

**RD SHARMA**

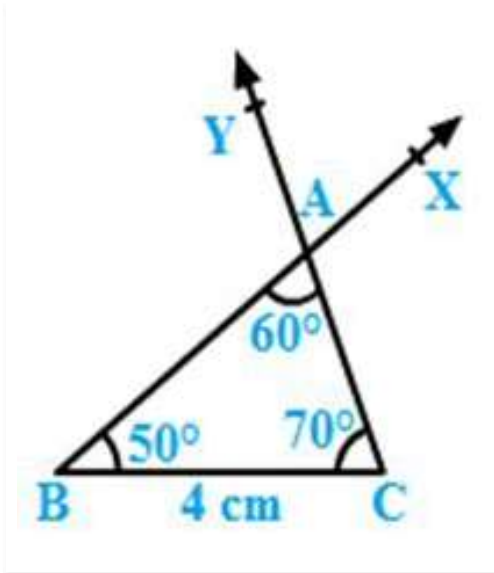
**Solutions**

**Class 7 Maths**

**Chapter 17**

**Ex 17.5**

*Q1. Draw a right triangle with hypotenuse of length 5 cm and one side of length 4 cm.*

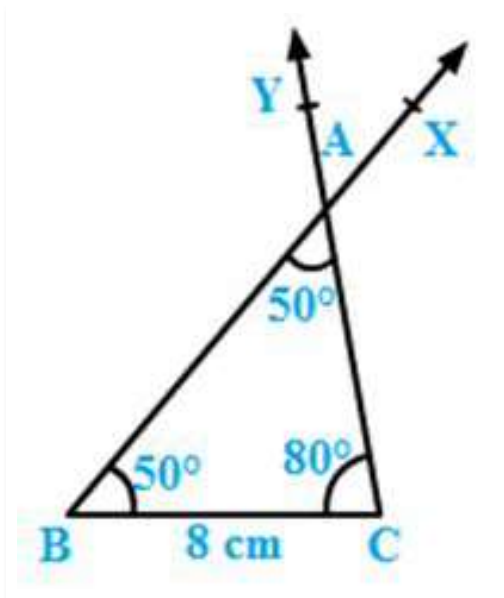


**Steps of construction:**

1. Draw a line segment QR = 4 cm.
2. Draw  $\angle QRX$  of measure  $90^\circ$ .
3. With centre Q and radius PQ = 5 cm, draw an arc of the circle to intersect ray RX at P.
4. Join PQ to obtain the desired triangle PQR.

PQR is the required triangle.

*Q2. Draw a right triangle whose hypotenuse is of length 4 cm and one side is of length 2.5 cm.*

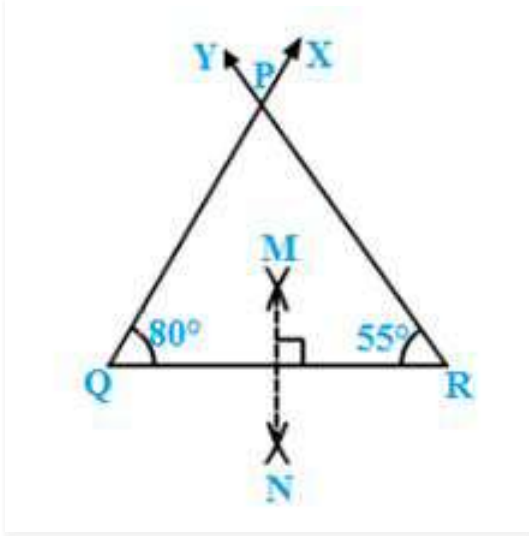


**Steps of construction:**

1. Draw a line segment QR = 2.5 cm.
2. Draw  $\angle QRX$  of measure  $90^\circ$ .
3. With centre Q and radius PQ = 4 cm, draw an arc of the circle to intersect ray RX at P.
4. Join PQ to obtain the desired triangle PQR.

PQR is the required triangle.

Q3. Draw a right triangle having hypotenuse of length 5.4 cm, and one of the acute angles of measure  $30^\circ$



Let ABC be the right triangle at A such that hypotenuse BC = 5.4 cm. Let  $\angle C = 30^\circ$ .

Therefore

$$\angle A + \angle B + \angle C = 180^\circ$$

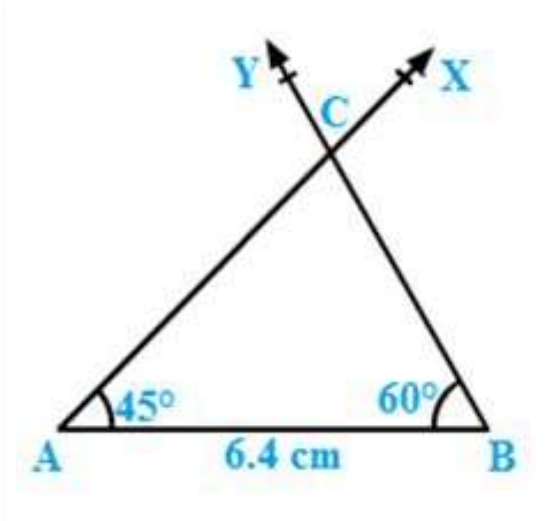
$$\angle B = 180^\circ - 30^\circ - 90^\circ = 60^\circ$$

**Steps of construction:**

1. Draw a line segment BC = 5.4 cm.
2. Draw angle  $\angle CBY = 60^\circ$
3. Draw angle  $\angle BCX$  of measure  $30^\circ$  with X on the same side of BC as Y.
4. Let BY and CX intersect at A.

Then ABC is the required triangle.

Q4. Construct a right triangle ABC in which  $AB = 5.8$  cm,  $BC = 4.5$  cm and  $\angle C = 90^\circ$ .

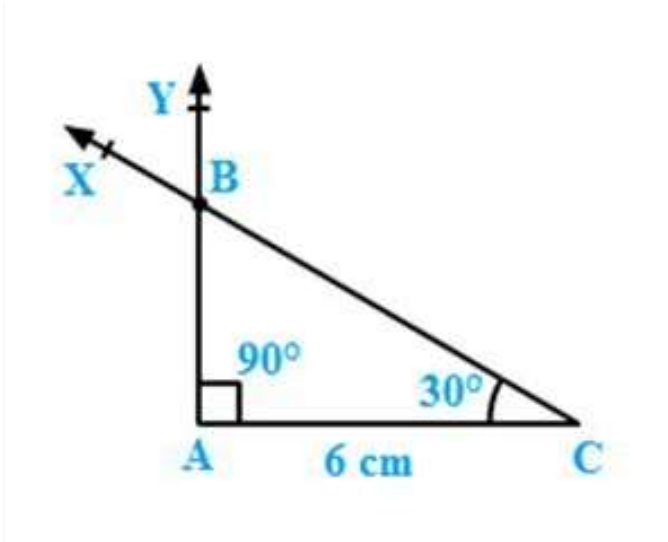


**Steps of construction:**

1. Draw a line segment BC = 4.5 cm.
2. Draw  $\angle BCX$  of measure  $90^\circ$ .
3. With centre B and radius AB = 5.8 cm, draw an arc of the circle to intersect ray BX at A.
4. Join AB to obtain the desired triangle ABC.

ABC is the required triangle.

Q5. Construct a right triangle, right angled at C in which  $AB = 5.2 \text{ cm}$  and  $BC = 4.6 \text{ cm}$ .



**Steps of construction:**

1. Draw a line segment  $BC = 4.6 \text{ cm}$ .
2. Draw  $\angle BCX$  of measure  $90^\circ$ .
3. With centre B and radius  $AB = 5.2 \text{ cm}$ , draw an arc of the circle to intersect ray CX at A.
4. Join AB to obtain the desired triangle ABC.

ABC is the required triangle.