

PARALELKENAR-EŞKENAR DÖRTGEN

1. ABCD paralelkenarında
[AD] // [BC] olduğundan

$$2x + 17 + x - 5 = 180$$

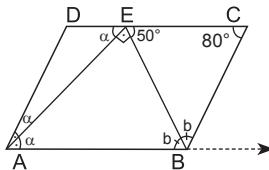
$$3x + 12 = 180$$

$$3x = 168$$

$$x = 56$$

CEVAP: D

3.



$$2a + 2b = 180 \Rightarrow a + b = 90^\circ$$

EAB üçgeninde $m(\widehat{AEB}) = 90^\circ$ olur.

$$80 + 2b = 180$$

$$2b = 100 \Rightarrow b = 50^\circ$$

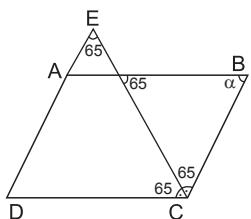
$$50 + 90 + \alpha = 180$$

$$140 + \alpha = 180$$

$$\alpha = 40^\circ \text{ olur.}$$

CEVAP: D

2.



[ED] // [BC] olduğundan

$m(\widehat{ECB}) = 65$ ($\widehat{ECD} = 65^\circ$) olur.

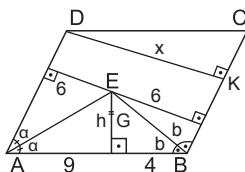
BCF üçgeninde, $65 + 65 + \alpha = 180$

$$130 + \alpha = 180$$

$$\alpha = 50^\circ \text{ dir.}$$

CEVAP: C

4.



$2a + 2b = 180 \Rightarrow a + b = 90^\circ$ olduğundan $m(\widehat{AEB}) = 90^\circ$ olur.

$$h^2 = 4 \cdot 9 \Rightarrow h^2 = 36$$

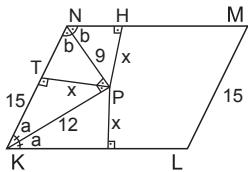
$$h = 6 \text{ ise}$$

paralel kenarın yüksekliği 12 cm olur. Buradan $x = 12$ dir.

CEVAP: D



5.



$$|ML| = |NK| = 15 \text{ cm}$$

$$2a + 2b = 180 \Rightarrow a + b = 90^\circ \text{ ise } m(\widehat{NPK}) = 90^\circ \text{ olur.}$$

$$\text{NPK dik üçgeninde } |NP|^2 = 225 - 144$$

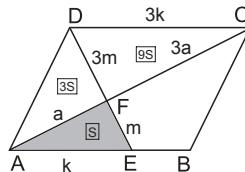
$$|NP|^2 = 81 \Rightarrow |NP| = 9 \text{ cm}$$

$$15 \cdot |PT| = 9 \cdot 12 \Rightarrow |PT| = \frac{9 \cdot 12}{15} = 7,2 \text{ cm}$$

Buna göre, $x = 7,2$ dir.

CEVAP: A

7.



$$|AB| = 3 \cdot |AE| = |DC|$$

$$\triangle AFE \sim \triangle CFD \text{ ise } \frac{FE}{FD} = \frac{k}{3k} = \frac{1}{3}$$

$$\frac{|FE|}{|FD|} = \frac{1}{3} \text{ olduğundan } A(\triangle AFE) = S$$

$$\text{ise } A(\triangle DAF) = 3S \text{ olur. } \frac{|AF|}{|FC|} = \frac{1}{3} \text{ olduğundan}$$

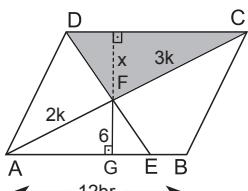
$$A(\triangle DFC) = 9S \text{ dir.}$$

$$\begin{aligned} A(\triangle ABC) &= 2 \cdot (A(\triangle ADC)) \\ &= 2 \cdot 12S \\ &= 24S \end{aligned}$$

Buna göre 24 katıdır

CEVAP: C

6.



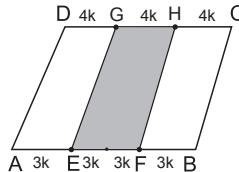
$$|AB| = |DC| = 12 \text{ cm dir.}$$

$$\frac{3K}{2K} = \frac{x}{6} \Rightarrow x = 9 \text{ cm}$$

$$A(\triangle DFF) = \frac{12 \cdot 9}{2} = 6 \cdot 9 = 54 \text{ br}^2 \text{ dir.}$$

CEVAP: C

8.



$$\begin{aligned} \frac{A(\triangle GEH)}{A(\triangle ABC)} &= \frac{|GH| + |EF|}{|AB| + |DC|} \\ &= \frac{4k + 6k}{12k + 12k} \\ &= \frac{10k}{24k} \\ &= \frac{5}{12} \text{ dir.} \end{aligned}$$

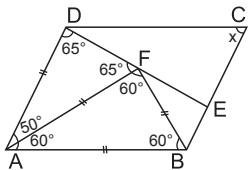
CEVAP: D



PARALELKENAR-EŞKENAR DÖRTGEN

**ÇÖZÜM
TEST: 1**

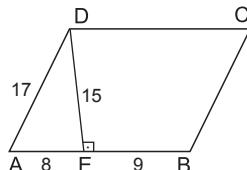
9.



ABCD eşkenar dörtgen ise $|AF| = |AD|$ olur.
 ADF üçgeninde $m(\widehat{ADF}) = m(\widehat{AFD}) = 65^\circ$
 ADF üçgeninde, $65 + 65 + m(\widehat{DAF}) = 180$
 $130 + m(\widehat{DAF}) = 180$
 $m(\widehat{DAF}) = 50$
 Buna göre, $m(\widehat{DAB}) = m(\widehat{DCB})$
 $x = 110^\circ$ dir.

CEVAP: C

11.

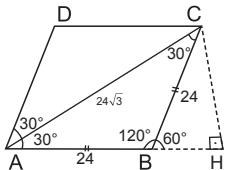


ABCD eşkenar dörtgen ise $|AB| = |AD| = 17$ cm dir.
 DAE dik üçgeninde $|DE|^2 + 8^2 = 17^2$
 $|DE|^2 + 64 = 289 \Rightarrow |DE|^2 = 225$

$|DE| = 15$ cm olur.
 Buna göre, $A(ABCD) = 15 \cdot 17$
 $= 255$ cm² dir.

CEVAP: D

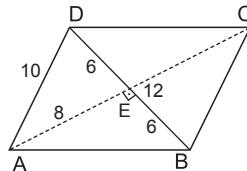
10.



ABCD eşkenar dörtgen ise $m(\widehat{DAC}) = m(\widehat{CAB}) = 30^\circ$ dir.
 $|AB| = |BC|$ olduğundan $m(\widehat{ACB}) = 30^\circ$ dir.
 30, 30, 120° üçgeninde
 $|AB| \cdot \sqrt{3} = 24\sqrt{3}$ ise $|AB| = |BC| = 24$ br olur.
 CBH dik üçgeninde, $|BH| = 12$ br
 $x = 12\sqrt{3}$ cm dir.

CEVAP: B

12.

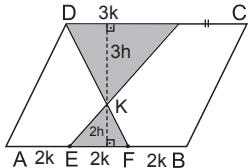


ABCD eşkenar dörtgeninde [AC] köşegeni çizilirse $|DE| = |EB| = 6$ cm olur. ADE dik üçgeninde
 $|AE|^2 + 6^2 = 10^2 \Rightarrow |AE|^2 = 100 - 36$
 $|AE|^2 = 64$
 $|AE| = 8$ cm
 $|AE| = |EC| = 8$ cm ise $|AC| = 16$ cm olur.
 Buna göre, $A(ABCD) = \frac{16 \cdot 12}{2}$
 $= 96$ cm² dir.

CEVAP: D



13.



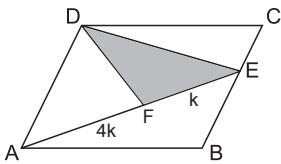
$$6k \cdot 5h = 120$$

$$k \cdot h = \frac{120}{30} = 4$$

$$\begin{aligned} A(\overset{\triangle}{DKH}) + A(\overset{\triangle}{EKF}) &= \frac{3k \cdot 3h}{2} + \frac{2h \cdot 2k}{2} \\ &= \frac{9 \cdot kh}{2} + \frac{4kh}{2} \\ &= \frac{9 \cdot 4}{2} + 2 \cdot 4 \\ &= 18 + 8 \\ &= 26 \text{ cm}^2 \text{ dir.} \end{aligned}$$

CEVAP: C

14.



$$|AF| = 4|FE| \text{ ise } |FE| = k \text{ ise } |AF| = 4k \text{ dir.}$$

$$\begin{aligned} A(\overset{\triangle}{DFE}) &= 5 \text{ br}^2 \text{ ise } A(\overset{\triangle}{ADF}) = 4 \cdot 5 = 20 \text{ br}^2 \\ \text{olur. } A(\overset{\triangle}{ADE}) &= 25 \text{ br}^2 \end{aligned}$$

$$\begin{aligned} \text{Buna göre, } A(\overset{\triangle}{ABCD}) &= 2 \cdot A(\overset{\triangle}{ADE}) \\ &= 2 \cdot 25 \\ &= 50 \text{ br}^2 \text{ dir.} \end{aligned}$$

CEVAP: E

15.

$\overset{\triangle}{(EFT)} \sim \overset{\triangle}{(EAB)}$ ise

$$\frac{A(\overset{\triangle}{EFT})}{A(\overset{\triangle}{EAB})} = \left(\frac{1}{2}\right)^2 \Rightarrow \frac{A(\overset{\triangle}{EFT})}{48 + A(\overset{\triangle}{EFT})} = \frac{1}{4}$$

$$4 \cdot A(\overset{\triangle}{EFT}) = 48 + A(\overset{\triangle}{EFT})$$

$$3 \cdot A(\overset{\triangle}{EFT}) = 48$$

$$A(\overset{\triangle}{EFT}) = 16 \text{ cm}^2 \text{ dir.}$$

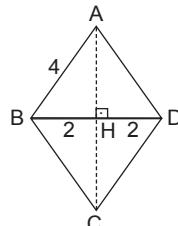
$$A(\overset{\triangle}{ABCD}) = 2 \cdot A(\overset{\triangle}{EAB})$$

$$= 2 \cdot 64$$

$$= 128 \text{ cm}^2 \text{ dir.}$$

CEVAP: E

16.



ABCD eşkenar dörtgeninde $|BH| = |HD| = 2 \text{ cm}$

$$\text{ABH dik üçgeninde } |AB|^2 = 2^2 + |AH|^2$$

$$4^2 = 4 + |AH|^2$$

$$\sqrt{12} = \sqrt{|AH|^2}$$

$$|AH| = 2\sqrt{3}$$

$$\text{Buna göre, } |AC| = 2 \cdot |AH|$$

$$= 2 \cdot 2\sqrt{3}$$

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

CEVAP: A

