



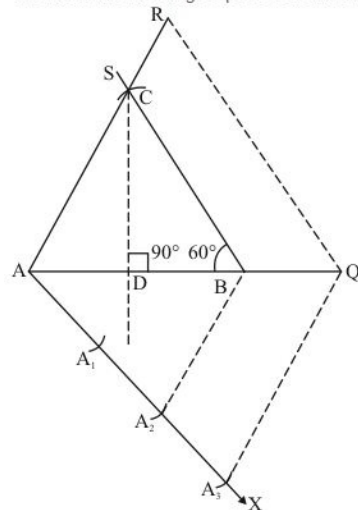
Constructions Ex 11.2 Q8

Answer :

Given that

Construct a triangle $\triangle ABC$ in which let $AB = 5 \text{ cm}$, $\angle B = 90^\circ$ and altitude $CD = 3 \text{ cm}$, and then a triangle $\triangle AQR$ similar to it whose sides are $\left(1.5 \text{ times} = \frac{3}{2}\right)$ 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 B as centre and draw an angle $\angle B = 60^\circ$.

Step: III -From point A and B construct altitude $CD = 3 \text{ cm}$, which cut the line BS at point C

Step: IV- Join AC 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 and A_3 such that $AA_1 = A_1A_2 = A_2A_3$

Step: VII -Join A_2B .

Step: VIII -Since we have to construct a triangle $\triangle AQR$ each of whose sides is $\left(1.5 \text{ times} = \frac{3}{2}\right)$ of the corresponding sides of $\triangle ABC$.

So, we draw a line A_3Q on AX from point A_3 which is $A_3Q \parallel A_2B$, and meeting AB at Q .

Step: IX- From Q point draw $QR \parallel BC$, and meeting AC at R

Thus, $\triangle AQR$ is the required triangle, each of whose sides is $\left(1.5 \text{ times} = \frac{3}{2}\right)$ of the corresponding sides of $\triangle ABC$.

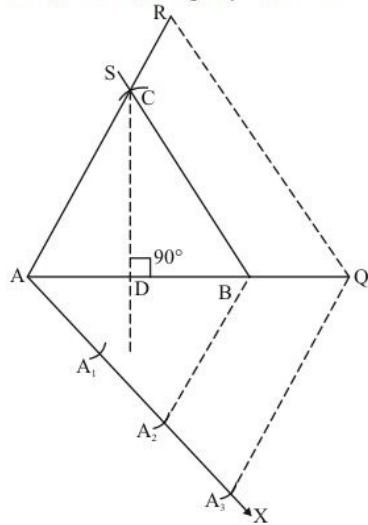
Constructions Ex 11.2 Q9

Answer :

Given that

Construct an isosceles triangle ABC in which $AB = BC = 6$ cm and altitude = 4 cm then another triangle similar to it whose sides are $\frac{3}{4}$ 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 $AB = 6$ cm.

Step: II- With B as centre and radius = $BC = 6$ cm, draw an arc.

Step: III- From point A and B construct altitude $CD = 4$ cm, which cut the line BS at point C

Step: IV -Join AC 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 and A_3 such that $AA_1 = A_1A_2 = A_2A_3$

Step: VII- Join A_3B .

Step: VIII -Since we have to construct a triangle $\triangle AQR$ each of whose sides is $\left(1.5 \text{ times} = \frac{3}{2}\right)$ of the corresponding sides of $\triangle ABC$.

So, we draw a line A_3Q on AX from point A_3 which is $A_3Q \parallel A_2B$, and meeting AB at Q .

Step: IX -From Q point draw $QR \parallel BC$, and meeting AC at R

Thus, $\triangle AQR$ is the required triangle, each of whose sides is $\left(\frac{3}{2}\right)$ of the corresponding sides of $\triangle ABC$.

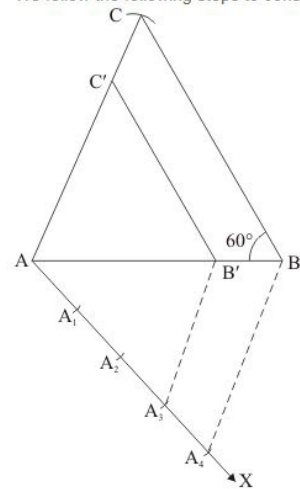
Constructions Ex 11.2 Q10

Answer :

Given that

Construct a $\triangle ABC$ of given data, $AB = 5$ cm, $BC = 6$ cm and $\angle ABC = 60^\circ$ 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 $AB = 5 \text{ cm}$.

Step: II- With B as centre draw an angle $\angle B = 60^\circ$.

Step: III- With B as centre and radius $= BC = 6 \text{ cm}$, draw an arc.

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

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

Step: VI -Along AX , mark off four 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 $\triangle ABC$.

So, we take three parts out of four equal parts on AX from point A_3 draw $A_3B' \parallel A_4B$, and meeting AB at B' .

Step: IX- From B' 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 *****