

9 In the opposite figure :

$$\overline{AB} \parallel \overline{DX} \parallel \overline{EY},$$

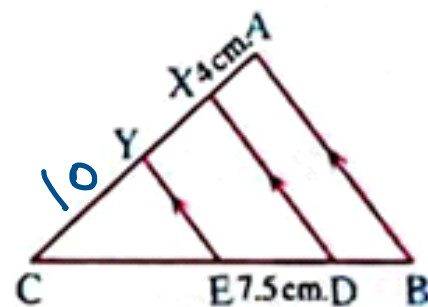
$$AX : XY : YC = 2 : 3 : 5$$

If $DE = 7.5$ cm. , $AX = 4$ cm.

, find the length of each of : \overline{BD} , \overline{CE} and \overline{AC}

$$10 + 6 + 4$$

$$20$$



« 5 cm. , 12.5 cm. , 20 cm. »

$$AX : XY : YC ; \text{Total}$$

$$2 : 3 : 5 : 10$$

$$4 : m : n$$

$$m = \frac{3 \times 4}{2} = 6 \text{ cm}$$

$$n = \frac{4 \times 5}{2} = 10 \text{ cm}$$

grade 5

$$\frac{AX}{XY} = \frac{BD}{DE}$$

$$\Rightarrow \frac{4}{6} = \frac{BD}{7.5}$$

$$BD = \frac{4 \times 7.5}{6} = \checkmark$$

$$\frac{CY}{YX} = \frac{CE}{ED}$$

$$\frac{CX}{YX} = \frac{CD}{ED}$$

$$\frac{10}{6} = \frac{CE}{7.5}$$

$$CE = \frac{10 \times 7.5}{6} = \checkmark$$

6 In the opposite figure :

If $\overline{AB} \parallel \overline{CD} \parallel \overline{EF}$,

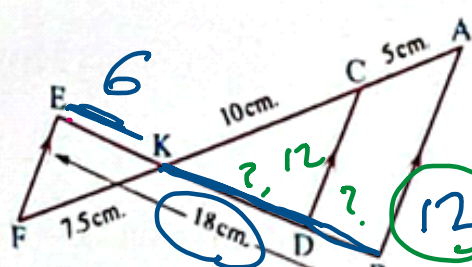
$AC = 5 \text{ cm.}$, $CK = 10 \text{ cm.}$,

$KF = 7.5 \text{ cm.}$, $BE = 18 \text{ cm.}$

Find the length of each of : \overline{BD} , \overline{DK} and \overline{KE}

? ? ?

« 10 cm. , 10.8 cm. »



« 4 cm. , 8 cm. , 6 cm. »

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$$\frac{KA}{CA} = \frac{KB}{DB}$$

$$\frac{KA}{AF} = \frac{KB}{BE}$$

$$\frac{15}{22.5} = \frac{x}{18}$$

$$\frac{15}{5} = \frac{x}{18}$$

$$x = \frac{18 \times 15}{22.5} = 12$$

$$KB = 12 \text{ cm}$$

$$KE = 6 \text{ cm}$$

$$\frac{KA}{CA} = \frac{KB}{DB}$$

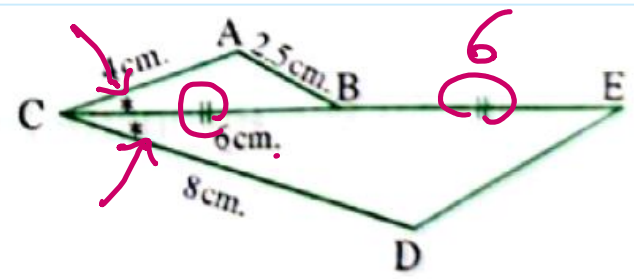
$$\frac{15}{5} = \frac{12}{DB}$$

$$DB = \frac{5 \times 12}{15} = 4$$

In the opposite figure :

If B is the midpoint of \overline{CE}

, then $DE = \dots \dots \dots$ cm.



$$\therefore m(\angle ACB) = m(\angle ECD) \rightarrow A$$

$$\frac{AC}{DC} = \frac{4}{8} = \frac{1}{2}$$

$$\triangle ABC \sim \triangle DEC$$

$$DE = 2.5 \times 2 = 5$$

$$\frac{AB}{DE} = \frac{2.5}{DE} = \frac{1}{2}$$

$$\frac{BC}{EC} = \frac{6}{12} = \frac{1}{2} \quad S$$

$$\frac{AC}{DC} = \frac{4}{8} = \frac{1}{2} \quad S$$

$\therefore \triangle ABC \sim \triangle DEC$ SAS