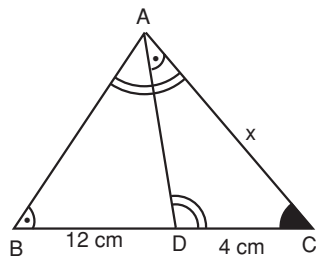


TEST 3

Üçgende Benzerlik

1.



$$\widehat{ABC} \sim \widehat{DAC}$$

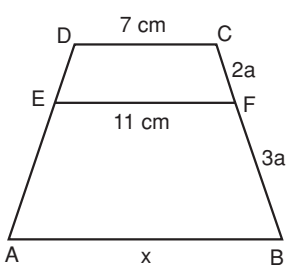
$$\frac{IBCI}{IACI} = \frac{IACI}{IDCI} = \frac{IABI}{IDAI}$$

$$\frac{16}{x} = \frac{x}{4} \Rightarrow x^2 = 64$$

$$x = 8$$

Cevap: D

2.

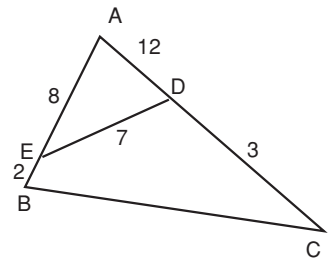


$$\Rightarrow \frac{11 - 7}{x - 11} = \frac{2a}{3a} = \frac{2}{3}$$

$$\Rightarrow 12 = 2x - 22 \Rightarrow x = 17$$

Cevap: A

3.

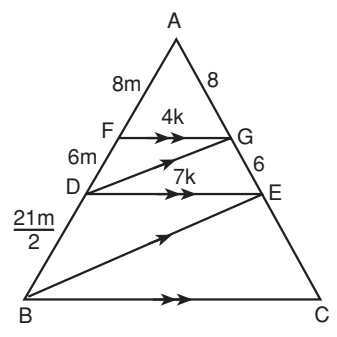


$$\widehat{AED} \sim \widehat{ABC} \text{ (Kenar - Açı - Kenar)}$$

$$\frac{8}{12} = \frac{10}{15} = \frac{7}{x} \Rightarrow x = 10,5$$

Cevap: C

4.



\widehat{ADE} 'ninde;

$$\frac{IAGI}{IAEI} = \frac{IFGI}{IDEI} = \frac{8}{14} = \frac{4}{7}$$

\widehat{ABE} 'ninde;

$$\frac{8}{6} = \frac{IADI}{IDBI} = \frac{14m}{IDBI} \Rightarrow IDBI = \frac{21m}{2}$$

\widehat{ABC} 'ninde;

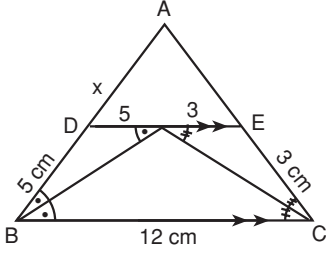
$$\frac{IADI}{IDBI} = \frac{IAEI}{IECI} \Rightarrow \frac{14m}{\frac{21m}{2}} = \frac{14}{IECI}$$

$$\Rightarrow \frac{4}{3} = \frac{14}{IECI} \Rightarrow IECI = 10,5 \text{ cm}$$

Cevap: C

OKS Matematik Soru Bankası Çözümleri

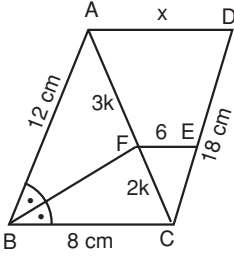
5.



$$\frac{x}{x+5} = \frac{8}{12} \Rightarrow x = 10$$

Cevap: D

6.



\widehat{ABC} üçgeninde açıortay kuralından;

$$\frac{IAB}{IBC} = \frac{IAF}{IFC} = \frac{12}{8} = \frac{3}{2}$$

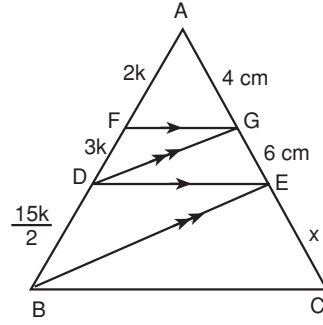
\widehat{ACD} üçgeninde temel benzerlik kuralından;

$$\frac{ICF}{ICA} = \frac{6}{x} \Rightarrow \frac{2k}{5k} = \frac{6}{x}$$

$$\Rightarrow x = 15$$

Cevap: A

7.



$$\widehat{ABE}'\text{ninde}; \frac{IADI}{IDBI} = \frac{IAGI}{IGEI} = \frac{4}{6}$$

$$\Rightarrow \frac{5k}{IDBI} = \frac{2}{3} \Rightarrow IDBI = \frac{15k}{2}$$

\widehat{ABC} 'ninde

$$\frac{IADI}{IDBI} = \frac{IAEI}{IECI}$$

$$\Rightarrow \frac{5k}{\frac{15k}{2}} = \frac{10}{x} \Rightarrow \frac{10k}{15k} = \frac{10}{x}$$

$$x = 15 \text{ cm}$$

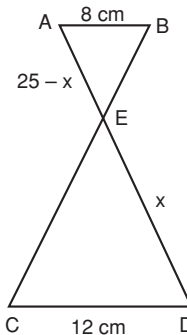
Cevap: D

8. Kelebek kuralından;

$$\frac{6}{x} = \frac{4}{12} = \frac{3}{9} \Rightarrow x = 18$$

Cevap: C

9.



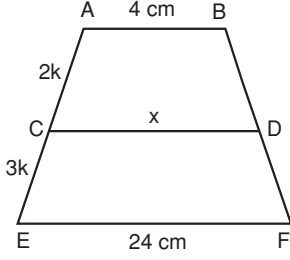
Kelebek kuralından;

$$\frac{8}{12} = \frac{25-x}{x}$$

$$\Rightarrow x = 15$$

Cevap: C

10.



$$\frac{x-4}{24-x} = \frac{2k}{3k} = \frac{2}{3}$$

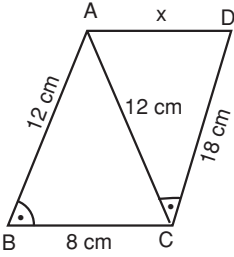
$$\Rightarrow 3x - 12 = 48 - 2x$$

$$\Rightarrow 5x = 60$$

$$\Rightarrow x = 12$$

Cevap: D

11.



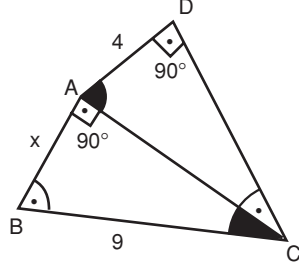
$$\widehat{ABC} \sim \widehat{DAC} \quad (\text{K.A.K})$$

$$\frac{|BC|}{|AC|} = \frac{|AC|}{|DC|} = \frac{|AB|}{|AD|} \Rightarrow$$

$$\frac{8}{12} = \frac{12}{18} = \frac{12}{x} \Rightarrow x = 18$$

Cevap: B

12.



$$\widehat{ABC} \sim \widehat{DCA}$$

$$\frac{9}{|AC|} = \frac{|AC|}{4} = \frac{x}{|DC|}$$

$$|AC|^2 = 4 \cdot 9 = 36 \Rightarrow |AC| = 6$$

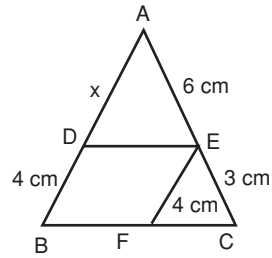
\widehat{ABC} 'ninde pisagordan;

$$9^2 = 6^2 + x^2$$

$$\Rightarrow x^2 = 45 \Rightarrow x = 3\sqrt{5}$$

Cevap: B

13.



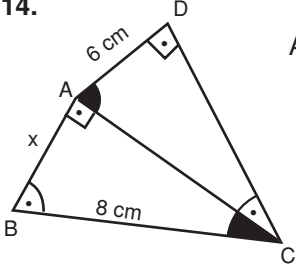
\widehat{ABC} 'ninde temel benzerlik teoreminden;

$$\frac{3}{3+6} = \frac{4}{4+x}$$

$$\Rightarrow x = 8$$

Cevap: C

14.



$$\widehat{ABC} \sim \widehat{DCA}$$

$$\frac{8}{|AC|} = \frac{|AC|}{6} = \frac{x}{|DC|}$$

$$|AC|^2 = 8 \cdot 6 = 48 \Rightarrow |AC| = 4\sqrt{3}$$

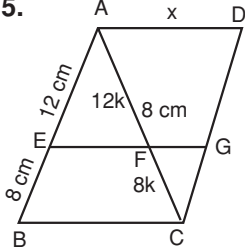
\widehat{ABC} 'ninde pisagordan;

$$|AC|^2 = x^2 + 8^2 \Rightarrow 48 + x^2 = 64$$

$$x = 4$$

Cevap: D

15.

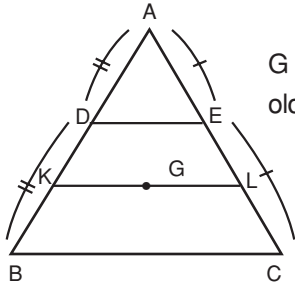


$$|AG| = 12k, |BG| = 8k$$

$$\frac{8k}{20k} = \frac{8}{x} \Rightarrow x = 20$$

Cevap: C

16.



G ağırlık merkezi olduğundan

$$\frac{|AK|}{|KB|} = \frac{2x}{x} \Rightarrow \frac{18}{|KB|} = \frac{2x}{x} = 2$$

$$\Rightarrow |KB| = 9 \text{ cm}$$

$$|AB| = 18 + 9 = 27 \text{ cm}$$

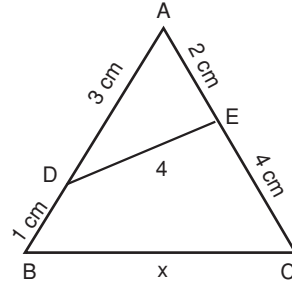
$$\Rightarrow |BD| = \frac{27}{2} = 13,5 \text{ bulunur.}$$

$$\Rightarrow |BD| = |KB| + |KD|$$

$$13,5 = 9 + |KD| \quad |KD| = 4,5$$

Cevap: B

17.



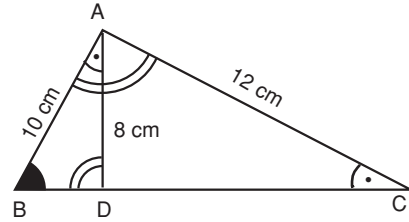
$$\widehat{ADE} \sim \widehat{ACB} \quad (\text{K.A.K})$$

$$\frac{|DE|}{|BC|} = \frac{|AE|}{|AB|} = \frac{|AD|}{|AC|}$$

$$\Rightarrow \frac{4}{x} = \frac{2}{4} = \frac{3}{6} \Rightarrow x = 8$$

Cevap: D

18.



$$\widehat{ABC} \sim \widehat{DBA}$$

$$\frac{|BC|}{|BA|} = \frac{|AC|}{|DA|} = \frac{|AB|}{|DB|}$$

$$\Rightarrow \frac{|BC|}{10} = \frac{12}{8} \Rightarrow |BC| = 15 \text{ cm}$$

Cevap: C