



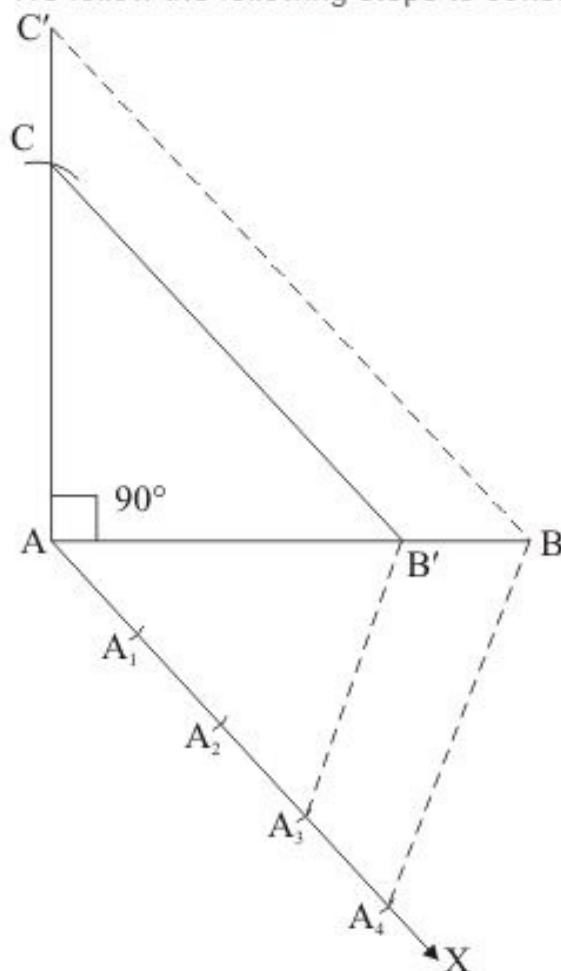
Constructions Ex 11.2 Q13

Answer :

Given that

Construct a right triangle of sides let $AB = 8\text{ cm}$, $AC = 6\text{ cm}$, and $\angle A = 90^\circ$ and then a triangle similar to it whose sides are $\left(\frac{3}{4}\right)^{\text{th}}$ 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 let $AB = 8\text{ cm}$.

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

Step: III- With A as centre and radius $AC = 6\text{ cm}$.

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

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 , and A_4 such that $AA_1 = A_1A_2 = A_2A_3 = A_3A_4$

Step: VII- Join A_4B .

Step: VIII -Since we have to construct a triangle each of whose sides is $\left(\frac{3}{4}\right)^{\text{th}}$ of the corresponding sides of right $\triangle ABC$.

So, we draw a line A_3B' on AX from point A_3 which is $A_3B' \parallel A_4B$, 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 $\left(\frac{3}{4}\right)^{\text{th}}$ of the corresponding sides of $\triangle ABC$.

***** END *****

