Triangles Ex 4.5 Q10

Answer :

Comparing ΔCAB and ΔCED,

$\angle CAB = \angle CED$ [Given]

$\angle ACB = \angle ECD$ [Common]

$\therefore \Delta CAB \sim \Delta CED$

$$\Rightarrow \frac{CA}{CE} = \frac{AB}{ED}$$ [In similar triangles, corresponding sides are in the same proportion]

$$\Rightarrow \frac{15\text{ cm}}{10\text{ cm}} = \frac{9\text{ cm}}{x}$$

$$\Rightarrow x = \frac{9 \times 10}{15}\text{ cm} = 6\text{ cm}$$

Triangles Ex 4.5 Q11

Answer :

It is given that perimeter of two similar triangle are 25cm and 15cm and one side 9cm.

We have to find the other side.

Let the corresponding side of the other triangle be x cm.

Since ratio of perimeter = ratio of corresponding side

25 cm15 cm=9 cmx

$$25\text{cm} \times x = 9\text{cm} \times 15\text{cm}$$

$$x = \frac{135\text{cm}}{25\text{cm}}$$

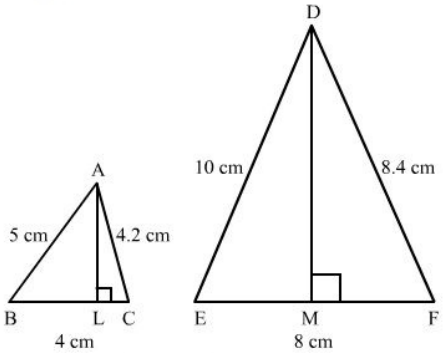
$$x = 5.4\text{cm}$$

Hence $\boxed{x = 5.4\text{cm}}$

Triangles Ex 4.5 Q12

Answer :

It is given that $AB = 5\text{cm}$, $BC = 4\text{cm}$, $CA = 4.2\text{cm}$, $DE = 10\text{cm}$, $EF = 8\text{cm}$ and $FD = 8.4\text{cm}$.



We have to find $AL : DM$

Since both triangle are similar

So, $\frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF} = \frac{1}{2}$

Here, we use the result that in similar triangle the ratio of corresponding altitude is same as the ratio of the corresponding sides.

$\therefore AL : DM = 1 : 2$

********** END **********