\widehat{A}) = s(\widehat{C}) = 60^\circ$ ve $s(\widehat{ABD}) = s(\widehat{DBC}) = 30^\circ$ dir.
 A) $s(\widehat{AED}) = 2 \cdot s(\widehat{ABD}) = 2 \cdot 30^\circ = 60^\circ$
 $s(\widehat{DFC}) = 2 \cdot s(\widehat{DBC}) = 2 \cdot 30^\circ = 60^\circ$ dir.
 B) $s(\widehat{AHB}) = s(\widehat{ADC})$ dir. ($|AB| = |AC|$ 'dir.)
 C) $s(\widehat{AHB}) = s(\widehat{BGC}) = s(\widehat{ADC}) = 120^\circ$ dir.
 $s(\widehat{AHB}) = 2 \cdot s(\widehat{AED}) = 2 \cdot 60^\circ = 120^\circ$ dir.
 D) $s(\widehat{BGC}) = 120^\circ = 2 \cdot s(\widehat{DFC}) = 2 \cdot 60^\circ = 120^\circ$ dir.
 $\Rightarrow D$ şıkkı yanlıştır.

Cevap: D

19.



$$|BD| = |DC| \text{ olur.}$$

(\widehat{ABC} ikizkenar üçgen)

$$|AD| = 6, |DE| = 4 \Rightarrow$$

$$|AE| = 6 + 4 = 10 \text{ cm'dir.}$$

$$|AD| = |OE| = 5 \text{ cm olur. (Yarıçap)}$$

$$|OD| = 1 \text{ cm olur.}$$

$$|BD| = |DC| = x \text{ olsun}$$

$$|BD| \cdot |DC| = |AD| \cdot |DE| \text{ (Kuvvet formülü)}$$

$$x \cdot x = 6 \cdot 4$$

$$\boxed{x^2 = 24 \text{ cm}} \text{ olur.}$$

\widehat{ADC} 'ninde;

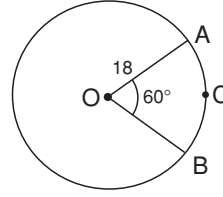
$$|AD|^2 + |DC|^2 = |AC|^2$$

$$6^2 + 24 = |AC|^2$$

$$\boxed{|AC| = \sqrt{60} = 2\sqrt{15} \text{ cm}}$$

Cevap: A

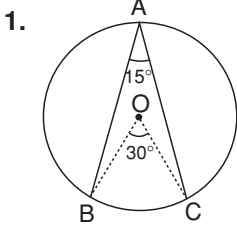
20.



$$|\widehat{ACB}| = \frac{2\pi \cdot 18 \cdot 60^\circ}{360^\circ}$$

$$|\widehat{ACB}| = \frac{2 \cdot 3 \cdot 18 \cdot 60^\circ}{360^\circ} = 18 \text{ cm'dir.}$$

Cevap: B



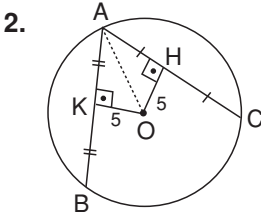
$$s(\widehat{BC}) = 2 \cdot s(\widehat{BAC}) = 2 \cdot 15^\circ = 30^\circ \text{ olur.}$$

[OB] ve [OC] çizilirse;

$$s(\widehat{BOC}) = s(\widehat{BC}) = 30^\circ \text{ olur.}$$

$$(\widehat{BC}) = \frac{2\pi \cdot r \cdot 30^\circ}{360^\circ} = \frac{2 \cdot 3 \cdot \pi \cdot 30^\circ}{360^\circ} = \frac{9}{2} \text{ br'dir.}$$

Cevap: A



$$|OK| = |OH| \Rightarrow |AB| = |AC| \text{ dir.}$$

$$2x + 6 = 5x - 3 \Rightarrow 3x = 9$$

$$x = 3 \text{ cm}$$

$$|AC| = 5x - 3 = 5 \cdot 3 - 3 = 12 \text{ cm'dir.}$$

$$|AH| = |HC| = 6 \text{ cm bulunur.}$$

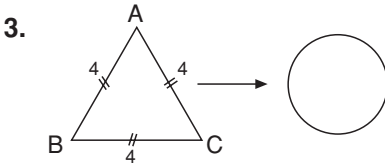
[AO] çizersek;

$$|AO|^2 = |AH|^2 + |OH|^2$$

$$|AO| = \sqrt{61} \text{ bulunur.}$$

$$|AO| = r$$

Cevap: C

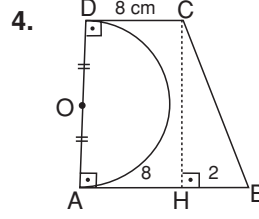


$$\text{Ç}(\widehat{ABC}) = \text{Çemberin Çevresi}$$

$$3 \cdot 4 = 2\pi \cdot r$$

$$12 = 2 \cdot 3 \cdot r \Rightarrow r = 2 \text{ cm}$$

Cevap: B



$$|DO| = |OA| = 3 \text{ cm'dir.}$$

[CH] dikmesi inilir.

$$|DC| = |AH| = 8 \text{ cm}$$

$$|BH| = 10 - 8 = 2 \text{ cm olur.}$$

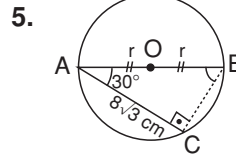
$$|CH| = |DA| = 6 \text{ cm'dir.}$$

\widehat{CHB} 'ninde;

$$|CB|^2 = 6^2 + 2^2$$

$$|CB|^2 = 40 \Rightarrow |CB| = 2\sqrt{10} \text{ cm}$$

Cevap: B



[BC] çizilir:

$$s(\widehat{ACB}) = 90^\circ \text{ olur. (Çapı gören çevre açısı } 90^\circ \text{ dir.)}$$

$$s(\widehat{ABC}) = 60^\circ \text{ olur.}$$

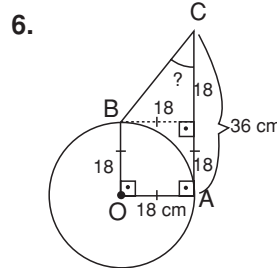
ABC'ninde;

$$\frac{90^\circ}{60^\circ} = \frac{|AB|}{\frac{|AB|}{2}} \cdot \sqrt{3} = 8\sqrt{3}$$

$$|AB| = 16 \text{ cm'dir.}$$

$$|AB| = 16 = 2r \Rightarrow r = 8 \text{ cm 'dir.}$$

Cevap: A



[BH] \perp [AC] olacak şekilde

[BH] dikmesi inilir.

$$|OA| = |OB| = |BH| = |AH| = 18 \text{ cm olur.}$$

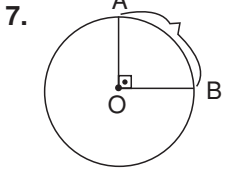
$$|CH| = 36 - 18 = 18 \text{ cm olur.}$$

$$\Rightarrow \widehat{BCH} \text{ ikizkenar üçgen olur.}$$

$$s(\widehat{BCA}) = 45^\circ \text{ dir.}$$

Cevap: B

OKS DERGİSİ

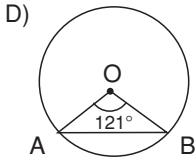


$$\frac{360^\circ}{90^\circ} \times \frac{8\pi}{|\widehat{AB}|}$$

$|\widehat{AB}| = 2\pi$ bulunur.

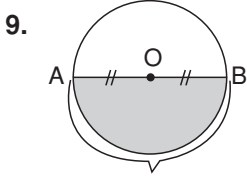
Cevap: A

8. Çemberler eş olduğundan yarıçaplar eştir ve yarıçaplar arasındaki açı büyüdükçe kiriş uzunluğu büyür.



şıkında $|AB|$ kiriş uzunluğu en fazladır.

Cevap: D



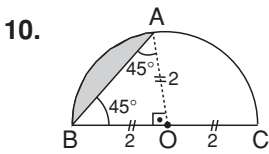
$|AO| = |OB| = r$ olsun.
Boyalı Alan $\rightarrow \frac{\pi r^2}{2} = 18\pi$

$r^2 = 36$

$r = 6 \text{ cm}$

Boyalı Alanın Çevresi $\rightarrow r + r + \frac{2\pi r}{2}$
 $= 6 + 6 + 6\pi$
 $= 12 + 6\pi$

Cevap: D

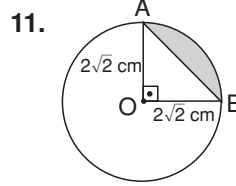


$[OA]$ çizilir.
 $|OA| = |OB| = 2 \text{ cm}$ 'dir.
 $s(\widehat{BAO}) = s(\widehat{ABO}) = 45^\circ$ ve $s(\widehat{AOB}) = 90^\circ$ olur.
Boyalı Alan = $(\widehat{AOB}$ daire dilimi Alanı) - (\widehat{AOB})

$$= \frac{\pi \cdot 2^2 \cdot 90^\circ}{360^\circ} - \frac{2 \cdot 2}{2}$$

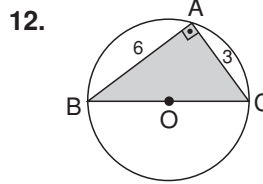
$$= \frac{3 \cdot 4}{4} - \frac{4}{2} = 3 - 2 = 1 \text{ cm}^2$$

Cevap: B



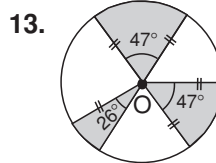
$|OB| = |OA| = 2\sqrt{2} \text{ cm}$ 'dir.
Boyalı Alan = $\frac{\pi \cdot |OB|^2 \cdot 90^\circ}{360^\circ} - \frac{|AO| \cdot |OB|}{2}$
 $= \frac{3 \cdot (2\sqrt{2})^2 \cdot 90^\circ}{360^\circ} - \frac{2\sqrt{2} \cdot 2\sqrt{2}}{2}$
 $= 6 - 4 = 2 \text{ cm}^2$

Cevap: B



$s(\widehat{BAC}) = 90^\circ$ 'dir. ($|BC|$ çap olduğundan)
Boyalı Alan = $\frac{|AB| \cdot |AC|}{2}$
 $= \frac{6 \cdot 3}{2} = 9 \text{ cm}^2$

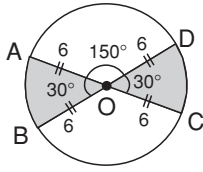
Cevap: B



Dairenin alanı = πr^2
 $= 3 \cdot 152 = 675 \text{ cm}^2$ 'dir.
Boyalı bölgeler $\rightarrow 47^\circ + 47^\circ + 26^\circ$
 $= 120^\circ$ ye karşılık geliyor.
 $\frac{360^\circ}{120^\circ} \times \frac{675 \text{ cm}^2}{?} = \text{Boyalı Alan}$
Boyalı Alan = 225 cm^2 olur.

Cevap: D

14.



$s(\widehat{AOB}) = s(\widehat{DOC}) = 30^\circ$ 'dir.

Boyalı bölge $\rightarrow 30^\circ + 30^\circ = 60^\circ$ 'ye karşılık geliyor.

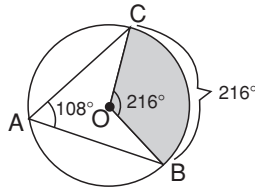
$$\frac{360^\circ}{60^\circ} \times \pi 6^2$$

Boyalı Alan

$$\text{Boyalı Alan} = \frac{\pi 6^2}{6} = 6\pi$$

Cevap: A

15.



$$s(\widehat{BC}) = s(\widehat{BOC}) = 2 \cdot s(\widehat{BAC})$$

$$= 2 \cdot 108^\circ$$

$$= 216^\circ \text{ olur.}$$

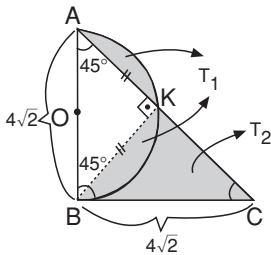
$$\frac{360^\circ}{216^\circ} \times \pi \cdot 10^2$$

Boyalı Alan

$$\text{Boyalı Alan} = \frac{\pi \cdot 10^2 \cdot 216^\circ}{360^\circ} = 60\pi$$

Cevap: A

16.



Boyalı bölgelerin Alanları T_1 ve T_2 olsun.

$[AB] \perp [BC]$ 'dir. (B Teğet değme noktası ve "O" merkezdir.)

$s(\widehat{BAC}) = 45^\circ = s(\widehat{BCA})$ 'dir.

$[BK]$ çizilir.

$s(\widehat{KB}) = 90^\circ$ 'dir. ($[AB]$ çap olduğundan)

$s(\widehat{ABK}) = 45^\circ$ olur.

ABK üçgeni ikizkenar üçgendir.

$|AK| = |BK|$ olduğundan

$[BK]$ ile KB arasında kalan alan da T_1 olur.

$$\text{Taralı Alanlar Toplamı} = T_1 + T_2$$

$$= A(\widehat{AKC}) \text{'dir.}$$

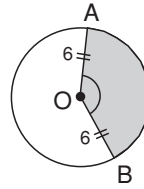
\widehat{BKC} ikizkenar üçgen olur.

$|BK| = |KC| = 4$ 'tür. ($90^\circ - 45^\circ - 45^\circ$)

$$T_1 + T_2 = A(\widehat{BKC}) = \frac{4 \cdot 4}{2} = 8 \text{ cm}^2$$

Cevap: C

17.



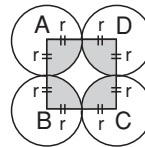
$$\text{Boyalı Alan} = \frac{\pi \cdot r^2 \cdot s(\widehat{AOB})}{360^\circ}$$

$$36 = \frac{3 \cdot 6^2 \cdot s(\widehat{AOB})}{2}$$

$s(\widehat{AOB}) = 120^\circ$ olur.

Cevap: B

18.



Her birinin yarıçapı r olsun.

$|AB| = |BC| = |CD| = |AD| = 2r$ olur.

$\text{Ç}(ABCD) = 4 \cdot 2r = 32 \Rightarrow [r = 4 \text{ cm}]$ bulunur.

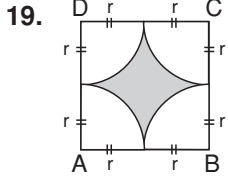
Boyalı bölgelerin her biri çeyrek daireyi gösterir.

O halde Boyalı bölgelerin tamamı 4 tane çeyrek daire = 1 tane daireyi gösterir.

$$\text{Boyalı bölgenin alanı} = \pi r^2$$

$$= 3 \cdot 42 = 48 \text{ cm}^2$$

Cevap: C



Boyalı olmayan Alan = 1 daire alanı

$$\pi \cdot r^2 = 25 \Rightarrow 3 \cdot r^2 = 25$$

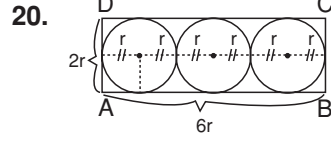
$$r^2 = \frac{25}{3} \text{ tür.}$$

Boyalı Alan = (Karenin alanı - 1 daire Alanı)

$$= (2r)^2 - \pi r^2$$

$$= 4r^2 - \pi r^2 = 4 \cdot \frac{25}{3} - 3 \cdot \frac{25}{3} = \frac{25}{3}$$

Cevap: A



Yukarıdaki verilere göre

$$\Ç(ABCD) = 2 \cdot (2r + 6r)$$

$$112 = 16r$$

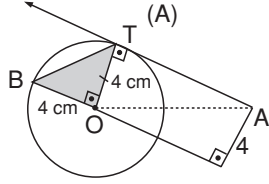
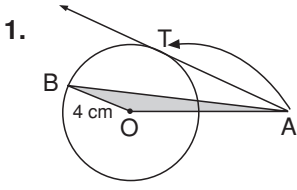
$$r = 7 \text{ cm olur.}$$

$$\text{Dairenin Alanı} = \pi r^2$$

$$= 3 \cdot 7^2$$

$$= 147 \text{ cm}^2$$

Cevap: C



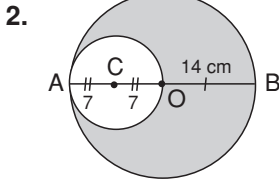
$$A(\widehat{BOA}) = \frac{|BO| \cdot |OA|}{2} = \frac{4 \cdot 4}{2} = 8 \text{ cm}^2$$

Cevap:
D

Not:

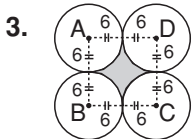
[BO] // [AT] olduğundan |BO| sabit olmak koşuluyla A'yı T noktasına taşıyabiliriz.

[OT] ⊥ [AT] olur. ⇒ [BO] ⊥ [OT] olur (İç ters açılar)



|AC| = |OC| = 7 cm ⇒ |AO| = |OB| = 14 cm olur.
Boyalı Alan = (Büyük dairenin Alanı – Küçük Dairenin Alanı)
= π · 14² – π · 7² = 147π olur.

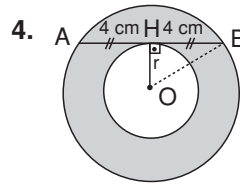
Cevap: C



Çemberlerin merkezleri A, B, C ve D olsun.
Boyalı Alan = (ABCD) – 4 çeyrek dairenin alanı
1 daire alanı

$$\begin{aligned} &= 12^2 - \pi \cdot 6^2 \\ &= 12^2 - 3 \cdot 6^2 \\ &= 144 - 108 = 36 \text{ cm}^2 \end{aligned}$$

Cevap: C



[OH] ⊥ [AB]'dir. (Merkezden teğete dik inilir.)

|AH| = |HB| olur. (Merkezden kirişe indirilen dikme kirişi iki eş parçaya ayırır.)

|OH| = r olsun

[OB]'yi çizelim:

|OB| = R olsun.

\widehat{OHB} 'ninde;

$$|OB|^2 = |OH|^2 + |HB|^2$$

$$12^2 = r^2 + 4^2$$

$$\boxed{R^2 - r^2 = 16}$$

Boyalı Alan = Büyük Dairenin Alanı – Küçük Dairenin Alanı

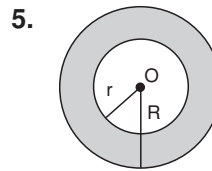
$$= \pi R^2 - \pi r^2$$

$$= \pi (R^2 - r^2)$$

$$16$$

$$= 16\pi$$

Cevap: B



Boyalı Alan = πR² – πr² dir.

$$33 = \pi(R^2 - r^2)$$

$$33 = 3 \cdot (R^2 - r^2)$$

$$11 = R^2 - r^2 \Rightarrow 11 = \underbrace{(R-r)}_1 \underbrace{(R+r)}_{11}$$

$$\Rightarrow R + r = 11$$

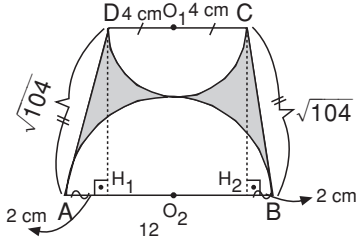
$$+ R - r = 1$$

$$\boxed{R = 6} \text{ ve } \boxed{r = 5} \text{ bulunur.}$$

D) şıkkı yanlıştır.

Cevap: D

6.



[DH₁] ve [CH₂] dikmeleri çizilir:
 $|AH_1| = |BH_2| = \frac{12 - 8}{2} = 2$ cm olur.

$\widehat{ADH_1}$ 'inde;

$$(\sqrt{104})^2 = |DH_1|^2 + 2^2$$

$$|DH_1| = 10 \text{ cm} = |CH_2| \text{ bulunur.}$$

Boyalı Alan = (A(ABCD) – Yarım daire alanlar toplamı)

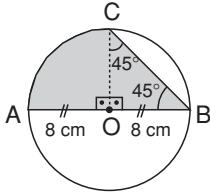
$$\text{Boyalı Alan} = \left(\frac{12 + 8}{2}\right) \cdot 10 - \left(\frac{\pi \cdot 4^2}{2} + \frac{\pi \cdot 6^2}{2}\right)$$

$$= 100 - (24 + 54)$$

$$= 22 \text{ cm}^2$$

Cevap: B

7.



$$|AO| = |OB| = \frac{|AB|}{2} = \frac{16}{2} = 8 \text{ cm}$$

[OC] çizilir.

$$|OC| = |OB| = |AO| = 8 \text{ cm'dir.}$$

\widehat{OBC} ikizkenar dik üçgen olur.

$$s(\widehat{OCB}) = 45^\circ \text{ ve } s(\widehat{COB}) = 90^\circ \text{ dir.}$$

Boyalı Alan = (AOC dörtte bir daire dilimi alanı + A(\widehat{COB}))

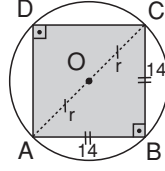
$$\text{Boyalı Alan} = \frac{\pi 8^2}{4} + \frac{|OC| \cdot |OB|}{2}$$

$$= \frac{3 \cdot 8^2}{4} = \frac{8 \cdot 8}{2}$$

$$= 48 + 32 = 80 \text{ cm}^2$$

Cevap: D

8.



[AC]'yi çizerek "O" dan geçer.

$s(\widehat{AOC}) = s(\widehat{ABC}) = 90^\circ$ dir. (Çapı gören çevre açısı 90° dir.)

$$A(\text{ABCD}) = (|AB|)^2$$

$$196 = (|AB|)^2 \Rightarrow |AB| = 14 \text{ cm olur.}$$

[AC] köşegendir.

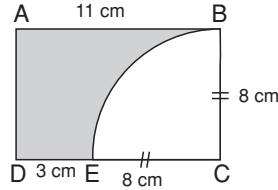
$$\widehat{ABC}'inde \rightarrow |AC| = |AB| \cdot \sqrt{2} (90^\circ - 45^\circ - 45^\circ)$$

$$|AC| = 14\sqrt{2} \text{ olur.}$$

$$|AC| = 2r \Rightarrow 14\sqrt{2} = 2r \Rightarrow \boxed{r = 7\sqrt{2} \text{ cm}}$$

Cevap: B

9.



$$|BC| = |EC| \text{ olur. (Yarıçap)}$$

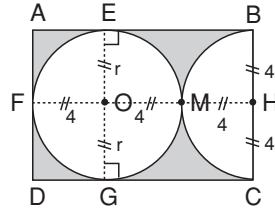
Boyalı Alan = (A(ABCD) – Çeyrek daire alanı)

$$= 11 \cdot 8 - \frac{3 \cdot 8^2}{4}$$

$$= 88 - 48 = 40 \text{ cm}^2$$

Cevap: A

10.



$$|BH| = |HC| = 4 \text{ cm}$$

$$|AD| = |BC| = 8 \text{ cm olur.}$$

$$|EO| = |OG| = r \text{ olsun.}$$

$$|EG| = 2r = |AD| = 8$$

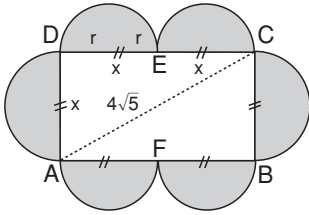
$$r = 4 \text{ cm olur.}$$

$$|GH| = |DC| = 12 \text{ cm olur.}$$

Boyalı Alan = (A(ABCD) – (Daire alanı + Yarım daire alanı))

$$\begin{aligned}
 &= |AD| \cdot |DC| - (\pi \cdot 4^2 + \frac{\pi \cdot 4^2}{2}) \\
 &= 8 \cdot 12 - (3 \cdot 42 + \frac{3 \cdot 4^2}{2}) \\
 &= 96 - (48 + 24) \\
 &= 24 \text{ cm}^2
 \end{aligned}$$

11.

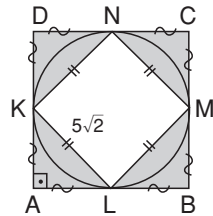


$|DE| = |EC| = |AD| = x$ olsun.
 $\triangle ADC$ 'ninde $\angle AEC$ $(4\sqrt{5})^2 = x^2 + (2x)^2$
 $80^\circ = 5x^2$
 $x^2 = 16 \Rightarrow x = 4 \text{ cm}$ olur.
 6 yarım daire = 3 tam daire'dir.
 $|DE| = x = 4 \text{ cm} \Rightarrow r = \frac{|DE|}{2} = \frac{4}{2} = 2 \text{ cm}$ olur.

Toplam alan = 3 · (Daire Alanı)
 $= 3 \cdot \pi \cdot r^2 = 3 \cdot 3 \cdot 2^2 = 36 \text{ cm}^2$

Cevap: B

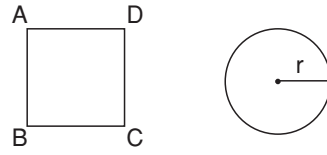
12.



$|KL| = |LM| = |MN| = |KN|$ 'dir.
 $A(KLMN) = |KL|^2$
 $50 = |KL|^2 \Rightarrow |KL| = 5\sqrt{2} \text{ cm}$
 $\triangle AKL, \triangle DKN, \triangle NCM, \triangle MBL$ üçgenleri eş üçgenler olur.
 Alanları eşittir.
 $|AK| = |AL|$ 'dir.
 $|KL| = |AK| \cdot \sqrt{2} \quad (90^\circ - 45^\circ - 45^\circ)$
 $5\sqrt{2} = |AK| \cdot \sqrt{2} \Rightarrow |AK| = 5 \text{ cm}$
 Boyalı Alanlar Toplamı = 4 · $A(\triangle AKL)$
 $= 4 \cdot \frac{5 \cdot 5}{2} = 50 \text{ cm}^2$

Cevap: B

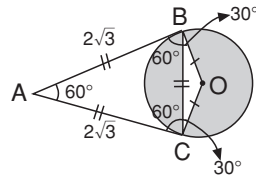
13.



$\text{Ç}(ABCD) = 4 \cdot |AB| \quad 2\pi r = 12$
 $12 = 4 \cdot |AB| \quad 23 \cdot r = 12$
 $|AB| = 3 \text{ cm} \quad r = 2 \text{ cm}$
 $\frac{\text{Karenin Alanı}}{\text{Dairenin Alanı}} = \frac{3^2}{3 \cdot 2^2} = \frac{9}{12} = \frac{3}{4}$

Cevap: B

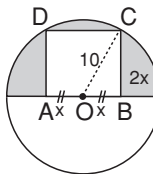
14.



$s(\widehat{ABC}) = s(\widehat{ACB}) = 60^\circ$ dir.
 $[OB] \perp [AB]$ 'dir.
 $s(\widehat{CBO}) = 30^\circ$ olur.
 $|OB| = |OC|$ (yarıçap)
 $s(\widehat{OBC}) = s(\widehat{OCB}) = 30^\circ$ olur.
 $s(\widehat{BOC}) = 180 - 2 \cdot 30^\circ = 120^\circ$ olur.
 $|BC| = (|OB| = |OC|) \cdot \sqrt{3} \quad (120^\circ - 30^\circ - 30^\circ)$
 $2\sqrt{3} = |OB| \cdot \sqrt{3} \Rightarrow |OB| = |OC| = 2 \text{ cm}$ olur.
 Boyalı Alan = Daire alanı - $A(\widehat{BOC})$
 $= \pi \cdot 2^2 - \frac{1}{2} \cdot |OB| \cdot |OC| \cdot \sin 120^\circ$
 $= 4\pi - \frac{1}{2} \cdot 2 \cdot 2 \cdot \frac{\sqrt{3}}{2}$
 $= 4\pi - \sqrt{3}$

Cevap: A

15.

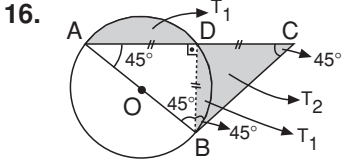


$[DC] = r$ 'yi çizelim:
 $|OC| = 10 \text{ cm}$ 'dir.
 $|AO| = |OB| = x$ olsun
 $\Rightarrow |AB| = |BC| = 2x$ olur.

$\triangle OBC$ 'ninde $\rightarrow 10^2 = x^2 + (2x)^2$
 $100 = 5x^2 \Rightarrow x = 2\sqrt{5} \text{ cm}$ olur.
 Boyalı Alanlar Toplamı = Yarım Daire Alanı - $A(ABCD)$
 $= \frac{\pi \cdot 10^2}{2} - (2x)^2$
 $= 50\pi - 4 \cdot 20$
 $= 50\pi - 80$

Cevap: D

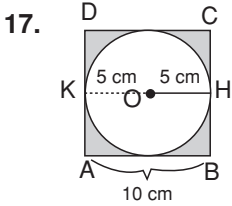
OKS DERGİSİ



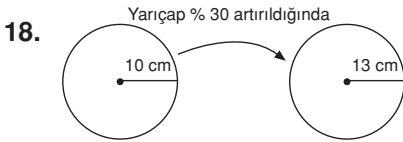
[DB]'yi çizelim
 $s(\widehat{ADB}) = 90^\circ$ olur. (Çapı görüyoruz)
 $s(\widehat{DAB}) = s(\widehat{DBA}) = 45^\circ$ olur.
 $|AD| = |DB|$ 'dir.
 $|AD|$ ve $|DB|$ kirişleri ile yaylar arasında kalan alanlar eşittir.
 Boyalı Alanlar Toplamı = $T_1 + T_2$ 'dir.
 $[AB] \perp [BC]$ 'dir. (B teğet değme noktasıdır.)
 $s(\widehat{DBC}) = s(\widehat{DCB}) = 45^\circ$ ve
 $|DB| = |DC|$ olur.
 $\Rightarrow |AD| = |BD| = |DC| = x$ olsun
 Boyalı Alanlar Tolamı = $A(\widehat{DBC})$
 $T_1 + T_2 = A(\widehat{DBC})$ 'dir.
 $16 = \frac{|DC| \cdot |DB|}{2} = \frac{x^2}{2}$

$$x^2 = 32 \Rightarrow |x| = 4\sqrt{2}$$

$$A(\widehat{ABC}) = \frac{|AC| \cdot |BD|}{2} = \frac{2x \cdot x}{2} = x^2 = 32 \text{ cm}^2$$



$|OK| = |OH| = 5 \text{ cm}$ olur.
 $|HK| = |AB| = 10 \text{ cm}$ olur.
 Boyalı Alan = $A(ABCD) - \text{Dairenin Alanı}$
 $= 10^2 - 3 \cdot 5^2$
 $= 100 - 75 = 25 \text{ cm}^2$

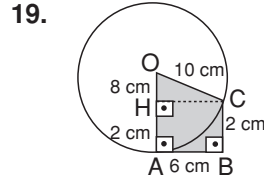


$$\pi r^2 = 3 \cdot 10^2 = 300 \text{ cm}^2$$

$$\pi r^2 = 3 \cdot 13^2 = 507 \text{ cm}^2$$

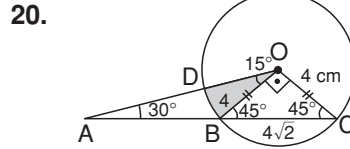
207 cm² artar.

Cevap: B



$[OA] \perp [AB]$ 'dir. (A noktası teğet değme noktası)
 $[CH]$ dikmesini inelim:
 $|CH| = |AB| = 6 \text{ cm}$ olur.
 \widehat{OHC} 'inde $\rightarrow 10^2 = 6^2 + |OH|^2$
 $|OH| = 8 \text{ cm}$ olur.
 $|HA| = |BC| = 2 \text{ cm}$ 'dir.
 $A(ABCD) = \frac{(|BC| + |OA|)}{2} \cdot |AB|$
 $= \frac{2 + 10}{2} \cdot 6$
 $= 6 \cdot 6 = 36 \text{ cm}^2$

Cevap: C



$|OB| = |OC|$ 'dir.
 $|BC| = (|OB| = |OC|) \cdot \sqrt{2} (90^\circ - 45^\circ - 45^\circ)$
 $4\sqrt{2} = |OB| \cdot \sqrt{2}$
 $|OB| = |OC| = 4 \text{ cm}$
 $s(\widehat{OBC}) = s(\widehat{OCB}) = 45^\circ$ olur.
 $s(\widehat{OAB}) + s(\widehat{DOB}) = s(\widehat{OBC})$
 $30^\circ + s(\widehat{DOB}) = 45^\circ$
 $s(\widehat{DOB}) = 15^\circ$ olur.

Boyalı bölge 15° ile gösteriliyor.
 $360^\circ \times \frac{\pi 4^2}{360} = \pi 4^2$
 $15^\circ \times \frac{\pi 4^2}{360} = \text{Boyalı Alan}$

$$\text{Boyalı Alan} = \frac{\pi \cdot 4^2 \cdot 15}{360} = \frac{16\pi}{24}$$

$$= \frac{2\pi}{3} \cdot 6.2$$

Cevap: B