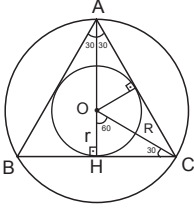


1.



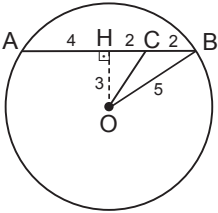
[AH] çizilirse $m(\widehat{BAH}) = m(\widehat{HAC}) = 30^\circ$ olur.

$|OC| = R$, $|OH| = r$ ise 30° , 60° , 90° üçgeninden

$R = 2r$ olur.

CEVAP: D

2.



[OH] çizilirse, merkezden kirişe indirilen dikme kirişi iki eşit parçaya ayırdığından $|AH| = |HB| = 4$ cm dir.

OHB dik üçgeninde pisagor bağıntısından $|OH|^2 + 4^2 = 5^2 \Rightarrow |OH| = 3$ cm OHC dik üçgeninde pisagor bağıntısından

$$3^2 + 2^2 = |OC|^2 \Rightarrow |OC|^2 = 13$$

$$|OC| = \sqrt{13} \text{ dir.}$$

CEVAP: B

3.

$$|AB| + |CD| = |AD| + |BC| = u \text{ ise}$$

$$u = 12 + 4 = 16 \text{ cm}$$

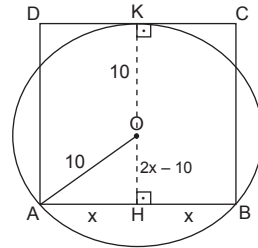
$$A(ABCD) = u \cdot r$$

$$= 16 \cdot 3$$

$$= 48 \text{ cm}^2 \text{ dir.}$$

CEVAP: D

4.



$[OH] \perp [AB]$ ve $[OK] \perp [DC]$

$|OA| = 10$ cm $|AH| = |HB| = x$ ise $|OH| = 2x - 10$ cm olur.

OAH dik üçgeninde pisagor bağıntısından, $10^2 = x^2 + (2x - 10)^2$

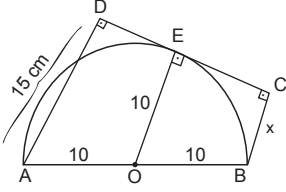
$$x = 8 \text{ dir.}$$

Buna göre, $|CD| = 16$ cm dir.

CEVAP: E



5.



yarım çemberin merkezi O olsun.

[OE] \perp [DC] çizelim

|OE| = 10 cm olur.

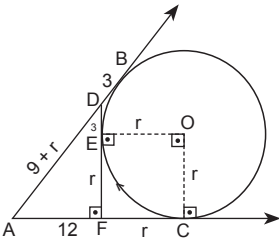
[OE], ABCD dik yamuğun orta tabanı olduğu için

$$10 = \frac{15 + |BC|}{2}$$

|BC| = 5 cm dir.

CEVAP: C

6.



[OC] \perp [AC ve [OE] \perp [DF] çizelim. |OC| = |EF| = |FC| = r

|AC| = |AB| = 12 + r ise |AD| = 9 + r olur.

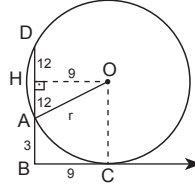
ADF dik üçgeninde pisagor bağıntısından,

$$(9 + r)^2 = (12)^2 + (3 + r)^2$$

r = 6 cm dir.

CEVAP: D

7.



B noktasına göre kuvvet uygularsak

$$9^2 = 3 \cdot (3 + |AD|)$$

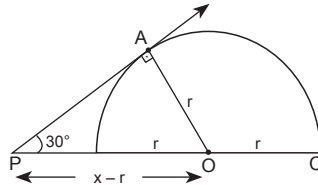
$$81 = 3 \cdot (3 + |AD|) \Rightarrow |AD| = 24 \text{ cm}$$

[OH] \perp [AD] çizersek |DH| = |HA| = 12 cm olur. AOH dik üçgeninde pisagor bağıntısından

$$9^2 + 12^2 = r^2 \Rightarrow r = 15 \text{ cm dir.}$$

CEVAP: D

8.



[OA] \perp [PA çizelim.

|OA| = |OC| = r

AOP dik üçgeninde

$$\frac{|PO|}{2} = |OA| \Rightarrow \frac{x - r}{2} = r$$

$$\Rightarrow x - r = 2r$$

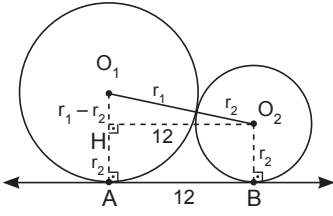
$$\Rightarrow x = 3r$$

$$r = \frac{x}{3}$$

CEVAP: E



9.



[AB] // [HO₂] olacak şekilde [HO₂] çizelim.

HO₁O₂ diküçgeninde

$$(r_1 + r_2)^2 = (r_1 - r_2)^2 + 12^2$$

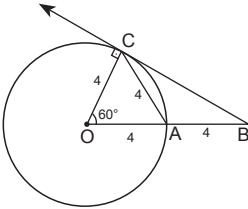
$$r_1^2 + 2r_1r_2 + r_2^2 = r_1^2 - 2r_1r_2 + r_2^2 + 144$$

$$4r_1r_2 = 144$$

$$r_1r_2 = 36 \text{ cm dir.}$$

CEVAP: E

10.



COB üçgeninde [CA] kenar ortaydır.

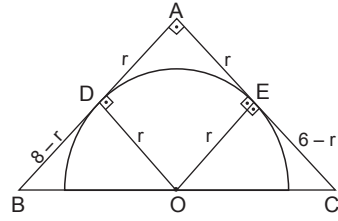
|OA| = |CA| = |AB| = 4 cm dir.

$$A(\triangle COA) = A(\triangle ABC) = \frac{4^2 \sqrt{3}}{4}$$

$$= 4\sqrt{3} \text{ cm}^2 \text{ dir.}$$

CEVAP: C

11.



|OD| = |OE| = |AE| = |AD| = r

|BD| = 8 - r

$\triangle BDO \sim \triangle BAC$

$$\frac{8-r}{8} = \frac{r}{6}$$

$$48 - 6r = 8r$$

$$14r = 48$$

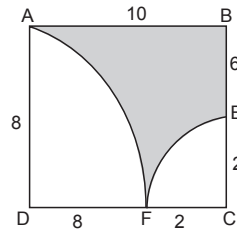
$$r = \frac{48}{14}$$

$$r = \frac{24}{7} \text{ dir.}$$

$$r = \frac{24}{7} \text{ dir.}$$

CEVAP: D

12.



Taralı alan

$$= 100 - \left[\frac{\pi \cdot 2^2}{4} + \frac{\pi \cdot 8^2}{4} \right]$$

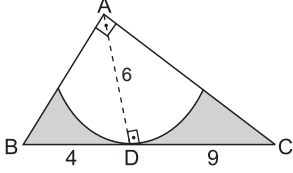
$$= 100 - [\pi + 16\pi]$$

$$= 100 - 17\pi \text{ dir.}$$

CEVAP: D



13.



[AD] \perp [BC] çizelim

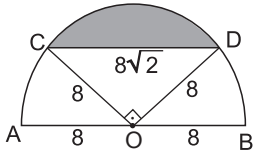
ABC dik üçgeninde öklit bağıntısından

$$|AD|^2 = 4 \cdot 9 \Rightarrow |AD| = 6 \text{ cm}$$

$$\begin{aligned} \text{Taralı alan} &= \frac{13 \cdot 6}{2} - \frac{\pi \cdot 6^2 \cdot 90}{360} \\ &= 39 - 9\pi \text{ dir.} \end{aligned}$$

CEVAP: B

14.



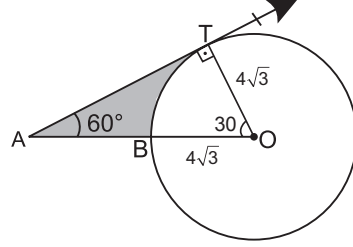
$$|OA| = |OB| = |OC| = |OD| = 8 \text{ cm}$$

olduğundan OCD üçgeni ikiz kenar dik üçgendir.

$$\begin{aligned} \text{Taralı alan} &= \frac{\pi \cdot 8^2 \cdot 90}{360} - \frac{8 \cdot 8}{2} \\ &= \frac{3 \cdot 64}{4} - 32 \\ &= 48 - 32 \\ &= 16 \text{ cm}^2 \text{ dir.} \end{aligned}$$

CEVAP: C

15.



ATO dik üçgeninde $m(\widehat{TOA}) = 30^\circ$

[OT] \perp [AT] çizelim

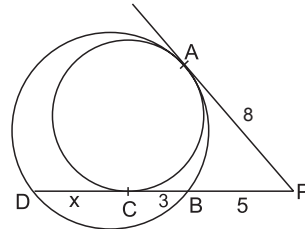
$$|OT| = 4\sqrt{3} \quad |AT| = 4 \text{ cm olur.}$$

Buna göre, taralı alan

$$\begin{aligned} &= \frac{4\sqrt{3} \cdot 4}{2} - \frac{\pi \cdot (4\sqrt{3})^2 \cdot 30}{360} \\ &= 8\sqrt{3} - 12 \text{ dir.} \end{aligned}$$

CEVAP: D

16.



$$|PA| = |PC| = 8$$

P noktasına göre, kuvvet uygularsak

$$8^2 = 5 \cdot (8 + x)$$

$$64 = 40 + 5x$$

$$24 = 5x$$

$$x = \frac{24}{5} \text{ dir.}$$

CEVAP: B

