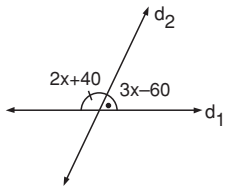
1.



$(2x + 40) + (3x - 60) = 180°$

$5x - 20 = 180°$

$5x = 180 + 20$

$5x = 200$

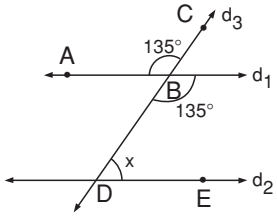
$\boxed{x = 40°}$ bulunur.

Geniş açı $= 2x + 40 = 2 \cdot 40 + 40$

$= 120°$ dir.

Cevap: B

2.



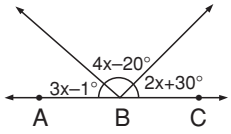
$d_1 // d_2$ olduğundan

$x + 135° = 180°$

$\boxed{x = 45°}$ olur.

Cevap: A

3.



A, B ve C noktaları doğrusal olduğundan;

$(3x - 1°) + (4x - 20°) + (2x + 30°) = 180°$

$9x + 9° = 180°$

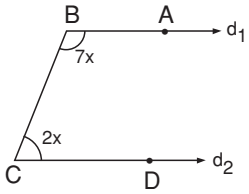
$9x = 180 - 9$

$9x = 171°$

$\boxed{x = 19°}$ bulunur.

Cevap: B

4.



$d_1 // d_2$ olduğundan

$7x + 2x = 180°$

$9x = 180°$

$\boxed{x = 20°}$ bulunur.

Cevap: B

5.

Açı	Tümleri olan açı
$4x$	$5x$

$\Rightarrow 4x + 5x = 90°$

$9x = 90°$

$\boxed{x = 10°}$ bulunur.

Küçük açı $\rightarrow 4x = 4 \cdot 10 = 40°$

Cevap: B

6.

Açı	Bütünleri olan açı
x	$4x + 20°$

Bütünler açıların toplamı 180° dir.

$x + (4x + 20) = 180°$

$5x + 20° = 180°$

$5x = 160°$

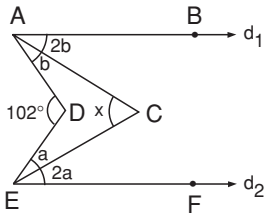
$\boxed{x = 32°}$ bulunur.

Küçük açı $\rightarrow x = 32°$ dir.

Cevap: B

OKS DERGİSİ

7.



$d_1 \,//\, d_2$

$s(A\hat{D}E) = s(B\hat{A}D) + s(F\hat{E}D)$

$102° = 3b + 3a$

$102° = 3(b + a)$

$34° = a + b$ bulunur.

$s(A\hat{C}E) = s(B\hat{A}C) + s(S\hat{E}F)$

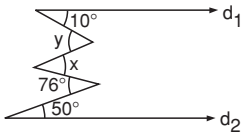
$x = 2b + 2a$

$x = 2\underbrace{(b + a)}_{34°}$

$x = 2 \,.\, 34° = 68°$ bulunur.

Cevap: D

8.



$d_1 \,//\, d_2$ olduğundan;

Aynı yöne bakan açıların toplamı zıt yöne bakan açıların toplamına eşittir.

$\Rightarrow 10 + x + 50 = y + 76$

$60 + x = y + 76$

$\boxed{x - y = 76 - 60 = 16}$'dır.

$x + y = 70°$ olarak verilmiş.

$x - \cancel{y} = 16°$

$+\; x + \cancel{y} = 70°$

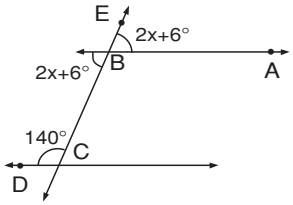
$2x = 70 + 16$

$2x = 86°$

$\boxed{x = 43°}$ bulunur.

Cevap: A

9.



[AB] // [DC] olduğundan;

$s(D\hat{C}B) + s(E\hat{B}C) = 180°$'dir.

$140° + 2x + 6 = 180°$

$2x + 146° = 180°$

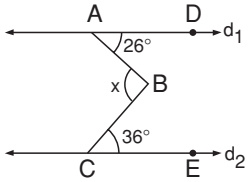
$2x = 180 - 146$

$2x = 34°$

$\boxed{x = 17°}$ bulunur.

Cevap: A

10.



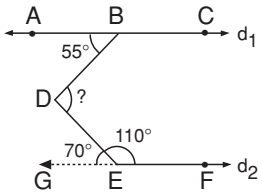
$d_1 \,//\, d_2$ olduğundan;

$x = 26° + 36°$

$\boxed{x = 62°}$ 'dir.

Cevap: B

11.



[EF] doğrusu atalım.

$s(D\hat{E}G) = 180° - 110° = 70°$ olur.

$s(B\hat{D}E) = s(A\hat{B}D) + s(D\hat{E}G)$

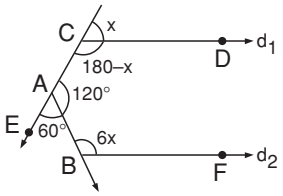
$s(B\hat{D}E) = 55° + 70°$

$= 125°$ olarak bulunur.

Cevap: B

OKS DERGİSİ

12.

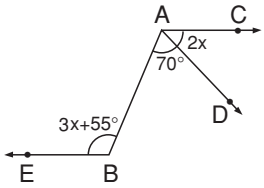


$s(D\hat{C}A) = 180 - x$, $s(C\hat{A}B) = 180 - 60$
$= 120°$ olarak bulunur.

$d_1 \,//\, d_2$ olduğundan
$s(D\hat{C}A) + s(C\hat{A}B) + s(A\hat{B}C) = 360°$
$(180 - x) + 120° + 6x = 360°$
$300° + 5x = 360°$
$5x = 60°$
$x = 12°$ bulunur.

Cevap: B

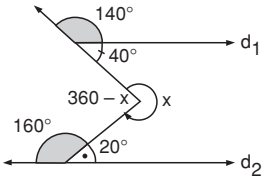
13.



[AC // [BE] olduğundan;
$s(A\hat{B}E) = s(B\hat{A}C)$'dir. (İç ters açılar)
$3x + 55° = 70 + 2x \Rightarrow \boxed{x = 15°}$

Cevap: A

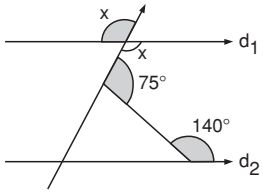
14.



$d_1 \,//\, d_2$ olduğundan aynı yöne ve zıt yöne bakan açıların toplamı eşittir.
$20° + 40° = 360 - x$
$60° = 360 - x$
$\boxed{x = 300°}$ dir.

Cevap: A

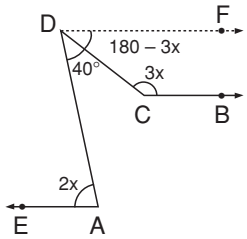
15.



$d_1 \,//\, d_2$ olduğundan;
$x + 75° + 140° = 360°$
$x + 215° = 360°$
$\boxed{x = 145°}$

Cevap: D

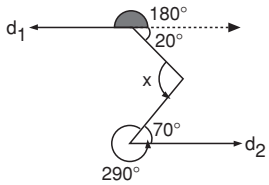
16.



[DF // [CB // [AE olacak şekilde [DF çizilir.
$s(F\hat{D}C) + s(B\hat{C}D) = 180°$
3x
$\Rightarrow s(F\hat{D}C) = 180 - 3x$ olur.
[DF // [AE olduğundan
$s(D\hat{A}E) = s(A\hat{D}F)$'dir. (İç ters açılar)
$2x = 40 + 180 - 3x$
$2x = 220 - 3x$
$5x = 220° \Rightarrow x = 44°$
$\Rightarrow s(D\hat{C}B) = 3x = 3.44°$
$= 132°$'dir.

Cevap: C

17.

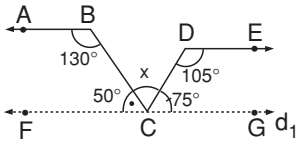


d_1 doğrusunu sağa doğru uzatalım:
$d_1 \,//\, d_2$ olduğundan;
$x = 20° + 70°$
$\boxed{x = 90°}$ bulunur.
$2x = 2 \,.\, 90° = 180°$ dir.

Cevap: D

OKS DERGİSİ

18.



C'den geçen ve [BA // [DE // d_1 olan d_1 doğrusunu çizelim:

Şekle göre

$s(B\hat{C}F) = 180° - 130° = 50°$

$s(D\hat{C}F) = 180° - 105° = 75°$ olur.

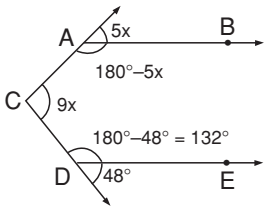
$50° + x + 75° = 180°$

$125° + x = 180°$

$\boxed{x = 55°}$ olur.

Cevap: C

19.



$s(C\hat{A}B) = 180 - 5x$

$s(E\hat{D}C) = 180° - 48° = 132°$ olur.

[AB // [DE olduğundan;

$180° - 5x + 9x + 132° = 360°$

$4x + 312° = 360°$

$4x = 48°$

$x = 12°$ bulunur.

Cevap: A

20.

Açı	Tümler açı
x	4x – 15°

$x + 4x - 15° = 90°$

$5x - 15° = 90°$

$5x = 105°$

$x = 21°$ bulunur.

Küçük açı → 90° – 21° = 69°'dir.

Cevap: D

OKS DERGİSİ

1.

Açı	Tümleri	Bütünleri
x	90 – x	180 – x

$\Rightarrow 90 - x + 180 - x = 270 - 2x$

x = 1 seçilirse;

$270 - 2x = 270 - 2.1 = 268$

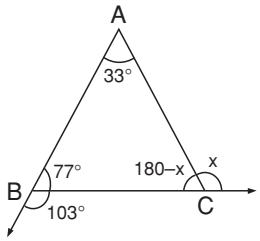
↓

1

olur. (en büyük değer)

Cevap: B

2.



$s(A\hat{B}C) = 180° - 103° = 77°$

$s(A\hat{C}B) = 180 - x$

Üçgenin iç açılar toplamı 180° dir.

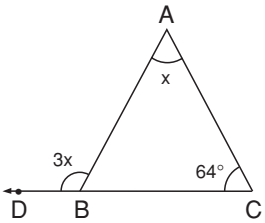
$33° + 77° + \cancel{180°} - x = \cancel{180°}$

$33 + 77° = x$

$\boxed{x = 110°}$

Cevap: C

3.



$s(A\hat{C}B) + s(B\hat{A}C) = s(A\hat{B}D)$'dir.

(İki iç açının toplamı, kendilerine komşu olmayan dış açının ölçüsüne eşittir)

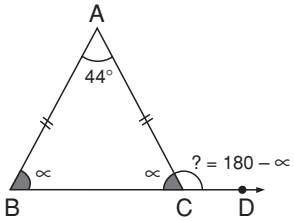
$3x = 64° + x$

$2x = 64°$

$\boxed{x = 32°}$

Cevap: B

4.



|AB| = |AC| olduğundan

$s(A\hat{B}C) = s(A\hat{C}B)$'dir.

$s(A\hat{B}C) = s(A\hat{C}B) = \propto$ olsun.

$\triangle ABC$ ninde;

$44° + \propto + \propto = 180°$

$2\propto = 180° - 44°$

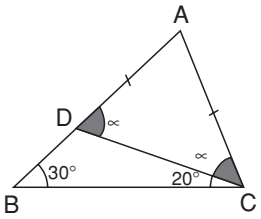
$2\propto = 136°$

$\boxed{\propto = 68°}$

$s(A\hat{C}D) = 180 - \propto = 180° - 68° = 112°$

Cevap: C

5.



|AD| = |AC| olduğundan, s(ADC) = s(ACD) dir.

$s(A\hat{D}C) = s(A\hat{C}D) = \propto$ olsun.

$s(D\hat{B}C) + s(D\hat{C}B) = s(A\hat{D}C)$'dir.

$\Rightarrow 30° + 20° = \propto \Rightarrow \boxed{\propto = 50°}$

$\triangle ADC$ ninde,

$\propto + \propto + s(D\hat{A}C) = 180°$

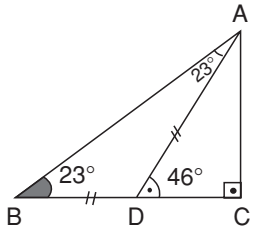
$50° + 50° + s(D\hat{A}C) = 180°$

$\Rightarrow \boxed{s(D\hat{A}C) = 80°}$

Cevap: C

OKS DERGİSİ

6.



$|AD| = |BD| \Rightarrow s(D\hat{B}A) = s(D\hat{A}B) = 23°$ olur.

$s(A\hat{D}C) = s(A\hat{B}D) + s(D\hat{A}B)$

$= 23° + 23° = 46°$ olur.

$\overset{\triangle}{ADC}$'ninde;

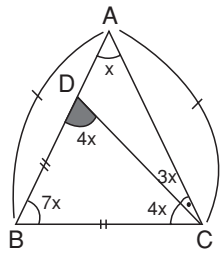
$46° + 90° + s(D\hat{A}C) = 180°$

$136° + s(D\hat{A}C) = 180°$

$\boxed{s(D\hat{A}C) = 44°}$ olur.

Cevap: A

7.



$|BD| = |BC|$ olduğundan

$s(B\hat{D}C) = s(D\hat{C}B) = 4x$ olur.

$s(D\hat{A}C) + s(A\hat{C}D) = s(B\hat{D}C)$'dir.

$x + s(A\hat{C}D) = 4x$

$s(A\hat{C}D) = 3x$ olur.

$|AB| = |AC|$ olduğundan;

$s(A\hat{B}C) = s(A\hat{C}D) = 4x + 3x = 7x$ olur.

$\overset{\triangle}{ABC}$'ninde;

$7x + 7x + x = 180°$

$15x = 180°$

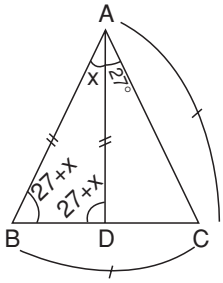
$\boxed{x = 12°}$ olur.

$s(\hat{B}) = 7x = 7 \cdot 12 = 84°$

Cevap: D

OKS DERGİSİ

8.



$|AC| = |BC| \Rightarrow s(A\hat{B}C) = s(B\hat{A}C)$ olur.

$s(B\hat{A}D) = x$ olsun.

$s(B\hat{A}C) = s(A\hat{B}C) = 27 + x$ olur.

$s(A\hat{B}C) = s(A\hat{D}B)$ olduğundan

$s(A\hat{D}B) = 27 + x$ olur.

$\overset{\triangle}{ABD}$'ninde;

$\underline{x} + 27 + \underline{x} + 27 + \underline{x} = 180°$

$3x + 54° = 180°$

$3x = 126°$

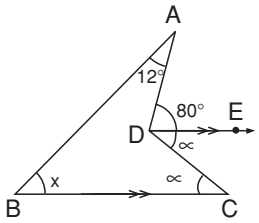
$\boxed{x = 42°}$ bulunur.

$s(A\hat{B}C) = 27° + x = 27° + 42°$

$= 69°$

Cevap: A

9.



[DE // [BC] olduğundan,

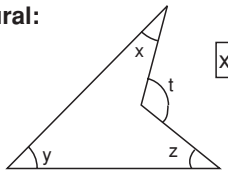
$s(D\hat{C}B) = s(E\hat{D}C)$'dir. (İç ters açılar)

$s(D\hat{C}B) = s(E\hat{D}C) = \propto$ olsun.

$12° + x + \not\propto = 80° + \not\propto$

$x = 80° - 12° = 68°$'dir.

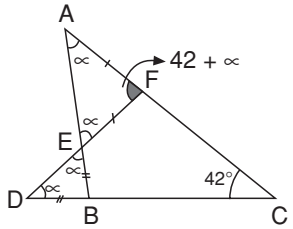
Kural:



$\boxed{x + y + z = t}$

Cevap: D

10.



$|BD| = |BE| \Rightarrow s(B\hat{D}E) = s(B\hat{E}D) = \propto$'dır.

$s(A\hat{E}F) = s(D\hat{E}B)$'dir. (Ters açılar.)

$|AF| = |FE|$ Ş $s(F\hat{A}E) = s(F\hat{E}A) = \propto$ olur.

$s(A\hat{F}D) = s(F\hat{D}C) + s(D\hat{C}F)$

$= \propto + 42°$ olur.

$\overset{\triangle}{AEF}$'ninde;

$\propto + \propto + 42° + \propto = 180°$

$3\propto + 42° = 180° \Rightarrow \boxed{\propto = 46°}$ bulunur.

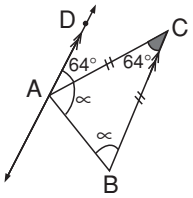
$s(A\hat{F}D) = 42° + \propto$

$= 42° + 46°$

$= 88°$

Cevap: D

11.



[AD] // [BC] olduğundan

$s(D\hat{A}C) = s(A\hat{C}D) = 64°$'dir.

(İç ters açılar)

$|AC| = |BC| \Rightarrow s(C\hat{A}B) = s(C\hat{B}A) = \propto$ olsun.

$\overset{\triangle}{ABC}$'ninde;

$\propto + \propto + 64° = 180°$

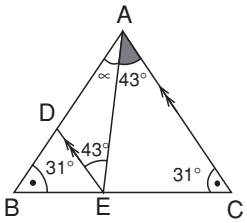
$2\propto = 116°$

$\boxed{\propto = 58°}$

$s(A\hat{D}C) = \propto = 58°$ dir.

Cevap: D

12.



[DE] // [AC] olduğundan

$s(D\hat{E}A) = s(E\hat{A}C) = 43°$ olur. (İç ters açılar)

$|AB| = |AC| \Rightarrow s(A\hat{B}C) = s(A\hat{C}B) = 31°$ olur.

$s(D\hat{A}E) = \propto$ olsun.

$\overset{\triangle}{ABC}$'ninde;

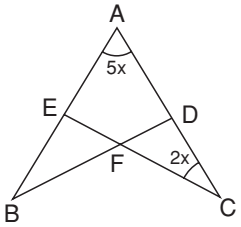
$31° + 31° + \propto + 43° = 180°$

$\propto + 105° = 180°$

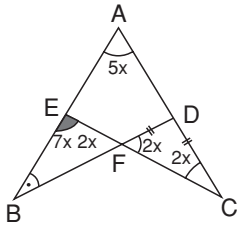
$\boxed{\propto = 75°}$ bulunur.

Cevap: D

13.



I. ve II verilirse



$\overset{\triangle}{ABD}$'ninde;

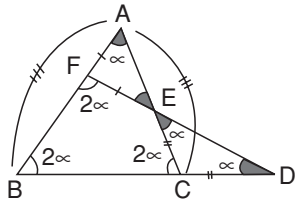
$s(A\hat{B}D) + 5x + 4x = 180°$

verilirse x bulunur.

Cevap: B

OKS DERGİSİ

14.



$|CE| = |CD| \Rightarrow s(C\hat{E}D) = s(C\hat{D}E) = \propto$ olsun.

$s(F\hat{E}A) = s(C\hat{E}D) = \propto$ olur.

$s(A\hat{C}B) = s(C\hat{E}D) + s(E\hat{D}C)$

$= \propto + \propto = 2\propto$ olur.

$s(A\hat{B}C) = s(B\hat{F}D) = 2\propto$ olur.

$\widehat{ABC}$'ninde;

$2\propto + 2\propto + \propto = 180°$

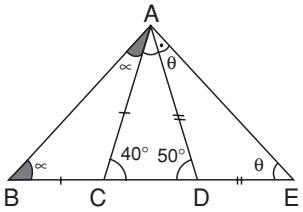
$5\propto = 180°$

$\boxed{\propto = 36°}$

$s(A\hat{C}B) = 2\propto = 2 \,.\, 36° = 72°$ olur.

Cevap: D

15.



$s(A\hat{B}C) = s(C\hat{A}B) = \propto$ olsun.

$s(D\hat{A}E) = s(A\hat{E}D) = \theta$ olsun.

$\propto + \propto = 40° \Rightarrow 2\propto = 40°$

$\boxed{\propto = 20°}$ 'dir.

$\theta + \theta = 50° \Rightarrow 2\theta = 50°$

$\boxed{\theta = 25°}$ 'dir.

$\widehat{ACD}$'ninde;

$40° + 50° + s(C\hat{A}D) = 180°$

$\boxed{s(C\hat{A}D) = 90°}$ bulunur.

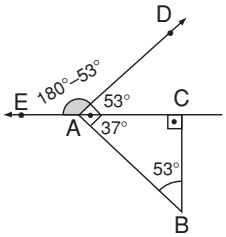
$s(B\hat{A}E) = \propto + \theta + s(C\hat{A}D)$

$= 20° + 25 + 90°$

$= 135°$ olur.

Cevap: C

16.



$s(C\hat{A}B) + 53° + 90° = 180°$

$s(C\hat{A}B) = 37°$ olur.

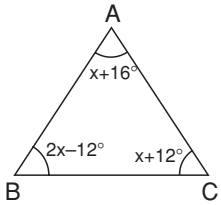
$s(D\hat{A}C) = 90° - 37° = 53°$ olur.

$s(EAD) = 180 - 53°$

$= 127°$ elde edilir.

Cevap: B

17.



$\widehat{ABC}$ üçgeninde,

$2x - 12° + x + 16° + x + 12° = 180°$

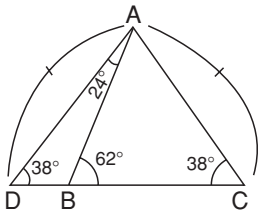
$4x + 16° = 180°$

$4x = 164°$

$\boxed{x = 41°}$

Cevap: B

18.



$s(A\hat{B}C) = s(D\hat{A}B) + s(A\hat{D}B)$'dir.

$62° = 24° + s(A\hat{D}B)$

$s(A\hat{D}B) = 38°$ olur.

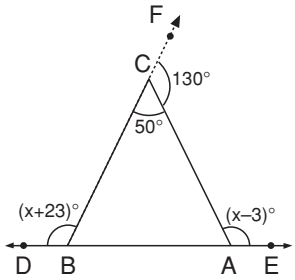
$s(A\hat{D}C) = s(A\hat{C}B)$ olduğundan

ADC ikizkenar üçgendir.

Cevap: A

OKS DERGİSİ

19.



[BC] doğrusunu uzatırsak;

$s(\widehat{ACF}) = 180° - 50° = 130°$ olur.

$\widehat{ABC}$'ninde;

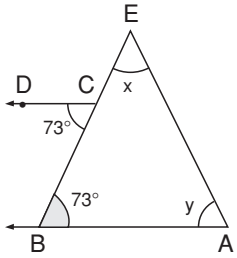
Dış açılar toplamı 360° dir.

$$x + 23° + 130° + x - 3 = 360°$$
$$2x + 150° = 360°$$
$$2x = 210°$$
$$\boxed{x = 105°}$$

$$s(\widehat{CAB}) = 180 - s(\widehat{CAE})$$
$$= 180° - (x - 3)$$
$$= 183 - x$$
$$= 183 - 105 = 78°$$

Cevap: A

20.



[CD // [AB olduğundan

$s(\widehat{DCB}) = s(\widehat{CBA})$'dır. (İç ters açılar)

$s(\widehat{CBA}) = 73°$ olur.

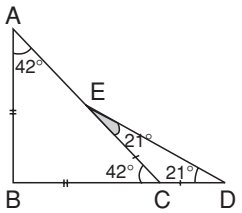
$\widehat{EBA}$'ninde;

$x + y + 73° = 180° \Rightarrow x + y = 107°$ olur.

Cevap: D

OKS DERGİSİ

1.



$|CD| = |CE| \Rightarrow s(C\hat{E}D) = s(C\hat{D}E) = 21°$ olur.

$s(A\hat{C}B) = 21° + 21° = 42°$

$|AB| = |BC| \Rightarrow s(B\hat{A}C) = s(A\hat{C}B)$'dir.

$\widehat{ABC}$'ninde;

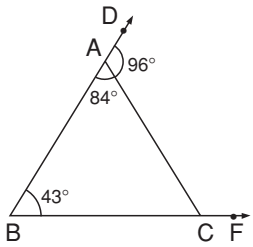
$42° + 42° + s(A\hat{B}C) = 180°$

$84° + s(A\hat{B}C) = 180°$

$\boxed{s(A\hat{B}C) = 96°}$

Cevap: C

2.



$s(B\hat{A}C) = 180° - s(C\hat{A}D)$

$= 180° - 96°$

$= 84°$ olur.

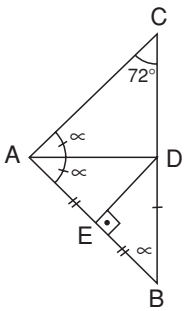
$s(A\hat{C}F) = s(B\hat{A}C) + s(A\hat{B}C)$

$s(A\hat{C}F) = 84° + 43$

$= 127°$ bulunur.

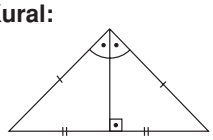
Cevap: B

3.



ADB üçgeni ikizkenar üçgen olur.

Kural:



$s(D\hat{B}E) = s(D\hat{A}B) = \propto$ olsun.

$s(C\hat{A}D) = s(D\hat{A}E) = \propto$ olur.

$\widehat{ABC}$'ninde;

$72° + 2\propto + \propto = 180°$

$3\propto = 180° - 72$

$3\propto = 108°$

$\propto = 36°$ bulunur.

$\widehat{DEB}$'ninde;

$90° + \propto + s(E\hat{D}B) = 180°$

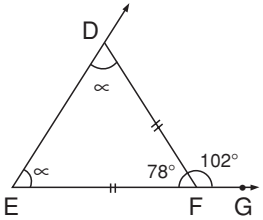
$90° + 36° + s(E\hat{D}B) = 180°$

$s(E\hat{D}B) = 54°$

olarak bulunur.

Cevap: C

4.



$|DF| = |EF| \Rightarrow s(E\hat{D}F) = s(D\hat{E}F) = \mu$ olsun.

$s(D\hat{F}E) = 180° - 102$

$= 78°$ olur.

$\widehat{DEF}$'ninde;

$\propto + \propto + 78° = 180°$

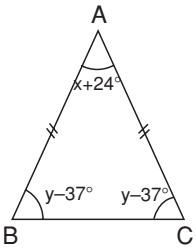
$2\propto = 180° - 78° = 102$

$\propto = 51°$ 'dir.

$s(E\hat{D}F) = \propto = 51°$ olur.

Cevap: A

5.



$|AB| = |AC| \Rightarrow s(A\hat{B}C) = s(A\hat{C}B)$'dir.

$\widehat{ABC}$'ninde;

$y - 37° + y - 37° + x + 24° = 180°$

$2y + x - 50° = 180°$

$2y + x = 230°$ olur.

$y - 37° > 0 \Rightarrow y > 37°$ olur.

OKS DERGİSİ

$2y + x = 230°$
$\downarrow$
$38°$

$2 \cdot 38° + x = 230°$

$76° + x = 230°$

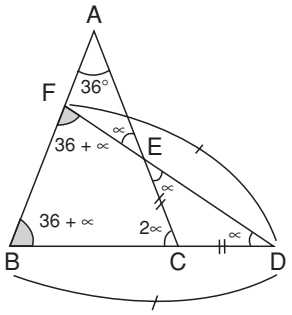
$x = 230° - 76° = 154°$ olur.

$\Rightarrow x = 154°, y = 38° \Rightarrow x + y = 154° + 38°$

$= 192°$ olur.

Cevap: D

6.



$|CE| = |CD| \Rightarrow s(C\hat{D}E) = s(C\hat{E}D) = \propto$ olsun.

$s(A\hat{C}B) = \propto + \propto = 2\propto$ olur.

$s(B\hat{F}D) = s(F\hat{A}E) + s(A\hat{E}F)$

$= 36° + \propto$ olur.

$s(D\hat{B}F) = s(B\hat{F}D)$ dir. $(|FD| = |BD|)$

$\widehat{ABC}$'ninde;

$36° + \propto + 2\propto + 36° = 180°$

$3\propto + 72° = 180°$

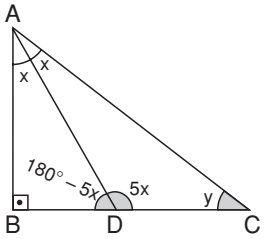
$3\propto = 108°$

$\boxed{\propto = 36°}$ olur.

$s(B\hat{C}E) = 2\propto = 2 \cdot 36 = 72°$

Cevap: C

7.



$s(A\hat{D}B) = 180° - s(A\hat{D}C)$

$= 180 - 5x$

$\widehat{ABD}$'ninde;

$90° + x + \cancel{180°} - 5x = \cancel{180°}$

$90° - 4x = 0$

$4x = 90°$

$\boxed{x = 22{,}5°}$ olur.

$\widehat{ABC}$'ninde;

$90° + 2x + y = 180°$

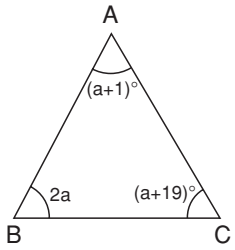
$90° + 2.(22{,}5°) + y = 180°$

$135° + y = 180°$

$\boxed{y = 45°}$

Cevap: B

8.



$\widehat{ABC}$'ninde;

$\underline{a} + 1 + 2\underline{a} + \underline{a} + 19 = 180°$

$4a + 20° = 180°$

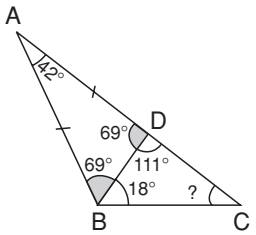
$4a = 160°$

$\boxed{a = 40°}$ bulunur.

Cevap: C

OKS DERGİSİ

9.



$|AD| = |AB| \Rightarrow s(A\hat{B}D) = s(A\hat{D}B)$ olur.

$\Rightarrow s(A\hat{B}D) = s(A\hat{D}B) = \dfrac{180° - 42°}{2} = 69°$ olur.

$s(B\hat{D}C) = 180° - s(A\hat{D}B)$

$= 180° - 69° = 111°$ bulunur.

$\widehat{BDC}$'ninde;

$111° + 18° + ? = 180°$

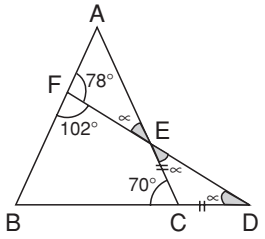
$129° + ? = 180°$

$? = 51°$ olur.

$\Rightarrow s(D\hat{C}B) = ? = 51°$

Cevap: A

10.



$|CE| = |CD| \Rightarrow s(C\hat{E}D) = s(E\hat{D}C) = \propto$ olsun.

$s(A\hat{C}B) = \propto + \propto = 70°$

$\propto = 35°$

$s(A\hat{F}E) = 180° - s(B\hat{F}D)$

$= 180° - 102° = 78°$

$s(A\hat{E}F) = s(C\hat{E}D) = \propto$ (Ters açılar)

$\widehat{AFE}$ ninde;

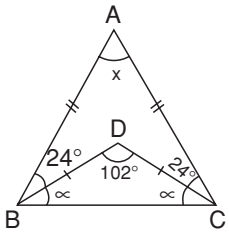
$s(\hat{A}) + 78° + \propto = 180°$

$s(\hat{A}) + 78° + 35° = 180°$

$\boxed{s(\hat{A}) = 67°}$

Cevap: C

11.



$s(D\hat{B}C) = s(D\hat{C}B) = \propto$ olsun.

$s(A\hat{B}C) = s(A\hat{C}B) = \propto + 24°$ olur. ($|AB| = |AC|$)

$s(A\hat{B}D) = 24°$ olur.

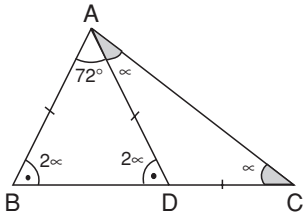
$102° = x + 24° + 24°$

$102° = x + 48°$

$\boxed{x = 54°}$ bulunur.

Cevap: B

12.



$s(D\hat{A}C) = s(A\hat{C}D) = \propto$ olsun. ($|AD| = |DC|$)

$s(A\hat{D}B) = \propto + \propto = 2\propto$ olur.

$s(A\hat{B}D) = s(A\hat{D}B) = 2\propto$ olur. ($|AB| = |AD|$)

$\widehat{ABD}$'ninde;

$2\propto + 2\propto + 72° = 180°$

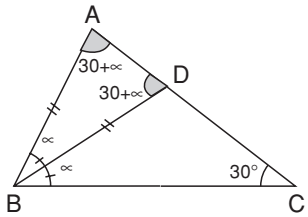
$4\propto = 108°$

$\boxed{\propto = 27°}$ bulunur.

$s(D\hat{A}C) = \propto = 27°$'dir.

Cevap: A

13.



$s(D\hat{B}C) = s(A\hat{B}D) = \propto$ olsun. (Açıortay)

$s(A\hat{D}B) = s(D\hat{C}B) + s(D\hat{B}C)$

$= 30 + \propto$ olur.

$s(A\hat{D}B) = s(B\hat{A}D) = 30 + \propto$ olur. ($|AB| = |BD|$)

$\widehat{ABD}$'ninde;

$\propto + 30 + \propto + 30 + \propto = 180°$

$3\propto + 60° = 180°$

$3\propto = 120°$

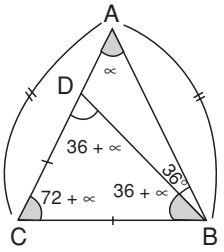
$\boxed{\propto = 40°}$

$s(B\hat{A}C) = 30 + \propto = 30° + 40° = 70°$

Cevap: D

OKS DERGİSİ

14.



$s(C\hat{A}B) = \propto$ olsun.

$s(B\hat{D}C) = \propto + 36°$ olur.

$s(C\hat{D}B) = s(C\hat{B}D) = 36° + \propto$ olur. ($|CD| = |BC|$)

$s(A\hat{B}C) = s(A\hat{C}B) = 72° + \propto$ olur. ($|AC| = |AB|$)

$\widehat{ABC}$'ninde;

$72 + \propto + 72 + \propto + \propto = 180°$

$3\propto + 144° = 180°$

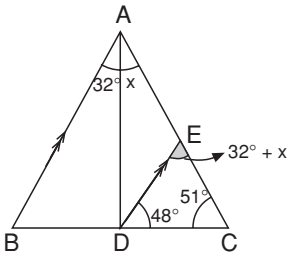
$\boxed{\propto = 12°}$

$s(B\hat{D}C) = 36 + \propto = 36 + 12°$

$= 48°$

Cevap: D

15.



[DE] // [AB] olduğundan

$s(B\hat{A}E) = s(D\hat{E}C) = 32° + \propto$'dır. (Yöndeş açılar)

$\widehat{EDC}$'ninde;

$32 + x + 48° + 51° = 180°$

$x + 131° = 180°$

$\boxed{x = 49°}$ olur.

Cevap: C

16.

Açı	Tümleri
x	5x

Komşu tümler açı olduklarından toplamları 90° dir.

$x + 5x = 90°$

$6x = 90°$

$\boxed{x = 15°}$ bulunur.

$|5x - x| = |4x| = |4.15| = 60°$

Cevap: B

17.

Açı	Tümleri	Bütünleri
x	90 – x	180 – x

$(180 - x) + (90 - x) = 4 . x - 30°$

$270° - 2x = 4x - 30°$

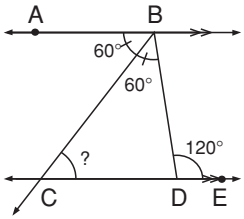
$270° + 30° = 4x + 2x$

$300° = 6x$

$x = 50°$

Cevap: B

18.



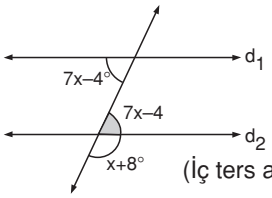
$s(A\hat{B}D) = s(B\hat{D}E) = 120°$ dir. (İç ters açılar)

$s(A\hat{B}C) = s(C\hat{B}D) = \frac{120°}{2} = 60°$ olur.

$s(A\hat{B}C) = s(B\hat{C}D) = 60°$ dir. (İç ters açılar)

Cevap: C

19.



(İç ters açılar)

$7x - 4 + x + 8 = 180°$

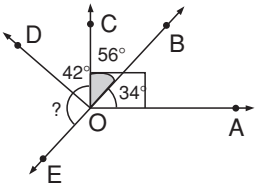
$8x + 4 = 180°$

$8x = 176°$

$\boxed{x = 22°}$ olur.

Cevap: A

20.



$[OC \perp [OA \Rightarrow s(C\hat{O}A) = 90°$dir.

$\Rightarrow s(C\hat{O}B) = 90° - 34° = 56°$

E, O, B doğrusal olduğundan;

$? + 42° + 56° = 180°$

$? + 98° = 180°$

$\boxed{? = 82°}$ olur.

Cevap: D

OKS DERGİSİ

1. Açı Tümleri

$x \quad x + 50°$

$x + x + 50° = 90°$

$2x + 50° = 90°$

$2x = 40°$

$x = 20°$

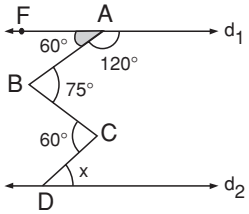
Açı $\rightarrow 20°$

Tümleri $\rightarrow 70°$ olur.

$\frac{20°}{70°} = \frac{2}{7}$

Cevap: A

2.



$s(\widehat{BAF}) = 60°$ olur.

Aynı yöne ve zıt yöne bakan açıların toplamı eşittir.

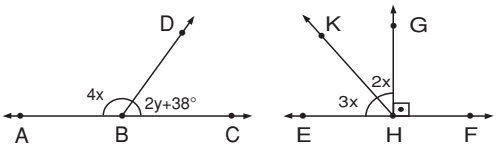
$60° + 60° = x + 75°$

$120° = x + 75°$

$\boxed{x = 45°}$ bulunur.

Cevap: B

3.



$\Downarrow \qquad \Downarrow$

$4x + 2y + 38° = 180°$ $\qquad$ $3x + 2x + 90° = 180°$

$4x + 2y = 142°$ $\qquad$ $5x = 90°$

$\boxed{2x + y = 71°}$ $\qquad$ $\boxed{x = 18°}$

$2x + y = 71° \Rightarrow 2 \,.\, 18° + y = 71°$

$\downarrow$

$18°$ $\qquad$ $\boxed{y = 35°}$

Cevap: A

4. Açı Tümleri

$7x \quad 11x$

$7x + 11x = 90°$

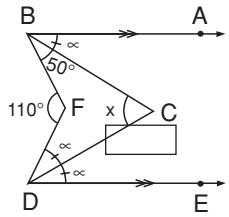
$18x = 90°$

$x = 5°$

$|11x - 7x| = |4x| = |4.5| = 20$

Cevap: B

5.



$s(\widehat{ABC}) = s(\widehat{FDC}) = s(\widehat{CDE}) = \propto$ olsun.

$s(\widehat{BFD}) = s(\widehat{FBA}) + s(\widehat{FDE})$

$110° = 50° + \propto + 2\propto$

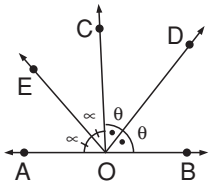
$60° = 3\propto \Rightarrow \propto = 20°$

$s(\widehat{BCD}) = s(\widehat{CBA}) + s(\widehat{CDE})$

$= 20° + 20° = 40°$

Cevap: A

6.



$s(\widehat{AOE}) = s(\widehat{EOC}) = \propto$ olsun.

$s(\widehat{COD}) = s(\widehat{DOB}) = \theta$ olsun.

$2\propto + 2\theta = 180°$

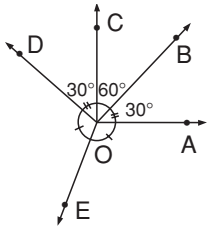
$\propto + \theta = 90°$ olur.

$s(\widehat{DOE}) = \theta + \propto$

$= 90°$

Cevap: C

7.



$[OC \perp [OA \Rightarrow s(\widehat{COA}) = 90°$

$\Rightarrow s(\widehat{BOA}) = 90° - 60° = 30°$ olur.

$s(\widehat{EOA}) = s(\widehat{DOE}) = \propto$ olsun.

$\Rightarrow \propto + \propto + 30° + 30° + 60° = 360°$

$2\propto + 120° = 360°$

$2\propto = 240°$

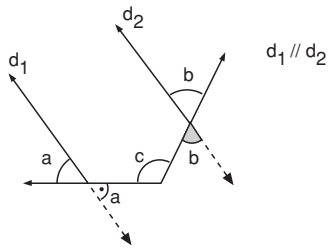
$\boxed{\propto = 120°}$

$s(\widehat{DOE}) = \propto = 120°$ olur.

Cevap: D

OKS DERGİSİ

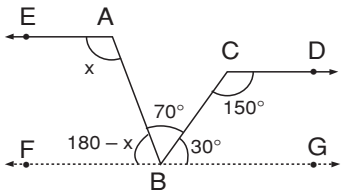
8.



$d_1 // d_2$ ise

$\boxed{a + b = c}$'dir.

9.



B'den geçen ve [AE // [CD // d_1 olan d_1 doğrusu çizelim.

$s(F\hat{B}A) = 180 - x$

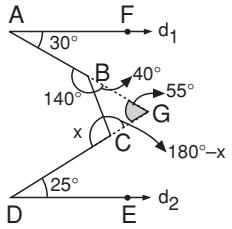
$s(C\hat{B}G) = 180° - 150° = 30°$ olur.

$180 - x + 70° + 30° = 180°$

$\boxed{x = 100°}$

Cevap: B

10.



$d_1 // d_2$ paraleldi.

[AB] ve [DC]'yi uzatırsak

$\widehat{BGC}$ üçgenin elde edilir.

$s(G\hat{B}C) = 180° - 140° = 40°$ olur.

$s(G\hat{C}B) = 180° - x$ olur.

$s(B\hat{G}C) = 30° + 25° = 55°$ olur.

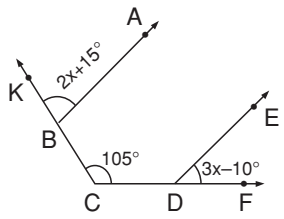
$\widehat{BGC}$'ninde;

$40° + 180° - x + 55° = 180°$

$\boxed{x = 95°}$ bulunur.

Cevap: C

11.



Kural gereği;

$2x + 15° + 3x - 10° = 105°$

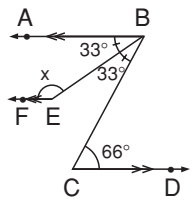
$5x + 5° = 105°$

$5x = 100°$

$\boxed{x = 20°}$

Cevap: B

12.



$s(B\hat{C}D) = s(A\hat{B}C) = 66°$ olur. (İç ters açılar)

$s(A\hat{B}E) = s(E\hat{B}C) = \frac{66}{2} = 33°$ olur.

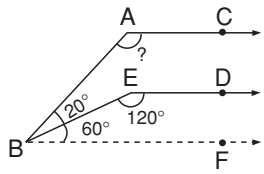
$s(A\hat{B}E) + s(F\hat{E}B) = 180°$

$33 + x = 180°$

$\boxed{x = 147°}$

Cevap: A

13.



[AC // [ED // [BF olacak şekilde [BF çizilir.

$s(E\hat{B}F) = 180° - 120°$

$= 60°$ olur.

$s(B\hat{A}C) + s(A\hat{B}F) = 180°$

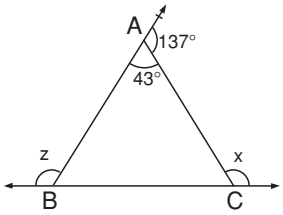
$s(B\hat{A}C) + 80° = 180°$

$s(B\hat{A}C) = 100°$ olur.

Cevap: A

OKS DERGİSİ

14.



$s(C\widehat{A}E) = 180° - 43° = 137°$

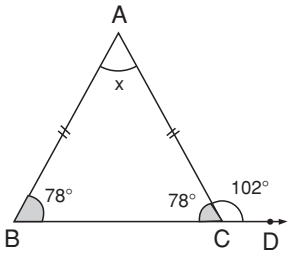
Üçgende dış açılar toplamı 360° dir.

$\Rightarrow z + x + 137° = 360°$

$x + y = 360° - 137° = 223°$

Cevap: A

15.



$s(A\widehat{C}B) = 180° - 102° = 78°$

$s(A\widehat{C}B) = s(A\widehat{B}C) = 78°$ olur. ($|AB| = |AC|$)

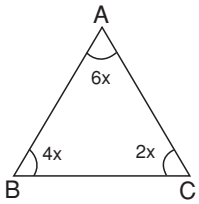
$\widehat{ABC}$'ninde;

$x + 78° + 78° = 180°$

$x + 156° = 180° \Rightarrow \boxed{x = 24°}$

Cevap: C

16.



$s(\widehat{A}) = 6x$

$s(\widehat{B}) = 4x$

$s(\widehat{C}) = 2x$ olsun.

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

$6x + 4x + 2x = 180°$

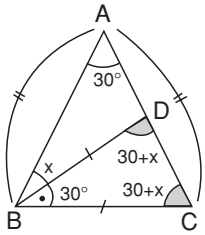
$12x = 180°$

$\boxed{x = 15°}$

$s(\widehat{C}) = 2x = 2.15° = 30°$ olur.

Cevap: B

17.



$s(B\widehat{D}C) = s(\widehat{A}) + s(A\widehat{B}D) = 30° + x$

$s(B\widehat{D}C) = s(B\widehat{C}D) = 30° + x$ ($|BD| = |BC|$)

$s(A\widehat{B}C) = s(A\widehat{C}B) = 30° + x$

$s(D\widehat{B}C) = 30°$ olur.

$\widehat{BDC}$'ninde;

$30° + 30° + x + 30° + x = 180°$

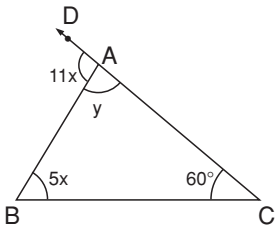
$90° + 2x = 180°$

$2x = 90°$

$\boxed{x = 45°}$

Cevap: B

18.



$s(A\widehat{B}C) + s(A\widehat{C}B) = s(D\widehat{A}B)$'dir.

$5x + 60° = 11x \Rightarrow 60° = 6x$

$\boxed{x = 10°}$

$\widehat{ABC}$'ninde;

$5x + y + 60° = 180°$

$5 . 10 + y + 60° = 180°$

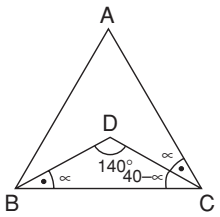
$y + 110° = 180°$

$\boxed{y = 70°}$

Cevap: D

OKS DERGİSİ

19.



$s(D\hat{B}C) = \propto$ olsun.

$\widehat{DBC}$'ninde;

$\propto + 140° + s(D\hat{C}B) = 180°$

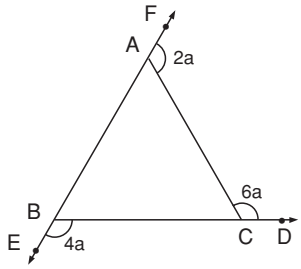
$\boxed{s(D\hat{C}B) = 40° - \propto}$ olur.

$s(D\hat{B}C) = s(A\hat{C}D) = \propto$'dır.

$s(A\hat{C}B) = \cancel{\propto} + 40° - \cancel{\propto} = 40°$ olur.

Cevap: D

20.



Dış açılar toplamı 360° dir.

$4a + 6a + 2a = 360°$

$12a = 360°$

$\boxed{a = 30°}$ 'dir.

Cevap: D

OKS DERGİSİ