

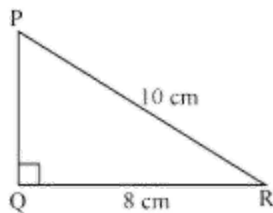
Board – CBSE

Class – 7th

Topic – Practical Geometry 10.5

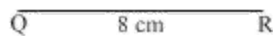
Q.1 Construct the right angled ΔPQR , where $m\angle Q = 90^\circ$, $QR = 8$ cm and $PR = 10$ cm.

Sol: A rough sketch of ΔPQR is as follows.

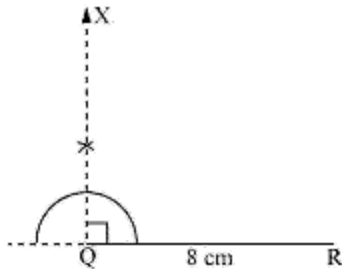


The steps of construction are as follows.

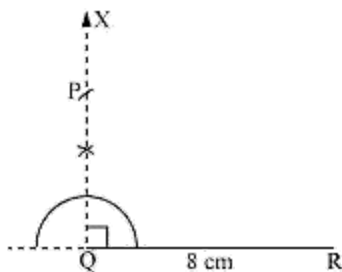
(i) Draw a line segment QR of length 8 cm.



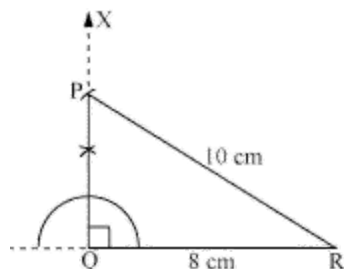
(ii) At point Q, draw a ray QX making 90° with QR.



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

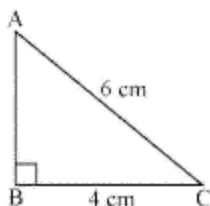


(iv) Join P to R. ΔPQR is the required right-angled triangle.



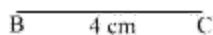
Q.2 Construct a right-angled triangle whose hypotenuse is 6 cm long and one of the legs is 4 cm long.

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 ΔABC is as follows.

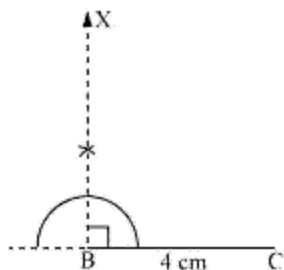


The steps of construction are as follows.

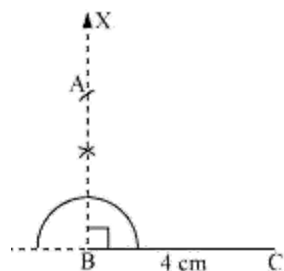
(i) Draw a line segment BC of length 4 cm.



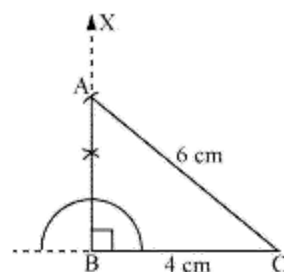
(ii) At point B, draw a ray BX making an angle of 90° with BC.



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



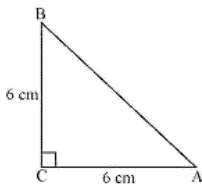
(iv) Join A to C to obtain the required ΔABC .



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

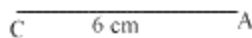
Sol: In an isosceles triangle, the lengths of any two sides are equal.

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

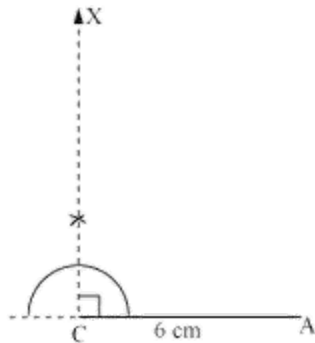


The steps of construction are as follows.

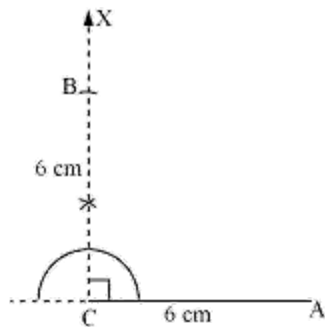
(i) Draw a line segment AC of length 6 cm.



(ii) At point C, draw a ray CX making an angle of 90° 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 ΔABC .

