

Üçgende Yardımcı Doğrular (Açıortay - Kenarortay)

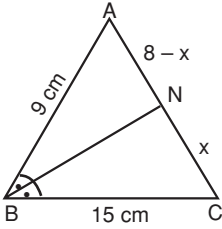
1. $\frac{3}{5} = \frac{c}{b} \Rightarrow c = 3k$
 $b = 5k$

$b + c = 5k + 3k = 8k = 32$

$\Rightarrow k = 4$ bulunur.

$c = 3k = 3 \cdot 4 = \boxed{12}$

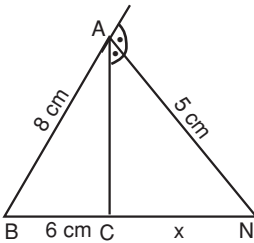
2.



$\frac{5}{9} = \frac{x}{8-x} \Rightarrow \frac{5}{3} = \frac{x}{8-x}$

$\Rightarrow 40 - 5x = 3x \Rightarrow \boxed{x = 5}$

3.



$\frac{x}{x+6} = \frac{5}{8}$

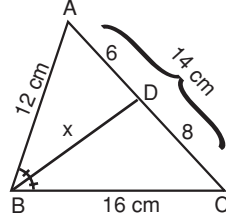
$8x = 5x + 30 \Rightarrow \boxed{x = 10}$

Cevap: D

Cevap: C

Cevap: A

4.



$\frac{|ADI|}{|DC|} = \frac{12}{16} = \frac{6}{8} \Rightarrow |ADI| = 6 \quad |DCI| = 8$

$\Rightarrow x^2 = 16 \cdot 12 - 6 \cdot 8$

$x^2 = 192 - 48 = 144 \Rightarrow x = 12$

Cevap: B

5. F ağırlık merkezi olduğundan;

$2 |FEI| = |FBI| = 8 \Rightarrow |FEI| = y = 4$

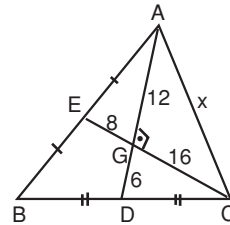
$2 |FDI| = |FAI| = x$

$2 \cdot 5 = x \Rightarrow \boxed{x = 10}$

$\Rightarrow x + y = 10 + 4 = 14$ bulunur.

Cevap: B

6.



G ağırlık merkezi olur.

$|GCI| = 2 \cdot |GEI| = 2 \cdot 8 = 16$

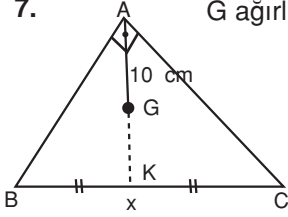
$|AGI| = 2 \cdot |GDI| = 2 \cdot 6$
 $= 12$

Pisagordan (\widehat{AGC})

$x^2 = 12^2 + 16^2 \Rightarrow x = 20$

Cevap: D

7. G ağırlık merkezi olduğundan:

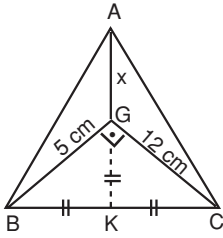


$$\begin{aligned} IAGI &= 2 \cdot IGKI \\ 10 &= 2 \cdot IGKI \\ \Rightarrow IGKI &= 5 \text{ cm} \end{aligned}$$

$\Rightarrow [AK]$ kenar ortay, $\widehat{s(A)} = 90^\circ$ olduğundan;
 $IAGI = IBKI = IKCI$ (muhteşem üçlü)
 $IBC I = x = 2 \cdot IAGI = 2 \cdot (10 + 5) = 30 \text{ cm}$

Cevap: B

8.



$$IAGI = 2 \cdot IGKI$$

$$\Rightarrow IBCI^2 = 5^2 + 12^2$$

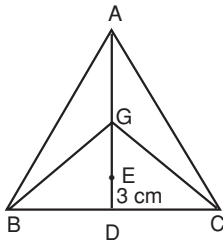
$$\Rightarrow IBCI = 13 \text{ cm}$$

$$\Rightarrow IGKI = \frac{IBC I}{2} = \frac{13}{2}$$

$$IAGI = 2 \cdot IGKI = 2 \cdot \frac{13}{2} = 13$$

Cevap: A

9.



$$IGEI = 2 \cdot IEDI$$

$$IGEI = 2 \cdot 3 = 6 \text{ cm}$$

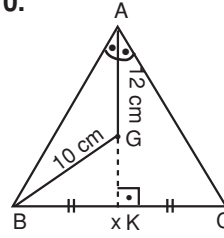
$$IAGI = 2 \cdot (6 + 3)$$

$$IAGI = 18 \text{ cm}$$

$$IADI = IAGI + IGDI = 18 + 9 = 27$$

Cevap: C

10.



$$\begin{aligned} IAGI &= 2 \cdot IGKI \Rightarrow 12 = 2 \cdot IGKI \\ \Rightarrow IGKI &= 6 \text{ cm} \end{aligned}$$

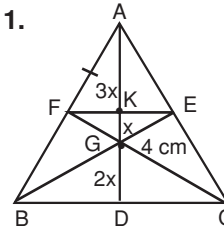
\widehat{GKB} 'ninde;

$$10^2 = 6^2 + IBKI^2 \Rightarrow IBKI = 8 \text{ cm}$$

$$x = IBCI = 2 \cdot IBKI = 2 \cdot 8 = 16 \text{ cm}$$

Cevap: B

11.

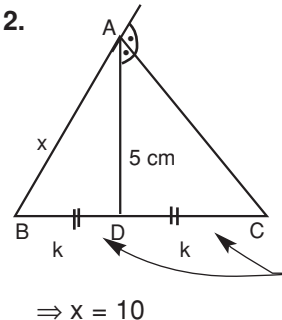


$$2x = 4 \Rightarrow x = 2 \text{ cm}$$

$$\Rightarrow IGKI = 2 \text{ cm}$$

Cevap: D

12.



dış açortay
kuralına göre;

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

$$\Rightarrow x = 10$$

Cevap: A

13. İç açortaydan;

$$\frac{3}{5} = \frac{IACI}{IABI} \text{ dir. (1)}$$

Dış açortaydan;

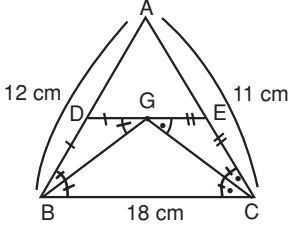
$$\frac{x}{x+8} = \frac{IACI}{IABI} \text{ dir. (2)}$$

$$(1) \text{ ve } (2)'den \dots \frac{3}{5} = \frac{x}{x+8}$$

$$\Rightarrow 3x + 24 = 5x \Rightarrow x = 12$$

Cevap: C

14.



$$\frac{|AEI|}{|IECI|} = \frac{2k}{k} \Rightarrow |AEI| + |IECI| = 11 \text{ cm}$$

$$2k + k = 11$$

$$k = \frac{11}{3} \text{ cm}$$

$$\frac{|ADI|}{|IDBI|} = \frac{2l}{l} \Rightarrow |ADI| + |IDBI| = 12 \text{ cm}$$

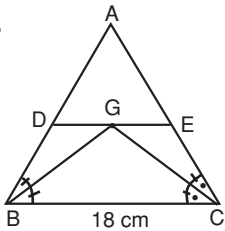
$$2l + l = 12$$

$$l = 4 \text{ cm}$$

$$\begin{aligned} \widehat{ADE} &= |AD| + |DE| + |AE| \\ &= 8 + 4 + \frac{11}{3} = \frac{22}{3} = 23 \end{aligned}$$

Cevap: D

15.



$$\frac{|AEI|}{|IECI|} = \frac{2k}{k} \text{ 'dir.}$$

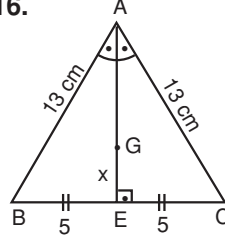
(G: ağırlık merkezi)

$$\Rightarrow \frac{|AEI|}{|ACI|} = \frac{|DEI|}{|BCI|} \Rightarrow \frac{2k}{3k} = \frac{|DEI|}{18}$$

$$\Rightarrow |DEI| = 12 \text{ cm}$$

Cevap: A

16.



İkizkenar üçgende kenarortay, açıortay ve yükseklik doğruları eşittir.

$$|BEI| = |IECI| = \frac{|BCI|}{2} = \frac{10}{2} = 5$$

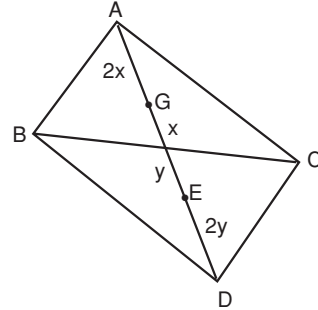
$$|AEI|^2 + 5^2 = 13^2 \Rightarrow |AEI| = 12$$

$$2 |IGE| = |AGI|$$

$$\Rightarrow |IGE| = \frac{|AEI|}{3} = \frac{12}{3} = 4$$

Cevap: A

17.

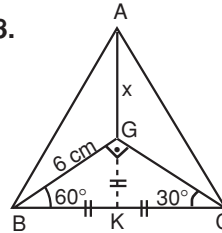


$$|GEI| = x + y = 8$$

$$|ADI| = 3x + 3y = 3(x + y) = 3 \cdot 8 = 24$$

Cevap: A

18.



\widehat{BGC} 'ninde;

(90 - 60 - 30 dan)

$|BCI| = 12 \text{ cm}$ olur.

$$|BKI| = |IKCI| = |KGI| = \frac{|BCI|}{2} = \frac{12}{2} = 6$$

$$|AGI| = 2 |IGKI| = 2 \cdot 6 = 12$$

Cevap: C