

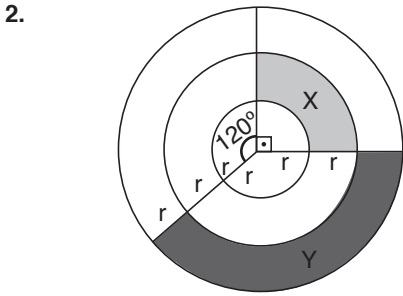
1.  $\left\{ \begin{array}{l} \text{Dairenin çevresi} = 2\pi r \\ \text{Karenin çevresi} = 4a \end{array} \right.$

$\text{Dairenin alanı} = \pi r^2$   
 $\text{Karenin alanı} = a^2$   
 $\pi r^2 = a^2$

$$\frac{2\pi r}{4a} = \frac{\pi r}{2a} = \frac{\pi}{2} \cdot \frac{1}{\sqrt{\pi}}$$

$$= \frac{\sqrt{\pi}}{2}$$

Cevap: C



$$X = \frac{90}{360} \cdot \pi \cdot (2r)^2 - \frac{90}{360} \pi \cdot r^2$$

$$= \frac{1}{4} \pi (4r^2 - r^2)$$

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

$$Y = \frac{150}{360} \cdot \pi \cdot (3r)^2 - \frac{150}{360} \cdot \pi \cdot (2r)^2$$

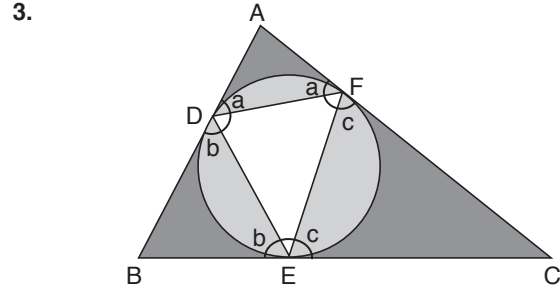
$$= \frac{15}{36} \pi (9r^2 - 4r^2)$$

$$= \frac{15}{36} \pi \cdot 5r^2$$

$$\sqrt{\frac{x}{y}} = \sqrt{\frac{\frac{3\pi r^2}{4}}{\frac{15.5\pi \cdot r^2}{36}}} = \sqrt{\frac{\frac{3}{4}}{\frac{15.5}{36}}} = \sqrt{\frac{3}{4} \cdot \frac{36}{15.5}}$$

$$= \frac{6}{2.5} = \frac{3}{5}$$

Cevap: E



$$3m(\hat{A}) = 5m(\hat{B}) = 15m(\hat{C}) = 15t$$

$$\left. \begin{array}{l} m(\hat{A}) = 5t \\ m(\hat{B}) = 3t \\ m(\hat{C}) = t \end{array} \right\} \begin{array}{l} \text{Toplamı } 180 \\ 9t = 180 \\ \boxed{t = 20} \end{array}$$

$$\left. \begin{array}{l} m(\hat{D}) = 180 - (a + b) \\ m(\hat{F}) = 180 - (a + c) \\ m(\hat{E}) = 180 - (b + c) \end{array} \right\} \begin{array}{l} m(\hat{D}) + m(\hat{F}) - m(\hat{E}) \\ = 180 - 2a - b - c + b + c \\ = 180 - 2a \dots\dots\dots \textcircled{1} \end{array}$$

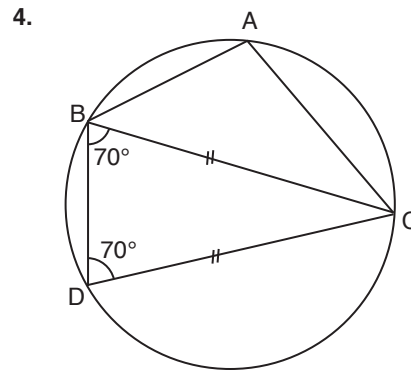
$$m(\hat{A}) + a + a = 5t + 2a = 180$$

$$2a = 180 - 5t$$

$$\boxed{2a = 80}$$

O halde  $\textcircled{1}$  sonucu  $180 - 2a = 180 - 80 = 100$

Cevap: A



$$|BC| = |CD|$$

$$m(\hat{DBC}) = 70$$

$$m(\hat{BDC}) = 70$$

$$m(\hat{BCD}) = 40$$

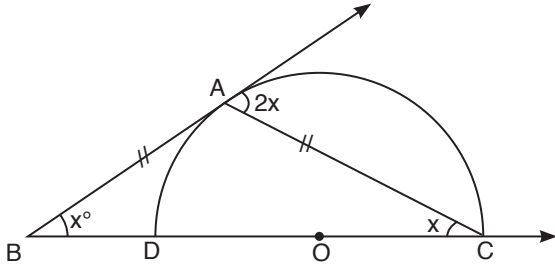
$$m(\hat{BD}) = 80$$

$$m(\hat{DC}) = 140$$

$$m(\hat{BAC}) = \frac{220}{2} = 110$$

Cevap: A

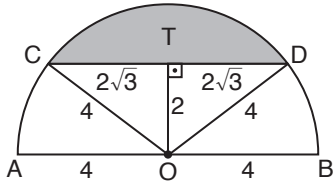
5.



$$\begin{aligned} m(\widehat{AC}) &= 4x \text{ "Çevre aç\u0131"} \\ m(\widehat{AD}) &= 2x \text{ "Çevre aç\u0131"} \\ 4x + 2x &= 180 \Rightarrow \boxed{x = 30} \end{aligned}$$

Cevap: D

6.



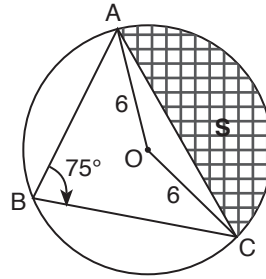
$$\begin{aligned} |CT| &= |TD| = 2\sqrt{3} \\ |OD| &= 4 \\ m(\widehat{COD}) &= \alpha \\ (4\sqrt{3})^2 &= 4^2 + 4^2 - 2 \cdot 4 \cdot 4 \cdot \cos\alpha \\ 48 &= 16 + 16 - 32 \cdot \cos\alpha \\ 32 \cdot \cos\alpha &= -16 \\ \cos\alpha &= -\frac{1}{2} \Rightarrow \alpha = 120 \end{aligned}$$

Taralı alan

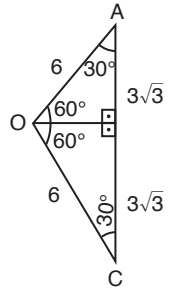
$$\begin{aligned} \frac{120}{360} \cdot \pi \cdot 4^2 - \frac{2 \cdot 4 \cdot 4 \sqrt{3}}{2} \\ = \frac{16\pi}{3} - 4\sqrt{3} \end{aligned}$$

Cevap: A

7.

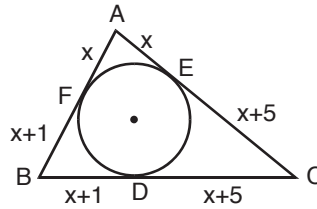


$$\begin{aligned} |AO| &= 6 \text{ yani yarıçap.} \\ m(\widehat{AC}) &= 150 \\ m(\widehat{AOC}) &= 150 \\ \text{Taralı alan} &= \frac{150}{360} \cdot \pi \cdot 6^2 - \frac{3 \cdot 6 \sqrt{3}}{2} \\ &= 15\pi - 93 \end{aligned}$$



Cevap: E

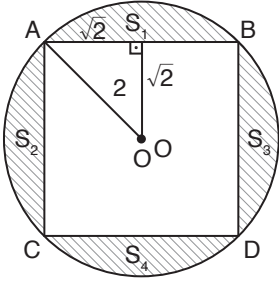
8.



$$\begin{aligned} |AB| + |BC| + |CA| &= 42 \text{ cm} \\ 2x + 1 + 2x + 6 + 2x + 5 &= 42 \\ 6x + 12 &= 42 \\ 6x &= 30 \\ x &= 5 \end{aligned}$$

Cevap: A

9.

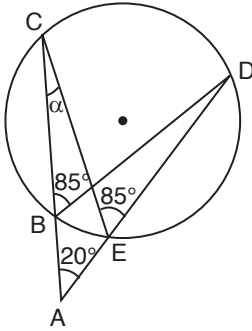


Karenin bir kenarı  
45 - 45 - 90 üçgeninden  
 $2\sqrt{2}$  olur.

$$S_1 + S_2 + S_3 + S_4 = \pi \cdot 2^2 - (2\sqrt{2})^2 = 4\pi - 8$$

Cevap: A

10.



$$m(\widehat{CD}) = 170$$

$$m(\widehat{CED}) = 85$$

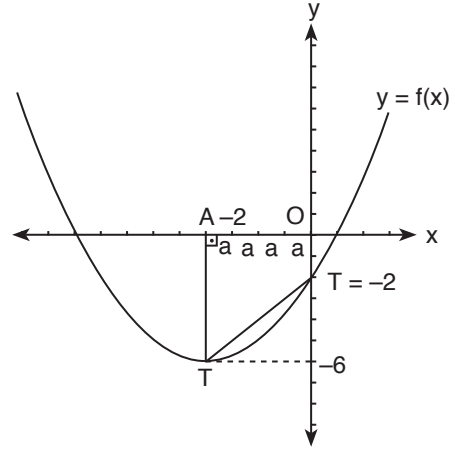
$$m(\widehat{ACE}) = 65 \rightarrow \text{iki iç bir dış}$$

$$a + 20 = 85$$

$$\alpha = 65$$

Cevap: C

11.



$$y = f(x) = x^2 + 4x + 2m - 4$$

$$r = \frac{-4}{2} = -2$$

A'nın apsisi -2

$$x = -2 \text{ iken } y = -6$$

$$-6 = (-2)^2 + 4(-2) + 2m - 4$$

$$-6 = 4 - 8 + 2m - 4$$

$$2 = 2m$$

$$1 = m$$

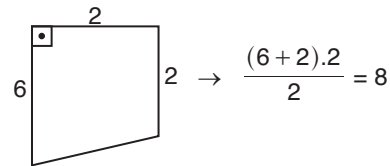
$x = 0$  için

T'nin ordinatı

$$y = 0^2 + 4 \cdot 0 + 2m - 4$$

$$y = -2$$

AOBT yamuğu



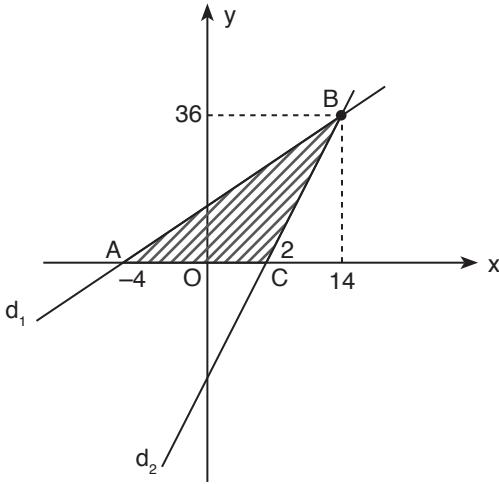
Cevap: D

$$12. |\vec{A} \cdot \vec{B}| = |(-3) \cdot 2 + 2 \cdot 1 + (-1) \cdot 3|$$

$$= |-6 + 2 - 3| = |-7| = 7$$

Cevap: E

13.



$$d_1 \rightarrow y = 2x + 8 \Rightarrow 0 = 2x + 8 \Rightarrow x = -4$$

$$d_2 \rightarrow y = 3x - 6 \Rightarrow 0 = 3x - 6 \Rightarrow x = 2$$

$$\begin{cases} y = 2x + 8 \\ y = 3x - 6 \end{cases} \Rightarrow 2x + 8 = 3x - 6$$

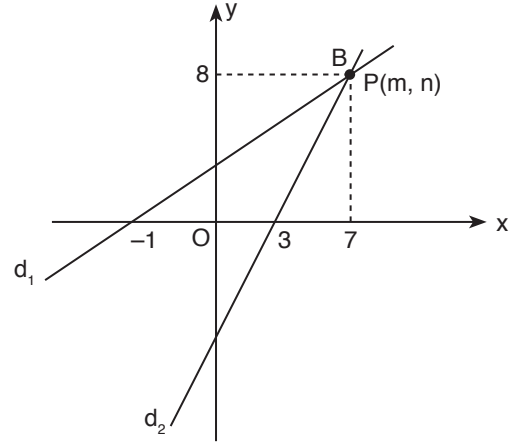
$$\boxed{14 = x}$$

$$y = 2 \cdot 14 + 8 = 36$$

$$\text{Bölge alanı} = \frac{36 \cdot 6}{2} = 108$$

Cevap: A

14.



$$d_1 \rightarrow y = 2x + 6 \Rightarrow 0 = 2x - 6 \quad x = 3$$

$$d_2 \rightarrow y = x + 1 \Rightarrow 0 = x + 1 \quad x = -1$$

$$\begin{cases} y = 2x - 6 \\ y = x + 1 \end{cases} \Rightarrow 2x - 6 = x + 1$$

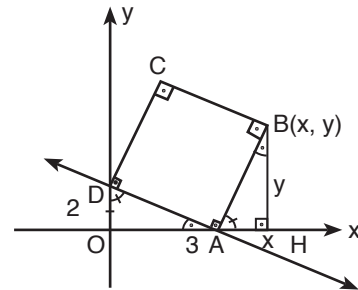
$$x = 7$$

$$y = x + 1 \Rightarrow y = 7 + 1 = 8$$

$$\begin{cases} m = 7 \\ n = 8 \end{cases} \Rightarrow m + n = 15$$

Cevap: E

15.



$$d: 2x + 3y - 6 = 0$$

$$x = 0 \text{ için } y = 2$$

$$y = 0 \text{ için } x = 3$$

DOA ve BHA üçgenleri benzerdir.

$$\frac{3}{y} = \frac{2}{x-3} = \frac{1}{1}$$

$$\frac{3}{y} = 1 \Rightarrow \boxed{y = 3}$$

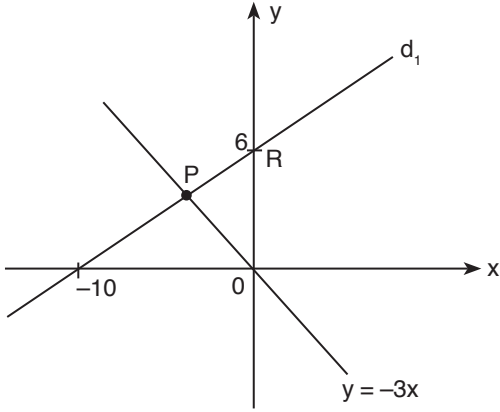
$$\frac{2}{x-3} = 1 \Rightarrow 2 = x - 3$$

$$\boxed{x = 5}$$

$$x + y = 3 + 3 = 6$$

Cevap: C

16.



$$d_1 \text{ doğrusu denklemini } \frac{x}{-10} + \frac{y}{6} = 1$$

$$\frac{-3x}{30} + \frac{5y}{30} = 1$$

$$-3x + 5y = 30$$

$$y = \frac{30 + 3x}{5}$$

$$P \text{ noktası için } -3x = \frac{30 + 3x}{5}$$

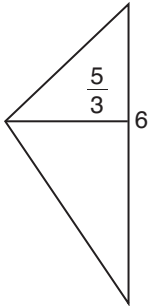
$$-15x = 30 + 3x$$

$$-18x = 30$$

$$x = -\frac{5}{3}$$

$$y = -3\left(-\frac{5}{3}\right) = 5$$

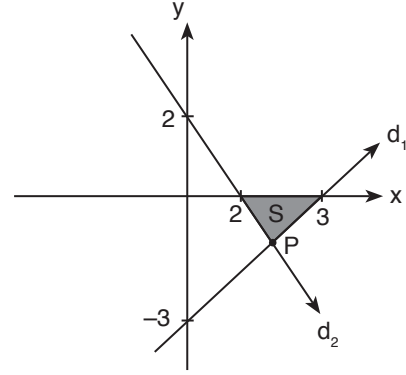
POR üçgen



$$\text{alanı} = \frac{\frac{5}{3} \cdot 6}{2} = 5$$

Cevap: A

17.



$$d_1 \rightarrow \frac{x}{3} + \frac{y}{-3} = 1$$

$$x - y = 3 \Rightarrow x - 3 = y$$

$$d_2 \rightarrow \frac{x}{2} + \frac{y}{2} = 1$$

$$x + y = 2 \Rightarrow y = 2 - x$$

P noktası için

$$x - 3 = 2 - x \Rightarrow 2x = 5$$

$$x = \frac{5}{2}$$

$$y = 2 - x$$

$$y = 2 - \frac{5}{2} = -\frac{1}{2}$$

$$\text{Taralı üçgen} \Rightarrow \text{Alanı} = \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4}$$

Cevap: A

18.  $m = 120^\circ$

$$\tan \alpha = \tan 120 = \tan(180 - 60)$$

$$= -\tan 60 = -\sqrt{3}$$

$$y - y_1 = m(x - x_1)$$

$$y - 2 = -\sqrt{3}(x - 1)$$

$$y - 2 = -\sqrt{3}x + \sqrt{3}$$

$$y = -\sqrt{3}x + \sqrt{3} + 2$$

Cevap: B

19.  $y = a(x - r)^2 + k$

$$y = a(x - 2)^2 - 3$$

geçtiği nokta  $(0, -1)$  için

$$-1 = a(a - 2)^2 - 3$$

$$-1 = 4a - 3$$

$$2 = 4a \Rightarrow a = \frac{1}{2}$$

$$y = 0(x - 2)^2 - 3$$

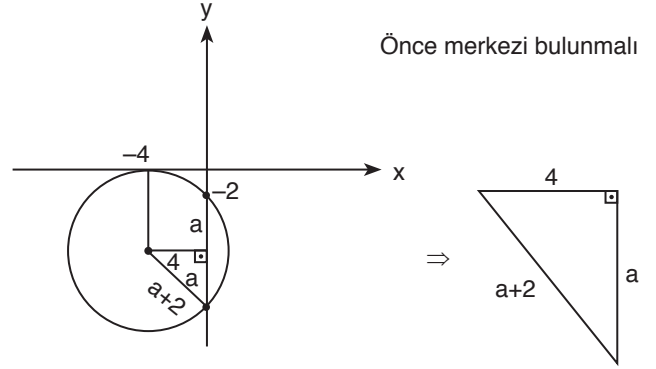
$$y = \frac{1}{2}(x^2 - 4x + 4) - 3$$

$$y = \frac{x^2}{2} - 2x + 2 - 3$$

$$y = \frac{x^2}{2} - 2x - 1$$

Cevap: A

20.



→ Pisagordan

$$(a + 2)^2 = a^2 + 4^2$$

$$(a + 2)^2 - a^2 = 16$$

$$(a + 2 - a)(a + 2 + a) = 16$$

$$2(2a + 2) = 16$$

$$2a + 2 = 8$$

$$2a = 6$$

$$a = 3$$

merkezi  $m(-4, -5)$ yarıçapı  $r = 5$ 

$$(x + 4)^2 + (y + 5)^2 = 25$$

Cevap: A