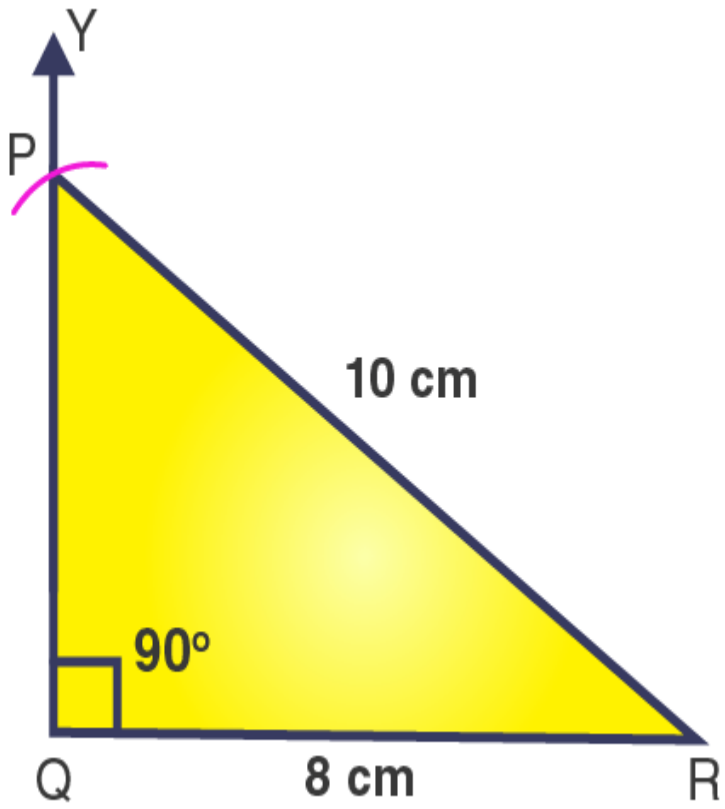
EXERCISE 10.5 PAGE: 203

1. Construct the right-angled ΔPQR, where m∠Q = 90°, QR = 8cm and PR = 10 cm.

Solution:-



Steps of construction

1. Draw a line segment QR = 8 cm.

2. At point Q, draw a ray QY to making an angle of 90°, i.e., ∠YQR = 90°.

3. With R as a centre and radius 10 cm, draw an arc that cuts the ray QY at P.

4. Join PR.

Then, ΔPQR is the required right-angled triangle.

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

Solution:-

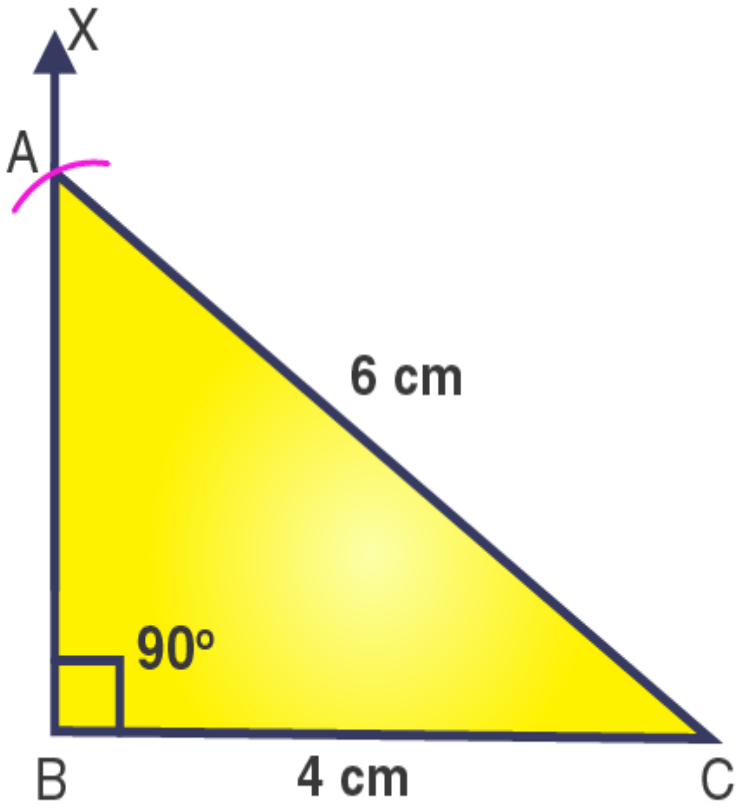
Let us consider ΔABC is a right-angled triangle at ∠B = 90°

Then,

AC is hypotenuse = 6 cm … [Given in the question]

BC = 4 cm

Now, we have to construct the right-angled triangle by using the above values.



Steps of construction

1. Draw a line segment BC = 4 cm.

2. At point B, draw a ray BX to making an angle of 90°, i.e., ∠XBC = 90°.

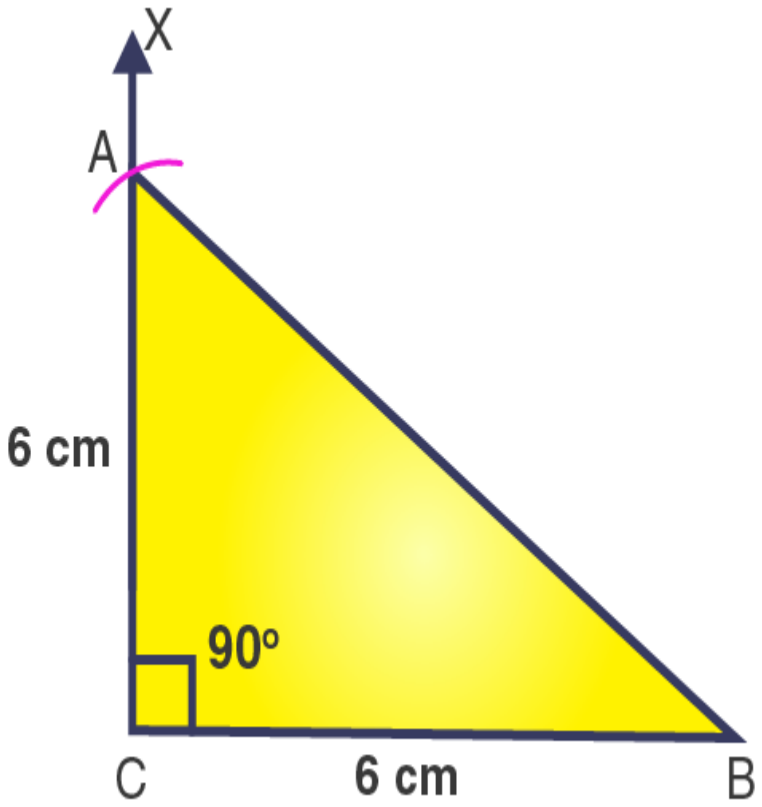
3. With C as a centre and radius 6 cm, draw an arc that cuts the ray BX at A.

4. Join AC.

Then, ΔABC is the required right-angled triangle.

3. Construct an isosceles right-angled triangle ABC, where m∠ACB = 90° and AC = 6 cm.

Solution:-



Steps of construction

1. Draw a line segment BC = 6 cm.

2. At point C, draw a ray CX to making an angle of 90°, i.e., ∠XCB = 90°.

3. With C as a centre and radius 6 cm, draw an arc that cuts the ray CX at A.

4. Join AB.

Then, ΔABC is the required right-angled triangle.