



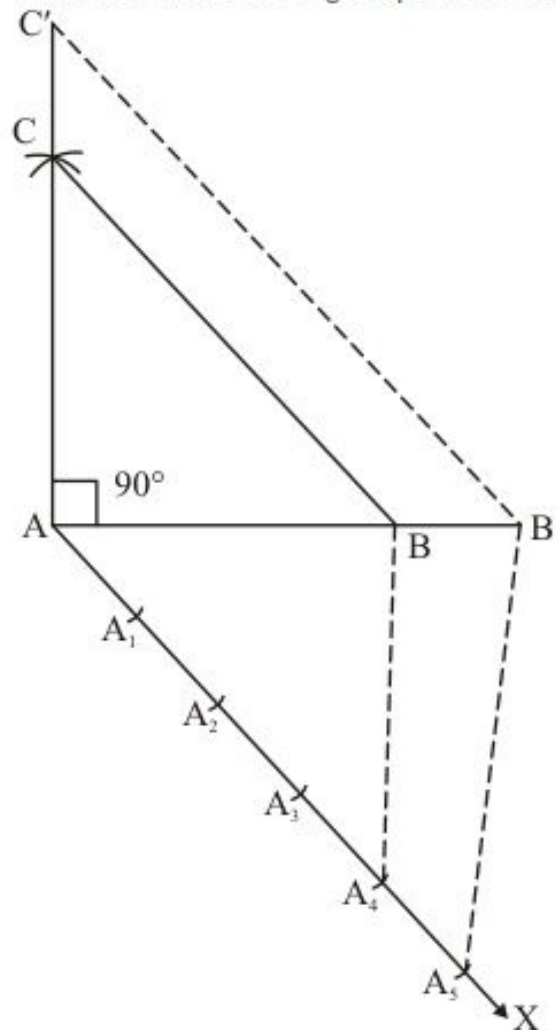
## Constructions Ex 11.2 Q6

**Answer :**

Given that

Construct a right triangle of sides  $AB = AC = 4.5\text{ cm}$ , and  $\angle A = 90^\circ$  and then a triangle similar to it whose sides are  $\left(\frac{5}{4}\right)^{\text{th}}$  of the corresponding sides of  $\triangle ABC$ .

We follow the following steps to construct the given



Step of construction

Step: I- First of all we draw a line segment  $AB = 4.5\text{ cm}$ .

Step: II- With A as centre and draw an angle  $\angle A = 90^\circ$ .

Step: III- With A as centre and radius  $AC = 4.5\text{ cm}$ .

Step: IV- Join BC to obtain  $\triangle ABC$ .

Step: V- Below AB, makes an acute angle  $\angle BAX = 60^\circ$ .

Step: VI- Along AX, mark off five points  $A_1, A_2, A_3, A_4$  and  $A_5$  such that

$AA_1 = A_1A_2 = A_2A_3 = A_3A_4 = A_4A_5$

Step: VII- Join  $A_4B$ .

Step: VIII- Since we have to construct a triangle each of whose sides is  $\left(\frac{5}{4}\right)^{\text{th}}$  of the corresponding sides of  $\triangle ABC$ .

So, we draw a line  $A_5B'$  on AX from point  $A_5$  which is  $A_5B' \parallel A_4B$ , and meeting AB at B'.

Step: IX- From B' point draw  $B'C' \parallel BC$ , and meeting AC at C'

Thus,  $\triangle AB'C'$  is the required triangle, each of whose sides is  $\left(\frac{5}{4}\right)^{\text{th}}$  of the corresponding sides of  $\triangle ABC$ .

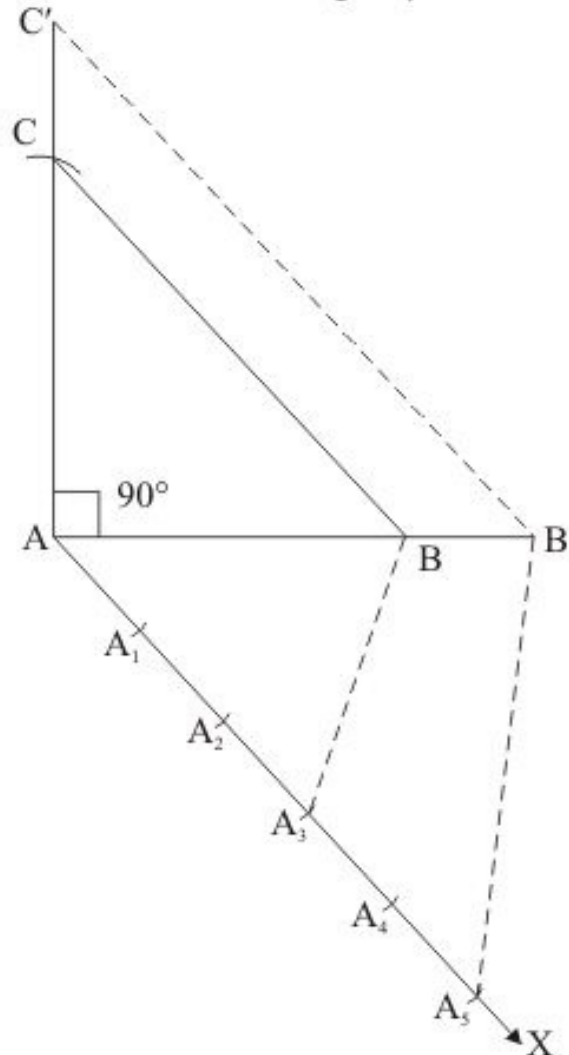
## Constructions Ex 11.2 Q7

**Answer :**

Given that

Construct a right triangle of sides let  $AB = 5 \text{ cm}$ ,  $AC = 4 \text{ cm}$ , and  $\angle A = 90^\circ$  and then a triangle similar to it whose sides are  $\left(\frac{5}{3}\right)^{\text{th}}$  of the corresponding sides of  $\triangle ABC$ .

We follow the following steps to construct the given



Step of construction

Step: I- First of all we draw a line segment  $AB = 5 \text{ cm}$ .

Step: II- With A as centre and draw an angle  $\angle A = 90^\circ$ .

Step: III- With A as centre and radius  $AC = 4 \text{ cm}$ .

Step: IV -Join  $BC$  to obtain  $\triangle ABC$ .

Step: V -Below  $AB$ , makes an acute angle  $\angle BAX = 60^\circ$ .

Step: VI -Along  $AX$ , mark off five points  $A_1, A_2, A_3, A_4$  and  $A_5$  such that

$AA_1 = A_1A_2 = A_2A_3 = A_3A_4 = A_4A_5$

Step: VII -Join  $A_3B$ .

Step: VIII -Since we have to construct a triangle each of whose sides is  $\left(\frac{5}{3}\right)^{\text{th}}$  of the corresponding sides of  $\triangle ABC$ .

So, we draw a line  $A_5B'$  on  $AX$  from point  $A_5$  which is  $A_5B' \parallel A_3B$ , and meeting  $AB$  at  $B'$ .

Step: IX -From  $B'$  point draw  $B'C' \parallel BC$ , and meeting  $AC$  at  $C'$

Thus,  $\triangle AB'C'$  is the required triangle, each of whose sides is  $\left(\frac{5}{3}\right)^{\text{th}}$  of the corresponding sides of  $\triangle ABC$ .

\*\*\*\*\* END \*\*\*\*\*