



**SpeedLabs**

**MATHS**

**CBSE 7<sup>th</sup>**

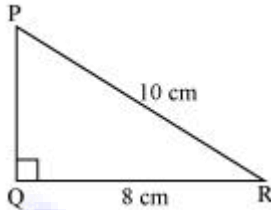
**TEEVRA EDUTECH PVT. LTD.**

# Practical Geometry

## Exercise-10.5

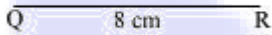
**Q.1** Construct the right angled  $\Delta PQR$ , where  $m \angle Q = 90^\circ$ ,  $QR = 8$  cm and  $PR = 10$  cm.

**Sol:** A rough sketch of  $\Delta PQR$  is as follows.

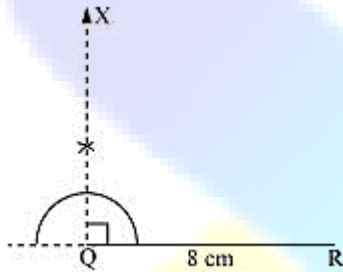


The steps of construction are as follows.

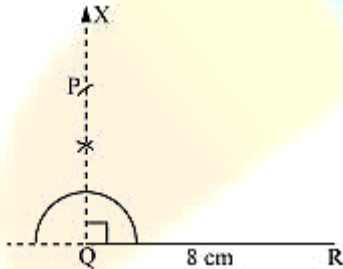
(i) Draw a line segment QR of length 8 cm.



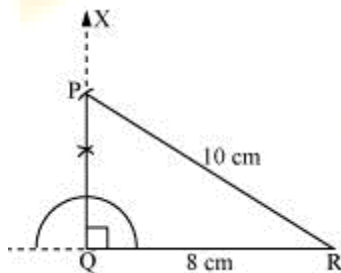
(ii) At point Q, draw a ray QX making  $90^\circ$  with QR.



(iii) Taking R as centre, draw an arc of 10 cm radius to intersect ray QX at point P.

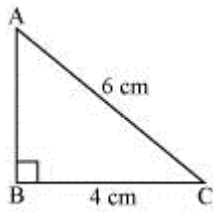


(iv) Join P to R.  $\Delta PQR$  is the required right-angled triangle.



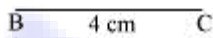
**Q.2** Construct a right-angled triangle whose hypotenuse is 6 cm long and one of the legs is 4 cm long.

**Sol:** A right-angled triangle ABC with hypotenuse 6 cm and one of the legs as 4 cm has to be constructed. A rough sketch of  $\Delta ABC$  is as follows.

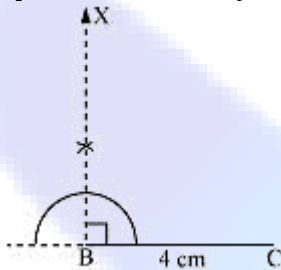


The steps of construction are as follows.

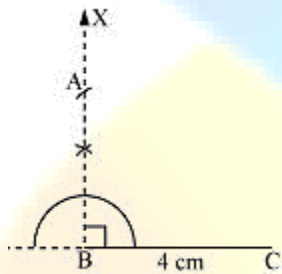
(i) Draw a line segment BC of length 4 cm.



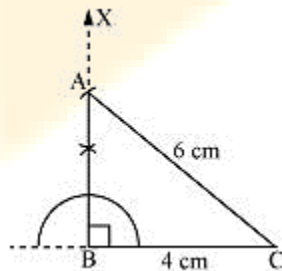
(ii) At point B, draw a ray BX making an angle of  $90^\circ$  with BC.



(iii) Taking C as centre, draw an arc of 6 cm radius to intersect ray BX at point A.



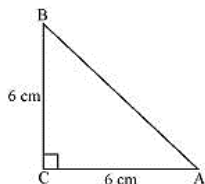
(iv) Join A to C to obtain the required  $\Delta ABC$ .



**Q.3** Construct an isosceles right-angled triangle ABC, where  $m\angle ACB = 90^\circ$  and  $AC = 6$  cm.

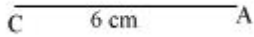
**Sol:** In an isosceles triangle, the lengths of any two sides are equal.

Let in  $\Delta ABC$ ,  $AC = BC = 6$  cm. A rough sketch of this  $\Delta ABC$  is as follows.

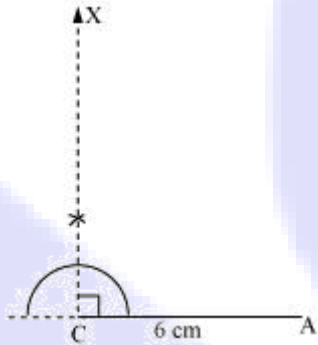


The steps of construction are as follows.

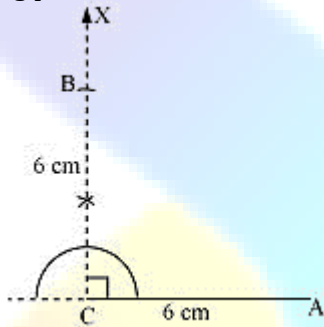
(i) Draw a line segment AC of length 6 cm.



(ii) At point C, draw a ray CX making an angle of  $90^\circ$  with AC.



(iii) Taking point C as centre, draw an arc of 6 cm radius to intersect CX at point B.



(iv) Join A to B to obtain the required  $\Delta ABC$ .

