1.

- $6^2 = |CD|.(|CD| + 9)$

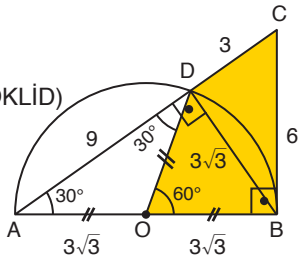
  $|CD| = 3$

- $|DB|^2 = |CD|.|DA|$ (ÖKLİD)

  $|DB|^2 = 3.9$

  $\sqrt{|DB|^2} = \sqrt{27}$

  $|DB| = 3\sqrt{3}$



- Taralı Alan = $A(\overset{\frown}{ODB}) + A(\overset{\frown}{BDC})$

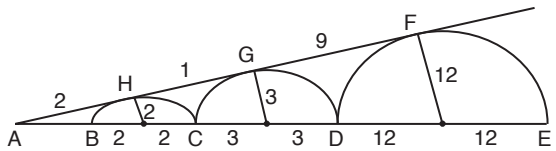
$$= \frac{(3\sqrt{3})^2\sqrt{3}}{4} + \frac{(3\sqrt{3}).3}{2}$$

$$= \frac{27\sqrt{3}}{4} + \underset{(2)}{\frac{9\sqrt{3}}{2}}$$

$$= \frac{45\sqrt{3}}{4}$$

Cevap: E

2.



- $\frac{|AH|}{|AG|} = \frac{2}{3} \Rightarrow |AH| = 2$ ve $|HG| = 1$ diyelim

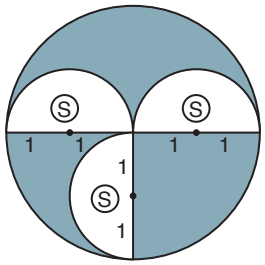
- $\frac{|AH|}{|AF|} = \frac{2}{12} \Rightarrow |AH| = 2$ ve $|HG| = 1$ olduğundan

  $|GF| = 9$ diyelim.

- $\frac{|AH|}{|GF|} = \frac{2}{9}$ olur.

Cevap: C

3.



Yarım dairelerin herbirinin yarıçapı 1 br ve büyük dairenin yarıçapı 2 br olsun.

Boyalı Alan = Büyük Dairenin Alanı – Boyalı Olmayan Alan

$$= 4\pi - \frac{3.\pi}{2} = \frac{5\pi}{2}$$

$$\frac{\frac{5\pi}{2}}{4\pi} = \frac{5}{8}$$

Cevap: C

4. İlk durumda dairenin alanı = πr^2

Son durumda dairenin alanı = $\pi(r + 4)^2$

$$\pi(r + 4)^2 - \pi r^2 = 40\pi$$

$$(r + 4)^2 - r^2 = 40$$

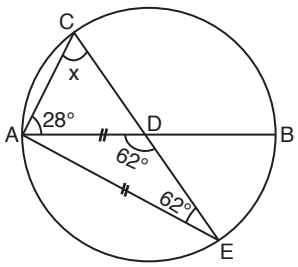
$$(r + 4 + r).(r + 4 - r) = 40$$

$$2r + 4 = 10$$

$$r = 3$$

Cevap: A

5.



$m(\widehat{AC}) = 2.62 = 124$

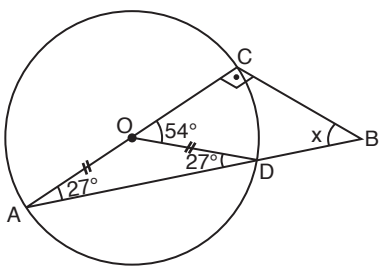
$m(\widehat{BC}) = 180 - 124 = 56$

$m(\widehat{CAD}) = \frac{56}{2} = 28$

$x + 28 = 62 \Rightarrow x = 34$

Cevap: B

6.



C teğet noktası olduğundan $m(\widehat{ACB}) = 90°$ dir.

$|AO| = |OD|$ olduğundan

$m(\widehat{ODA}) = m(\widehat{OAD}) = 27°$ dir.

ABC üçgeninde iç açılar toplamından;

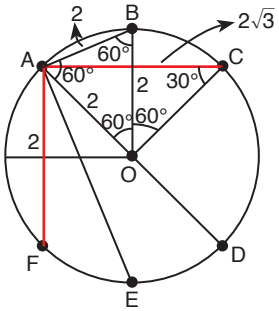
$27 + 90 + x = 180$

$117 + x = 180$

$x = 63$

Cevap: D

7.



$|AB| = |AF| = 2$

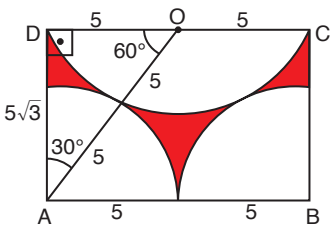
$|AC| = |AE| = 2\sqrt{3}$

$|AD| = 4$

$2.2 + 2.2\sqrt{3} + 4 = 8 + 4\sqrt{3}$

Cevap: E

8.



AOD üçgeni, kenarların oranlarından dolayı 30° - 60° - 90° üçgenidir.

Taralı Alan = Dikdörtgenin Alanı – Dairelerin Alanları Toplamı

(Dairelerin Alanları Toplamı: bir tam dairenin alanına eşit)

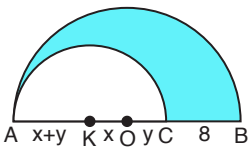
$= 5\sqrt{3}.10 - \pi.5^2$

$= 50\sqrt{3} - 25\pi$

$= 25(2\sqrt{3} - \pi)$

Cevap: C

9.



$|AO| = |OB|$

$2x + y = y + 8$

$x = 4$

O merkezli yarım dairenin alanı $\dfrac{\pi.(2x+y)^2}{2}$

K merkezli yarım dairenin alanı $\dfrac{\pi.(x+y)^2}{2}$

Taralı Alan $= \dfrac{\pi.(2x+y)^2}{2} - \dfrac{\pi(x+y)^2}{2}$

$48\pi = \dfrac{\pi}{2}.(2x + y + x + y).(2x + y - x - y)$

$48 = \dfrac{1}{2}.(3x + 2y).x$

$48 = \dfrac{1}{2}.(12 + 2y).4$

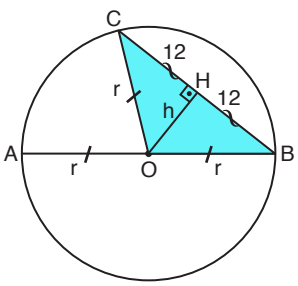
$24 = 12 + 2y$

$y = 6$

$x + y = 4 + 6 = 10$

Cevap: A

10.



Alan$(\widehat{COB}) = 60$

$\dfrac{24.h}{2} = 60$

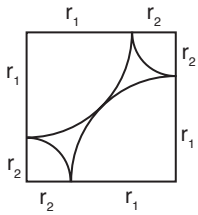
$h = 5$

OHB üçgeni 5 – 12 – 13 üçgenidir. O halde r = 13 olur.

Çemberin Çevresi $= 2\pi r = 2\pi.13 = 26\pi$

Cevap: E

11.



$4(r_1 + r_2) = 52$

$r_1 + r_2 = 13$

Karşılıklı çemberlerin çevreleri eşit ve iki çeyrek çember bir yarım çembere eşit olduğundan;

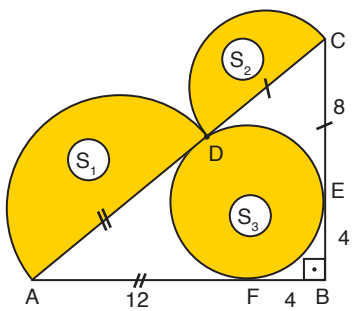
Parçanın Çevresi $= \dfrac{2\pi r_1}{2} + \dfrac{2\pi r_2}{2}$

$= \pi(r_1 + r_2)$

$= 13\pi$

Cevap: E

12.



$|CD| = |CE| = 8$ birim

$|AD| = |AF| = 12$ birim

$|AC| = 8 + 12 = 20$ birim

ABC üçgeni 12 – 16 – 20 üçgeni

$|FB| = |EB| = 4$ birim

$S_1 = \dfrac{\pi.6^2}{2} = 18\pi$

$S_2 = \dfrac{\pi.4^2}{2} = 8\pi$

$+ \quad S_3 = \pi.4^2 = 16\pi$

$S_1 + S_2 + S_3 = 42\pi$

Cevap: E