

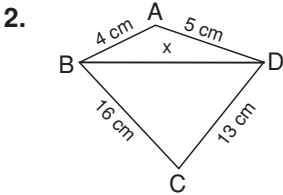
$$\begin{aligned} s(\widehat{DAB}) &= x \\ x + 68 + 52 &= 180^\circ \\ x &= 60^\circ \end{aligned}$$

$$\begin{aligned} s(\widehat{D}) &> x > s(\widehat{B}) \\ s(\widehat{ABC}) &= y = 180 - (72 + 61) \\ y &= 47^\circ \end{aligned}$$

$$\begin{aligned} s(\widehat{A}) &> s(\widehat{C}) > y \\ |BC| &> |AB| > |AC| \\ |AB| &> |DB| > |DA| \end{aligned}$$

Yukarıdaki uzunluklar arasındaki ilişkiye bakarsak en uzun doğru parçasının [BC] olduğunu görürüz.

Cevap: B



$$|BD| = x \text{ cm,}$$

\widehat{ABD} 'de	\widehat{BCD} 'de
$5 - 4 < x < 5 + 4$	$16 - 13 < x < 16 + 13$
$1 < x < 9$	$3 < x < 29$
$x: 2, 3, 4, \dots, 8$	$x: 4, 5, 6, \dots, 28$

Yukarıdaki iki kümenin kesişimi bize x'in alacağı değerler kümesini verir.

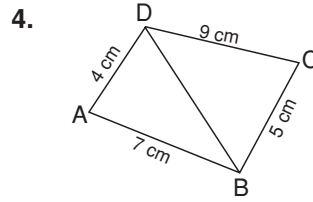
x: 4, 5, 6, 7, 8 değerlerini alır.

Buna göre A doğrudur.

Cevap: A

3. $E\widehat{A}B$ 'de $s(\widehat{B}) = 180^\circ - (50^\circ + 60^\circ) = 70^\circ$
 $E\widehat{B}C$ 'de $s(\widehat{E}) = 180^\circ - (41^\circ + 70^\circ) = 69^\circ$
 $E\widehat{C}D$ 'de $s(\widehat{C}) = 180^\circ - (40^\circ + 75^\circ) = 65^\circ$
 Büyük açı karşısında büyük kenar olacağı üzere, bu üç üçgenin kenar uzunlukları arasındaki ilişkileri yazalım.
 $|AE| > |AB| > |EB|$
 $|EB| > |BC| > |EC|$
 $|EC| > |ED| > |DC|$
 En büyük $|AE|$ 'dir.

Cevap: C



$$7 - 4 < |DB| < 7 + 4$$

$$9 - 5 < |DB| < 9 + 5$$

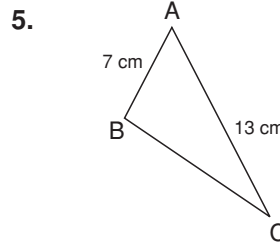
$$3 < |DB| < 11$$

$$2 < |DB| < 14$$

İki kümenin kesişimi; ($|DB|$ 'nin olabileceği değerler)

$$|DB|: 4, 5, 6, \dots, 10$$

Cevap: A



$$13 - 7 < |BC| < 13 + 7$$

$$6 \text{ cm} < |BC| < 20 \text{ cm}$$

$$\textcircled{1} |BC| = 7, 8, 9, \dots, 19$$

$s(\widehat{B}) > s(\widehat{A})$ olduğu için,

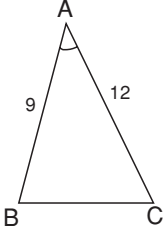
$|AC| > |BC|$ olması lazım.

$\textcircled{2} 13 > |BC|$, $|BC|$ 13'ten küçük değerleri alması lazım.

$$|BC| = 7, 8, 9, 10, 11, 12$$

Cevap: C

6.



$$s(\widehat{A}) < 90^\circ$$

$$12 - 9 < |BC| < 12 + 9$$

$$3 < |BC| < 21$$

$$s(\widehat{A}) = 90^\circ \text{ olsaydı;}$$

\widehat{ABC} bir dik üçgen olurdu.

Bu durumda;

$$|BC|^2 = |AB|^2 + |AC|^2$$

$$= 9^2 + 12^2$$

$$= 81 + 144$$

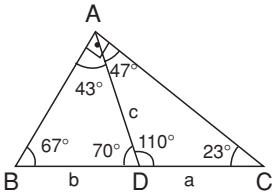
$$= 225$$

$$|BC| = 15 \text{ cm olurdu.}$$

$$s(\widehat{A}) < 90^\circ \Rightarrow |BC| = 14 \text{ en büyük değerdir.}$$

Cevap: A

7.



\widehat{ABC} içerisindeki açılı değerle şekilde görüldüğü gibi olur.

\widehat{ABD} 'de b ile c arasındaki ilişki,

$b < c$ 'dir.

\widehat{ADC} 'de a ile c arasındaki ilişki,

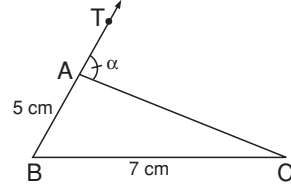
$c < a$ dır.

Bu durumda sıralama

$b < c < a$ 'dir.

Cevap: D

8.



$$s(\widehat{BAC}) = 180 - \alpha$$

$$\alpha = 54 \Rightarrow s(\widehat{BAC}) = 126$$

$$\alpha < 54 \text{ durumunda ise}$$

$$s(\widehat{BAC}) > 126 \text{ olur.}$$

$$s(\widehat{B}) + s(\widehat{C}) = 180 - s(\widehat{A})$$

$$s(\widehat{B}) + s(\widehat{C}) = 180 - 126 = 54$$

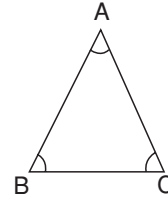
$$s(\widehat{B}) + s(\widehat{C}) < 54$$

$$s(\widehat{B}) < 70^\circ$$

Cevap: A

$$9. \frac{s(\widehat{A})}{4} = \frac{s(\widehat{B})}{5} = \frac{s(\widehat{C})}{7}$$

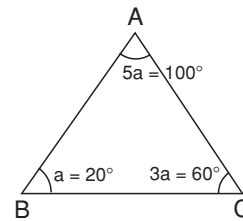
$$s(\widehat{C}) > s(\widehat{B}) > s(\widehat{A})$$



$$|AB| > |AC| > |BC| \text{ veya } |BC| < |AC| < |AB|$$

Cevap: C

10.



$$s(\widehat{A}) + s(\widehat{B}) + s(\widehat{C}) = 180^\circ$$

$$5a + a + 3a = 180^\circ$$

$$9a = 180^\circ$$

$$a = 20^\circ$$

$$s(\widehat{A}) = 100^\circ$$

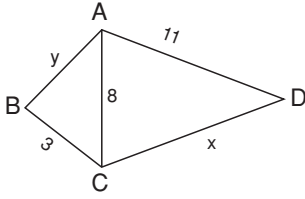
$$s(\widehat{B}) = 20^\circ$$

$$s(\widehat{C}) = 60^\circ$$

$$|BC| > |AB| > |AC| \text{ veya } |AC| < |AB| < |BC|$$

Cevap: C

11.

 \widehat{ABC} 'de

$$8 - 3 < y < 8 + 3$$

$$5 < y < 11$$

En küçük y değeri 6'dır. En büyük x değeri 18'dir.

$$x + y = 18 + 6$$

$$= 24$$

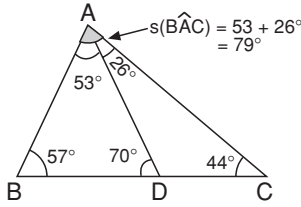
 \widehat{ACD} 'de

$$11 - 3 < x < 11 + 8$$

$$8 < x < 19$$

Cevap: D

12.



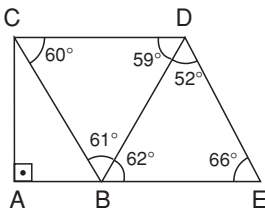
$$s(\widehat{ADB}) = 26 + 44 = 70^\circ$$

$$s(\widehat{BAD}) = 180 - (57 + 70) = 53^\circ$$

$$\left. \begin{array}{l} 79^\circ \text{ karşısında } [BC] \\ 57^\circ \text{ karşısında } [AC] \end{array} \right\} \Rightarrow |BC| > |AC|$$

Cevap: C

13.

 \widehat{BCD} 'de

$$s(\widehat{D}) = 180 - (60 + 61)$$

$$= 180 - 121 = 59^\circ$$

 \widehat{BDE} 'de

$$s(\widehat{B}) = 180 - (52 + 66) = 62$$

Verilen açılara göre

 \widehat{BCD} 'de \widehat{BDE} 'de

$$|CD| > |BD| \quad |BD| > |DE| > |BE|$$

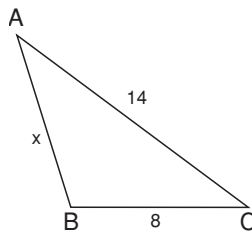
İki sıralamayı ortak uzunluk olduğundan dolayı birlikte sıralayabiliriz.

$$|CD| > |BD| > |DE| > |BE|$$

[CD] en uzun kenardır.

Cevap: A

14.



$$14 - 8 < x < 14 + 8$$

$$6 < x < 22$$

 $s(\widehat{B}) > 90^\circ$, B geniş açı

$$14^2 > 8^2 + x^2$$

$$196 > 64 + x^2$$

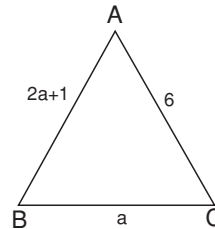
$$132 > x^2$$

$$x = \underbrace{11, 10, 9, 8, 7}_{5 \text{ tane}}$$

Cevap: A

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15.



$$2a + 1 - a < 6 < 2a + 1 + a$$

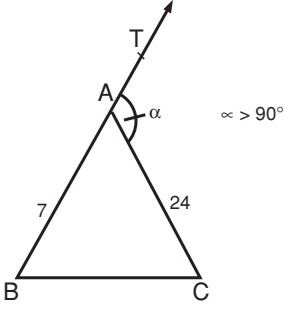
$$a + 1 < 6 < 3a + 1$$

$$a < 5 < 3a$$

Bu sıralamaya uyan a değeri 4'tür.

Cevap: A

16.

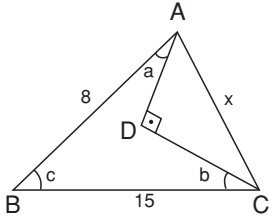


$\alpha > 90^\circ \Rightarrow s(\widehat{BAC}) < 90^\circ$ olur.
 $24 - 7 < |BC| < 24 + 7$
 $s(\widehat{BAC}) = 90^\circ$ durumunda \widehat{BAC} bir dik üçgen olur.
 Bu durumda; $|BC|^2 = 7^2 + 24^2$
 $= 49 + 576$
 $= 625$

$|BC| = 25$ olurdu
 $s(\widehat{BAC}) < 90^\circ \Rightarrow |BC| < 25$
 Yukarıdaki sıralama aşağıdaki gibi değişir.
 $17 < |BC| < 25$
 $17 < |BC| < 31$
 En büyük değer $|BC| = 24$ 'tür.

Cevap: C

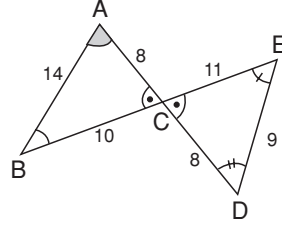
17.



\widehat{ABC} 'inde
 $15 - 8 < x < 15 + 8$
 $7 < x < 23$
 $s(\widehat{BAD}) = a$, $s(\widehat{ABC}) = c$, $s(\widehat{BCD}) = b$
 $s(\widehat{ADC}) = a + b + c$
 $90^\circ = a + b + c \Rightarrow c < 90$
 $c = 90^\circ$ olsaydı;
 $x^2 = 8^2 + 15^2$ (Pisagor)
 $x^2 = 289$
 $x = 17$ cm olurdu. Sıralama,
 $7 < x < 17$ şeklinde değişir. En büyük değer 16'dır.

Cevap: A

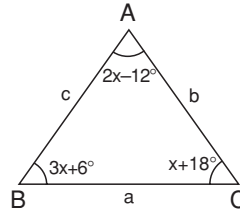
18.



\widehat{ABC} 'nde
 $s(\widehat{C}) > s(\widehat{A}) > s(\widehat{B})$
 \widehat{CDE} 'nde
 $s(\widehat{D}) > s(\widehat{C}) > s(\widehat{E})$
 En büyük açı D'dir.

Cevap: ?

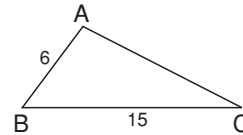
19.



$2x - 12 + 3x + 6 + x + 18 = 180^\circ$
 $6x + 12 = 180$
 $6x = 168$
 $x = 28^\circ$
 $s(\widehat{A}) = 2x - 12 = 2 \cdot 28 - 12 = 44^\circ$
 $s(\widehat{B}) = 3x + 6 = 3 \cdot 28 + 6 = 90^\circ$
 $s(\widehat{C}) = x + 18 = 28 + 18 = 46^\circ$
 $s(\widehat{B}) > s(\widehat{C}) > s(\widehat{A})$
 $|AC| > |AB| < |BC|$
 $b > c > a$

Cevap: C

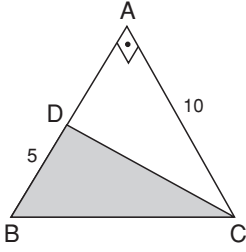
20.



$15 - 6 < |AC| < 15 + 6$
 $9 < |AC| < 21$
 $|AC| = 10$ ($|AC|$ kenarının en küçük değeri. Bu durumda \widehat{ABC} 'nin çevresi en küçük olur.)
 $\text{Ç}(\widehat{ABC}) = 10 + 6 + 15$
 $= 31$ cm

Cevap: D

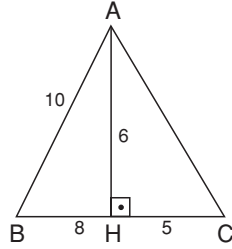
1.



$$A(\widehat{BDC}) = \frac{|BD| \cdot |AC|}{2} = \frac{5 \cdot 10}{2} = 25 \text{ cm}^2$$

Cevap: B

2.

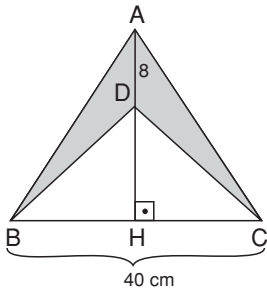
 \widehat{ABH} 'ninde;

$$10^2 = 8^2 + |AH|^2 \Rightarrow |AH| = 6 \text{ cm olur.}$$

$$A(\widehat{ABC}) = \frac{|BC| \cdot |AH|}{2} = \frac{13 \cdot 6}{2} = 39 \text{ cm}^2$$

Cevap: C

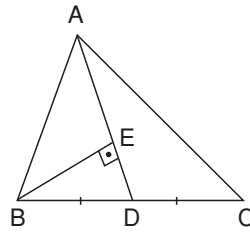
3.



$$\text{Boyalı Alan} = \frac{|BC| \cdot |AD|}{2} = \frac{40 \cdot 8}{2} = 160 \text{ cm}^2$$

Cevap: C

4.



$$A(\widehat{ABD}) = A(\widehat{ADC}) \text{ dir.}$$

(Kenar ortay alanı iki eş parçaya ayırır.)

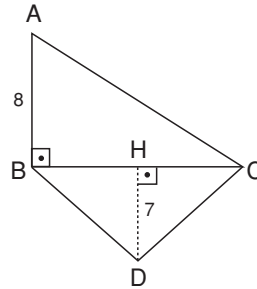
$$A(\widehat{ABD}) = \frac{|AD| \cdot |BE|}{2} = \frac{13 \cdot 6}{2} = 39 \text{ cm}^2$$

$$A(\widehat{ABC}) = 2 \cdot A(\widehat{ABD}) \\ = 2 \cdot 39 = 78 \text{ cm}^2$$

Cevap: C

OKS DERGİSİ

5.



$$A(\widehat{ABC}) = \frac{|AB| \cdot |BC|}{2}$$

$$40 = \frac{8 \cdot |BC|}{2}$$

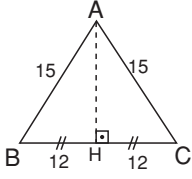
$$\Rightarrow |BC| = 10 \text{ cm}$$

$$A(\widehat{BDC}) = \frac{|BC| \cdot |HD|}{2}$$

$$A(\widehat{BDC}) = \frac{10 \cdot 7}{2} = 35 \text{ cm}^2$$

Cevap: C

6.



[AH] ⊥ [BC] olacak şekilde

[AH] çizilir.

|BH| = |HC| olur. (İkizkenar üçgende yükseklik kenar ortaydır.)

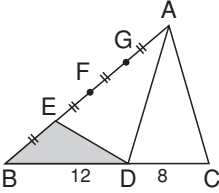
\widehat{ABH} 'ninde;

$|AH|^2 + 12^2 = 15^2 \Rightarrow |AH| = 9$ cm bulunur.

$$A(\widehat{ABC}) = \frac{|BC| \cdot |AH|}{2} = \frac{24 \cdot 9}{2} = 108 \text{ cm}^2$$

Cevap: D

7.



$$\frac{8}{12} \times \frac{40 \text{ cm}^2}{A(\widehat{ABD})}$$

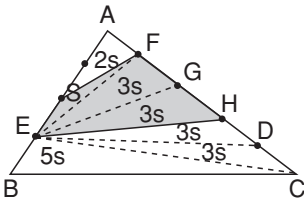
$$A(\widehat{ABD}) = \frac{12 \cdot 40}{8} = 60 \text{ cm}^2$$

(Yükseklikleri aynı olan üçgenlerin alanları tabanlarıyla orantılıdır.)

$$A(\widehat{EBD}) = \frac{A(\widehat{ABD})}{4} = \frac{60}{4} = 15 \text{ cm}^2$$

Cevap: A

8.



[EF], [EG], [EH], [ED] ve [EC] çizilir.

Alanları şekildeki gibi tabanlarla orantılı olacak şekilde dağıtılır.

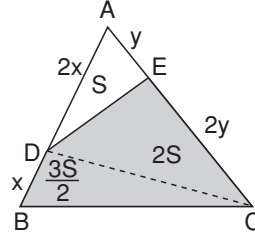
$$A(\widehat{ABC}) = 20S = 60 \text{ cm}^2$$

$$S = 3 \text{ cm}^2$$

Boyalı bölgenin alanı $\rightarrow 7S = 7 \cdot 3 = 21 \text{ cm}^2$

Cevap: B

9.



[DC]'yi çizelim:

$$\frac{A(\widehat{ADE})}{A(\widehat{DEC})} = \frac{y}{2y} = \frac{1}{2}$$

$$A(\widehat{ADE}) = S$$

$$A(\widehat{DEC}) = 2S \text{ olur.}$$

$$\frac{2x}{x} \times \frac{3S}{A(\widehat{DBC})}$$

$$A(\widehat{DBC}) = \frac{3S}{2} \text{ olur.}$$

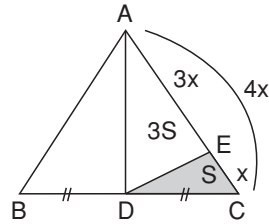
$$\text{Boyalı Alan} \rightarrow \frac{3S}{2} + 2S = \frac{7S}{2} = 28$$

$$S = 8 \text{ cm}^2$$

$$A(\widehat{ADE}) = S = 8 \text{ cm}^2 \text{ olur.}$$

Cevap: A

10.



|EC| = x \Rightarrow |AE| = 3x olur.

$$A(\widehat{EDC}) = S \text{ olsun.}$$

$$\frac{x}{3x} \times \frac{S}{A(\widehat{ADE})}$$

$$A(\widehat{ADE}) = 3S \text{ olur.}$$

$$A(\widehat{ABD}) = A(\widehat{ADC}) = 4S \text{ olur.}$$

(Tabanlar eşit)

$$A(\widehat{ABC}) = 2A(\widehat{ABD})$$

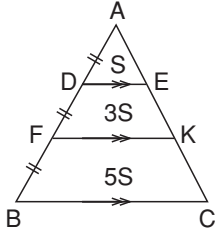
$$= 2 \cdot 4S = 8S$$

$$\text{Boyalı alan} = S = 9 \text{ cm}^2$$

$$\Rightarrow A(\widehat{ABC}) = 8S = 8 \cdot 9 = 72 \text{ cm}^2$$

Cevap: D

11.



$[DE] \parallel [FK] \parallel [BC]$ ve
 $|AD| = |DF| = |FB|$ ise

$$A(\widehat{ADE}) = S$$

$$A(\widehat{FDEK}) = 3S$$

$$A(\widehat{FBCK}) = 5S$$

Şeklinde devam eder.

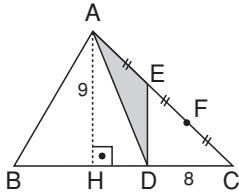
$$A(\widehat{FDEK}) = 3S = 15$$

$$\boxed{S = 5 \text{ cm}^2}$$

$$A(\widehat{FBCK}) = 5S = 5 \cdot 5 = 25 \text{ cm}^2$$

Cevap: A

12.

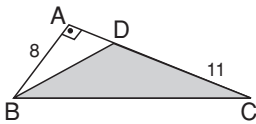


$$A(\widehat{ADC}) = \frac{|DC| \cdot |AH|}{2} = \frac{8 \cdot 9}{2} = 36 \text{ cm}^2$$

$$A(\widehat{ADE}) = \frac{A(\widehat{ADC})}{3} = \frac{36}{3} = 12 \text{ cm}^2$$

Cevap: B

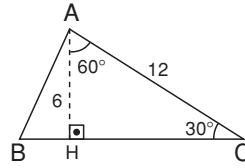
13.



$$A(\widehat{BCD}) = \frac{|DC| \cdot |AB|}{2} = \frac{11 \cdot 8}{2} = 44 \text{ cm}^2$$

Cevap: C

14.



$[AH] \perp [BC]$ olacak şekilde $[AH]$ çizilir.

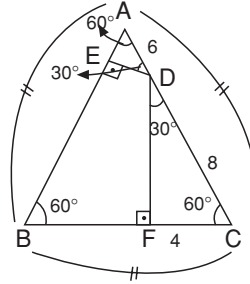
\widehat{AHC} 'inde;

$|AH| = 6 \text{ cm}$ olur. $(90^\circ - 30^\circ - 60^\circ)$

$$A(\widehat{ABC}) = \frac{|BC| \cdot |AH|}{2} = \frac{15 \cdot 6}{2} = 45 \text{ cm}^2$$

Cevap: B

15.



\widehat{DFC} 'inde;

$|DC| = 8$ olur. $(90^\circ - 30^\circ - 60^\circ)$

\widehat{AED} 'inde;

$|AE| = 3$

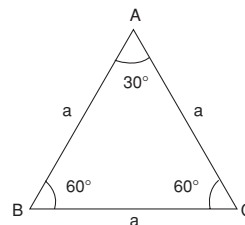
$|AD| = 6$ olur. $(90^\circ - 30^\circ - 60^\circ)$

$\Rightarrow |AC| = |AB| = |BC| = 14$ olur.

$$A(\widehat{ABC}) = \frac{14^2 \cdot \sqrt{3}}{4} = 49\sqrt{3}$$

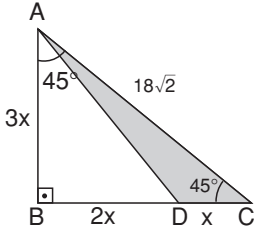
Cevap: A

Hatırlatma:



$$A(\widehat{ABC}) = \frac{a^2 \cdot \sqrt{3}}{4}$$

16.

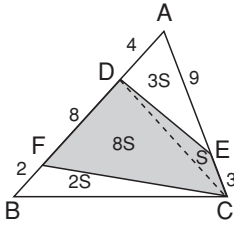


$|DC| = x$ ise $|BD| = 2x$ olur.
 \widehat{ABC} ikizkenar üçgendir.
 $|BC| = |AB|$ 'dir.
 $|AC| = |BC| \cdot \sqrt{2} \Rightarrow 18\sqrt{2} = 3x \cdot \sqrt{2}$
 $(90^\circ - 45^\circ - 45^\circ)$
 $x = 6$ bulunur.

$$\text{Boyalı Alan} = \frac{|DC| \cdot |AB|}{2} = \frac{6 \cdot 18}{2} = 54 \text{ cm}^2$$

Cevap: D

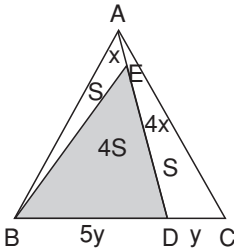
17.



$[DC]$ çizilir.
 $A(\widehat{DEC}) = S$ ise $A(\widehat{ADE}) = 3S$ olur.
 (Tabanlarla orantılı)
 $A(\widehat{ADC}) = 4S + A(\widehat{DFC}) = 8S$
 $A(\widehat{FCB}) = 2S$ olur.
 $A(\widehat{FCED}) = 9S = 27 \Rightarrow S = 3 \text{ cm}^2$ olur.
 $A(\widehat{ABC}) = 14S = 14 \cdot 3 = 42 \text{ cm}^2$ bulunur.

Cevap: B

18.



$|AE| = x \Rightarrow |DE| = 4x$
 $|DC| = y \Rightarrow |BD| = 5y$ olur.
 \widehat{ABD} 'ninde;
 $A(\widehat{ABE}) = S \Rightarrow A(\widehat{BED}) = 4S$ olur.

ABC 'ninde;

$$A(\widehat{ABD}) = 5S \Rightarrow A(\widehat{ADC}) = S \text{ olur.}$$

(Tabanlarla alanlar orantılı)

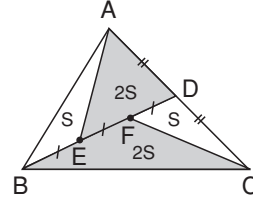
$$A(\widehat{ABC}) = 6S = 120 \text{ cm}^2$$

$$\Rightarrow S = 20 \text{ cm}^2$$

$$A(\widehat{BED}) = 4S = 4 \cdot 20 = 80 \text{ cm}^2$$

Cevap: D

19.



\widehat{BDC} 'ninde;

$$A(\widehat{FDC}) = S \text{ olsun.}$$

$$A(\widehat{BFC}) = 2S \text{ olur.}$$

$A(\widehat{BDC}) = A(\widehat{ABD})$ olur. (Kenar ortay alanı iki eş parçaya böler)

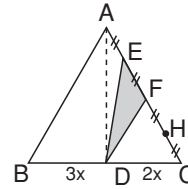
$$A(\widehat{ABD}) = 3S \text{ olur.}$$

$$A(\widehat{AED}) = \frac{A(\widehat{ABD})}{3} \cdot 2 = \frac{3S \cdot 2}{3} = 2S \text{ olur.}$$

$$\frac{A(\widehat{AED})}{A(\widehat{BCF})} = \frac{2S}{2S} = 1 \text{ olur.}$$

Cevap: A

20.



$$A(\widehat{DEF}) = \frac{A(\widehat{ADC})}{4}$$

$$5 = \frac{A(\widehat{ADC})}{4}$$

$$A(\widehat{ADC}) = 20 \text{ cm}^2$$

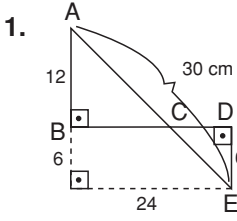
$$\frac{A(\widehat{ABD})}{A(\widehat{ADC})} = \frac{3x}{2x} = \frac{3}{2}$$

$$\frac{A(\widehat{ABD})}{20} = \frac{3}{2}$$

$$\Rightarrow A(\widehat{ABD}) = 30 \text{ cm}^2$$

$$\Rightarrow A(\widehat{ABC}) = A(\widehat{ABD}) + A(\widehat{ADC}) = 30 + 20 = 50 \text{ cm}^2$$

Cevap: B



[AB] doğrusu uzatılıp, E'den [EF] \perp [AF] olacak şekilde [EF] dikmesi çizilir.

BDEF dikdörtgen olur.

$|DE| = |BF| = 6$ cm'dir.

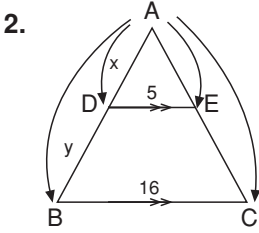
\widehat{AFE} 'ninde;

$|AE|^2 = |AF|^2 + |FE|^2$ (Pisagor)

$30^2 = 18^2 + |FE|^2$

$\Rightarrow |FE| = 24$ olur.

$\Rightarrow |BD| = |FE| = 24$ cm olur.

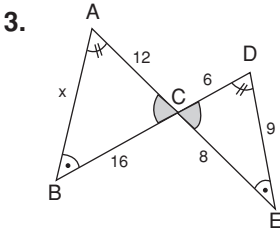


Temel benzerlik teoremine göre

$$\frac{x}{x+y} = \frac{5}{16} \Rightarrow 16x = 5x + 5y$$

$$11x = 5y$$

$$\frac{x}{y} = \frac{5}{11} \text{ olur.}$$



$$\frac{|AC|}{|BC|} = \frac{12}{16} = \frac{3}{4}$$

$$\frac{|CD|}{|CE|} = \frac{6}{8} = \frac{3}{4} \text{ 'tür.}$$

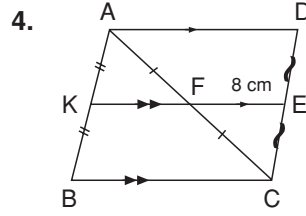
\Rightarrow (K.A.K) benzerliği vardır.

$$s(\widehat{BAC}) = s(\widehat{CDE})$$

$$s(\widehat{ABC}) = s(\widehat{CED}) \text{ olur.}$$

$$\frac{x}{9} = \frac{12}{6} \Rightarrow x = 18 \text{ bulunur.}$$

Cevap: A



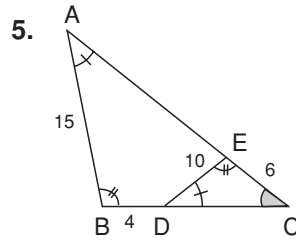
[KF] // [BC] ve $|AK| = |KB|$ olduğundan $|AF| = |FC|$ olur.

[EF] // [AD] ve $|AF| = |FC|$ olduğundan $|EO| = |EC|$ olur.

\Rightarrow [FE] orta taban olur.

$$|FE| = \frac{|AD|}{2} = 8 \Rightarrow |AD| = 16 \text{ cm olur.}$$

Cevap: A



ABC ve EDC üçgenlerinde $s(\widehat{C})$ ortak açı

$$\Rightarrow s(\widehat{DEC}) = s(\widehat{ABC}) \text{ olur.}$$

$$\Rightarrow \widehat{ABC} \sim \widehat{DEC} \text{ olur.}$$

$$\frac{|BC|}{|EC|} = \frac{|AC|}{|DC|} = \frac{|AB|}{|DE|}$$

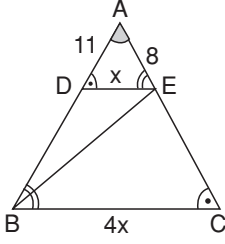
$$\frac{|BC|}{6} = \frac{15}{10} \Rightarrow |BC| = 9 \text{ cm olur.}$$

$$\Rightarrow |BC| = |BD| + |DC|$$

$$9 = 4 + |DC| \Rightarrow |DC| = 5 \text{ cm}$$

Cevap: B

6.



$s(\widehat{A})$, ADE ve ABC üçgenlerinin ortak açısı,

$$s(\widehat{ADE}) = s(\widehat{ACB})$$

$s(\widehat{AED}) = s(\widehat{ABC})$ bulunur.

$\widehat{ADE} \cong \widehat{ACB}$ 'dir.

$$|DE| = x \Rightarrow |BC| = 4x \text{ olur.}$$

$$\frac{|DE|}{|CB|} = \frac{|AE|}{|AB|}$$

$$\frac{x}{4x} = \frac{8}{|AB|} \Rightarrow |AB| = 32 \text{ cm}$$

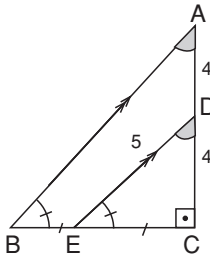
$$|AB| = |AD| + |DB|$$

$$32 = 11 + |DB|$$

$$\Rightarrow |DB| = 21 \text{ cm}$$

Cevap: D

7.



$S(\widehat{BAC}) = S(\widehat{EDC})$ olur.

$\Rightarrow [DE] \parallel [AB]$ elde edilir.

$|AD| = |DC|$ ve $[DE] \parallel [AB]$

$\Rightarrow [DE]$ orta tabandır.

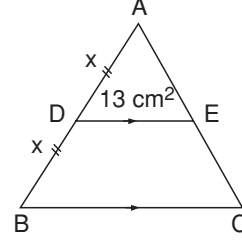
$$\Rightarrow |DE| = \frac{|AB|}{2}$$

$$5 = \frac{|AB|}{2}$$

$$|AB| = 10 \text{ cm}$$

Cevap: A

8.



$[DE] \parallel [BC] \Rightarrow ADE \sim ABC$

$$\frac{A(\widehat{ADE})}{A(\widehat{ABC})} = \left(\frac{x}{2x}\right)^2 = \left(\frac{1}{2}\right)^2 = \frac{1}{4}$$

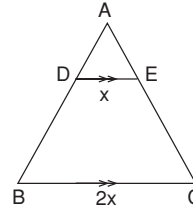
$$\frac{13}{A(\widehat{ABC})} = \frac{1}{4} \Rightarrow A(\widehat{ABC}) = 52 \text{ cm}^2$$

$$A(\widehat{ABC}) - A(\widehat{ADE}) = A(\widehat{BCED})$$

$$52 - 13 = 39 \text{ cm}^2 = A(\widehat{BCED})$$

Cevap: C

9.



$$|DE| = x$$

$$|BC| = 2x \text{ olsun.}$$

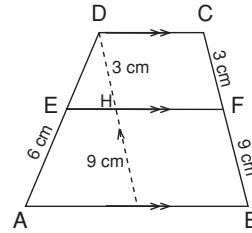
$ADE \sim ABC$ 'dir.

$$\Rightarrow \frac{\widehat{C}(ADE)}{\widehat{C}(ABC)} = \frac{x}{2x} = \frac{1}{2} \text{ 'dir.}$$

$$\frac{15}{\widehat{C}(ABC)} = \frac{1}{2} \Rightarrow \widehat{C}(ABC) = 30 \text{ cm}$$

Cevap: A

10.



$[DG] \parallel [BC]$ olacak şekilde $[DG]$ 'yi çizelim.

DGBC paralelkenar olur.

$$|DH| = |CF| = 3 \text{ cm}$$

$$|HG| = |FB| = 9 \text{ cm olur.}$$

$\widehat{DEH} \sim \widehat{DAG}$ 'dir.

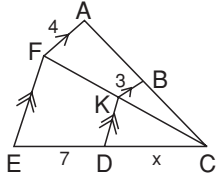
Temel benzerlik teoremine göre,

$$\frac{|DE|}{|EA|} = \frac{|DH|}{|HG|} \Rightarrow \frac{|DE|}{6} = \frac{3}{9}$$

$$\Rightarrow |DE| = 2 \text{ cm bulunur.}$$

Cevap: A

11.


 $\widehat{CKD} \sim \widehat{CFE}$ 'dir.

Temel benzerlik teoremine göre

$$\frac{|DC|}{|CE|} = \frac{|CK|}{|CF|} \Rightarrow \frac{x}{7+x} = \frac{|CK|}{|CF|} \dots (I)$$

 $\widehat{CBK} \sim \widehat{CAF}$ 'dir.

Temel benzerlik teoremine göre

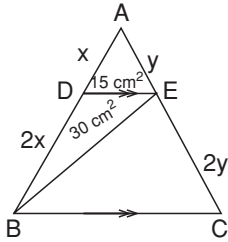
$$\frac{|CK|}{|CF|} = \frac{|KB|}{|AF|} = \frac{3}{4} \dots (II)$$

(I) ve (II) den

$$\frac{x}{7+x} = \frac{3}{4} \Rightarrow 4x = 3x + 21$$

$$x = 21$$

12.



$|AD| = x$

$|AB| = 3x$ olur.

 $|DE| \parallel |BC|$ olduğundan

$$\frac{|AE|}{|EC|} = \frac{|AD|}{|DB|} = \frac{x}{2x} = \frac{1}{2}$$
 olur.

$|AE| = y$

$|EC| = 2y$ olur.

 \widehat{ADE} ninde;

$x \quad 15 \text{ cm}^2$

$2x \quad A(\widehat{DBE})$

$A(\widehat{DBE}) = 30 \text{ cm}^2$ olur.

 \widehat{ABC} 'ninde;

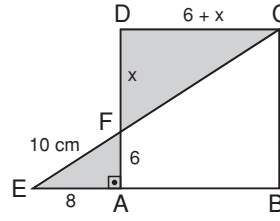
$y \quad 45 \text{ cm}^2$

$2y \quad A(\widehat{BEC})$

$A(\widehat{BEC}) = 90 \text{ cm}^2$ olur.

Cevap: D

13.



EFA'ninde;

$|EF|^2 = 8^2 + 6^2$

$|EF| = 10 \text{ cm}$ bulunur.

$|DF| = x$ olsun.

$|DA| = 6 + x = |DC|$ 'dir. (ABCD bir kare)

Taralı bölgede kelebek kuralını uygularsak;

$$\frac{6+x}{8} = \frac{x}{6}$$

$36 + 6x = 8x$

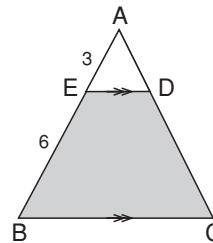
$36 = 2x$

$x = 18$ bulunur.

$|DF| = x = 18 \text{ cm}$ 'dir.

Cevap: C

14.


 $\widehat{AED} \sim \widehat{ABC}$ 'dir.

$$\frac{A(\widehat{AED})}{A(\widehat{ABC})} = \left(\frac{3}{9}\right)^2 = \frac{1}{9}$$

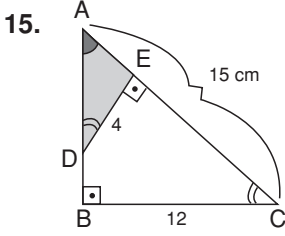
$$\frac{15}{A(\widehat{ABC})} = \frac{1}{9} \Rightarrow A(\widehat{ABC}) = 135 \text{ cm}^2$$

$\Rightarrow A(\widehat{ABC}) - A(\widehat{ADE}) = A(\widehat{BCED})$

$135 - 15 = A(\widehat{BCED})$

$120 \text{ cm}^2 = A(\widehat{BCED})$

Cevap: C



ADE ve ABC üçgenlerinde $\widehat{s(A)}$ ortak açıdır.
 $\Rightarrow S(\widehat{ADE}) = S(\widehat{ACB})$ olur.
 $\widehat{ABC} \sim \widehat{AED}$ 'dir.

$$\left(\frac{|DE|}{|BC|}\right)^2 = \frac{A(\widehat{ADE})}{A(\widehat{ABC})} \text{ dir.}$$

$$\left(\frac{4}{12}\right)^2 = \frac{A(\widehat{ADE})}{A(\widehat{ABC})}$$

$$\frac{1}{9} = \frac{A(\widehat{ADE})}{A(\widehat{ABC})}$$

$$\boxed{9A(\widehat{ADE}) = A(\widehat{ABC})}$$

$A(\widehat{ADE}) = S$ olsun.

$A(\widehat{ABC}) = 9S$ olur.

\widehat{ABC} 'ninde;

$$|AB|^2 + 12^2 = 15^2$$

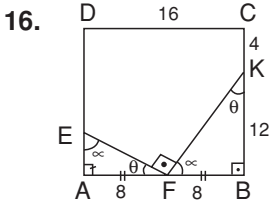
$|AB| = 9$ bulunur.

$$A(\widehat{ABC}) = \frac{|AB| \cdot |BC|}{2} = \frac{9 \cdot 12}{2} = 54$$

$$A(\widehat{ABC}) = 9S = 54 \text{ cm}^2$$

$$\boxed{S = 6 \text{ cm}^2}$$

$$A(\widehat{ADE}) = S = 6 \text{ cm}^2$$



$|AB| = |DC|$ 'dir.

$$|AF| = |FB| = \frac{|AB|}{2} = \frac{16}{2} = 8 \text{ cm}$$

$s(\widehat{AEF}) = \alpha$, $s(\widehat{EFA}) = \theta$ olsun.

$\alpha + \theta = 90^\circ$ dir.

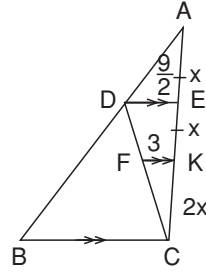
$s(\widehat{KFB}) = \alpha$, $s(\widehat{FKB}) = \theta$ olur.

$\widehat{EAF} \sim \widehat{FBK}$ dir.

$$\frac{|AF|}{|KB|} = \frac{|EA|}{|FB|} \Rightarrow \frac{8}{12} = \frac{|EA|}{8}$$

$$\Rightarrow |EA| = \frac{64}{12} = \frac{16}{3}$$

17.



$|AC| = 4x$ olsun. $\Rightarrow |EK| = |AE| = x$ olur.

$\widehat{DEC} \sim \widehat{FKC}$ dir.

Temel benzerlik teoremine göre;

$$\frac{|FK|}{|DE|} = \frac{|KC|}{|CE|} \Rightarrow \frac{3}{|DE|} = \frac{2x}{4x} \Rightarrow |DE| = \frac{9}{2} \text{ bulunur.}$$

$\widehat{ADE} \sim \widehat{ABC}$ 'dir. ($[DE] \parallel [BC]$)

Temel benzerlik teoremine göre;

$$\frac{|DE|}{|BC|} = \frac{|EA|}{|AC|} \Rightarrow \frac{\frac{9}{2}}{4} = \frac{x}{4x}$$

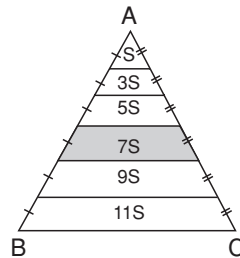
$$|BC| = 4 \cdot \frac{64}{12} = 18 \text{ cm}$$

Cevap: B

OKS DERGİSİ

Cevap: B

18.



Alanlar şekildeki gibi dağıtılır.

Boyalı Alan = $7S = 21 \text{ cm}^2$

$$\boxed{S = 3 \text{ cm}^2}$$

$$A(\widehat{ABC}) = S + 3S + 5S + 7S + 9S + 11S$$

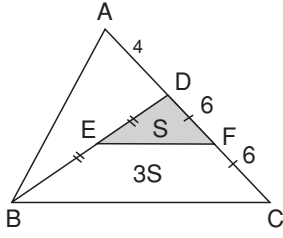
$$= 36S$$

$$= 36 \cdot 3 = 108 \text{ cm}^2$$

Cevap: D

Cevap: B

19.



$|DC| = 12 \text{ cm} \Rightarrow |DF| = |FC| = 6 \text{ cm}$ olur.

$\frac{|DE|}{|EB|} = \frac{|DE|}{|DB|}$ eşit olduğundan

$[EF] \parallel [BC]$ olur.

$[EF]$ orta tabandır.

$\widehat{DEF} \sim \widehat{DBC}$ 'dir.

$$\frac{A(\widehat{DEF})}{A(\widehat{DBC})} = \left(\frac{|DE|}{|DB|}\right)^2 = \left(\frac{1}{2}\right)^2 = \frac{1}{4}$$

$\Rightarrow A(\widehat{DEF}) = S \Rightarrow A(\widehat{DBC}) = 4S$ olur.

$$A(\widehat{DBC}) = \frac{3}{4} \cdot A(\widehat{ABC}) = \frac{3}{4} \cdot 80 = 60 \text{ cm}^2$$

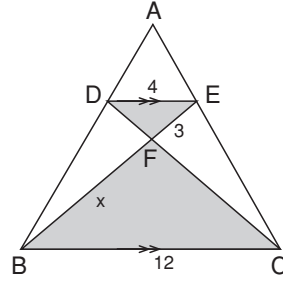
$$\Rightarrow A(\widehat{DBC}) = 4S = 60 \text{ cm}^2$$

$$\boxed{S = 15 \text{ cm}^2}$$

$$\Rightarrow A(\widehat{DEF}) = S = 15 \text{ cm}^2$$

Cevap: D

20.



$[DE] \parallel [BC]$ olduğundan

$DEF \sim CBF$ 'dir.

Taralı bölgede kelebek kuralını uygularsak;

$$\frac{4}{12} \neq \frac{3}{x}$$

$$4x = 3 \cdot 12$$

$$\boxed{x = 9 \text{ cm}}$$

Cevap: C

OKS DERGİSİ