

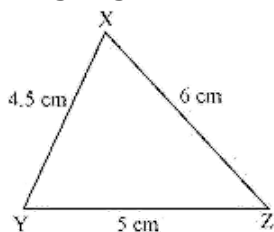
Board – CBSE

Class – 7th

Topic – Practical Geometry 10.2

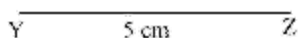
Q.1 Construct ΔXYZ in which $XY = 4.5$ cm, $YZ = 5$ cm and $ZX = 6$ cm.

Sol: The rough figure of this triangle is as follows.



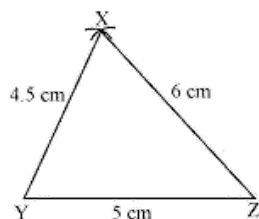
The required triangle is constructed as follows.

(i) Draw a line segment YZ of length 5 cm.



(ii) Point X is at a distance of 4.5 cm from point Y . Therefore, taking point Y as centre, draw an arc of 4.5 cm radius.

(iii) Point X is at a distance of 6 cm from point Z . Therefore, taking point Z as centre, draw an arc of 6 cm radius. Mark the point of intersection of the arcs as X . Join XY and XZ .



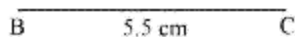
XYZ is the required triangle.

Q.2 Construct an equilateral triangle of side 5.5 cm.

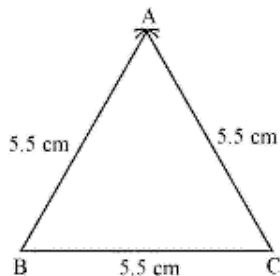
Sol: An equilateral triangle of side 5.5 cm has to be constructed. We know that all sides of an equilateral triangle are of equal length. Therefore, a triangle ABC has to be constructed with $AB = BC = CA = 5.5$ cm.

The steps of construction are as follows.

(i) Draw a line segment BC of length 5.5 cm.



- (ii) Taking point B as centre, draw an arc of 5.5 cm radius.
- (iii) Taking point C as centre, draw an arc of 5.5 cm radius to meet the previous arc at point A.
- (iv) Join A to B and C.

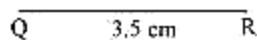


ABC is the required equilateral triangle.

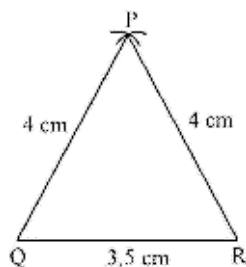
Q.3 Draw ΔPQR with $PQ = 4$ cm, $QR = 3.5$ cm and $PR = 4$ cm. What type of triangle is this?

Sol: The steps of construction are as follows.

- (i) Draw a line segment QR of length 3.5 cm.



- (ii) Taking point Q as centre, draw an arc of 4 cm radius.
- (iii) Taking point R as centre, draw an arc of 4 cm radius to intersect the previous arc at point P.
- (iv) Join P to Q and R.

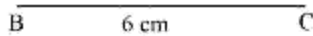


ΔPQR is the required triangle. As the two sides of this triangle are of the same length ($PQ = PR$), therefore, ΔPQR is an isosceles triangle.

Q.4 Construct ΔABC such that $AB = 2.5$ cm, $BC = 6$ cm and $AC = 6.5$ cm. Measure $\angle B$.

Sol: The steps of construction are as follows.

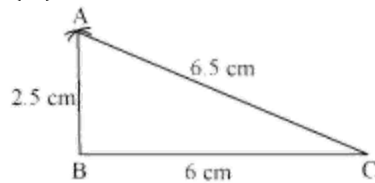
(i) Draw a line segment BC of length 6 cm.



(ii) Taking point C as centre, draw an arc of 6.5 cm radius.

(iii) Taking point B as centre, draw an arc of radius 2.5 cm to meet the previous arc at point A.

(iv) Join A to B and C.



$\triangle ABC$ is the required triangle. $\angle B$ can be measured with the help of protractor. It comes to 90° .