

Chapter – 10

Practical Geometry

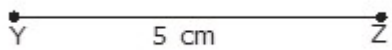
Exercise 10.2

1. Construct $\triangle XYZ$ in which $XY = 4.5$ cm, $YZ = 5$ cm and $ZX = 6$ cm.

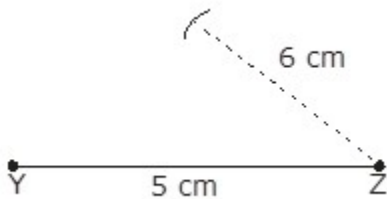
Answer:

We have to draw figure using following steps of construction:

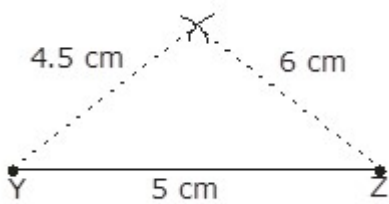
Step 1: Draw a line segment ZY of 5 cm.



Step 2: Taking Z as a center and radius 6 cm mark an arc.

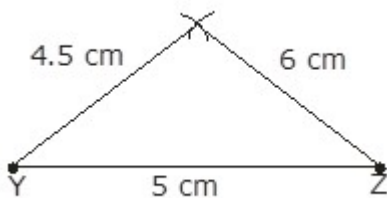


Step 3: Now, taking Y as a center and radius 4.5 cm mark another arc intersecting the previous arc at X .



Step 4: Join Z to X and Y to X

Hence $\triangle XYZ$ is the required triangle.



2. Construct an equilateral triangle of side 5.5 cm.

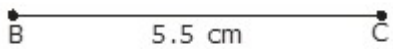
Answer:

Here,

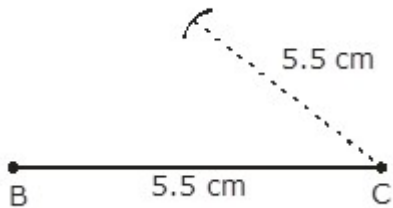
According to the question,

We have to draw figure using following steps of construction:

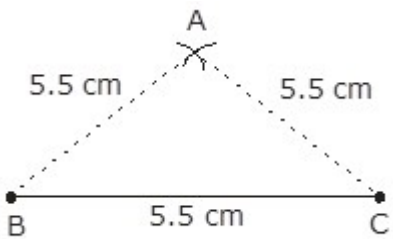
Step 1: Draw a line segment BC of 5.5cm



Step 2: Taking B as a center and radius 5.5 cm mark an arc.

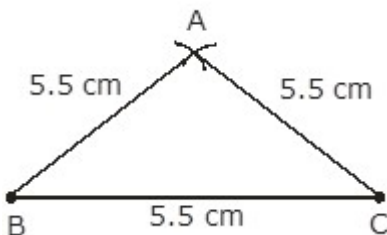


Step 3: Now, taking C as a center and radius 5.5 cm mark another arc intersecting the previous arc at A.



Step 4: Now, join B to A and A to C.

Hence, $\triangle ABC$ is the required triangle.



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

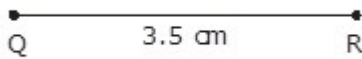
Answer:

Here,

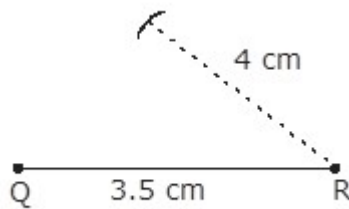
According to the question,

We have to draw figure using following steps of construction:

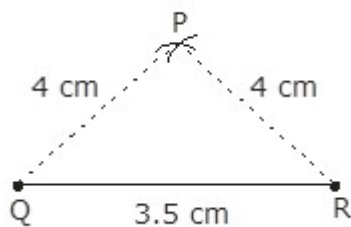
Step 1: Draw a line segment QR of 3.5 cm.



Step 2: Taking Q as a center and radius 4 cm mark an arc.



Step 3: Now, taking R as a center and radius 4 cm mark another arc intersecting the previous arc at P.

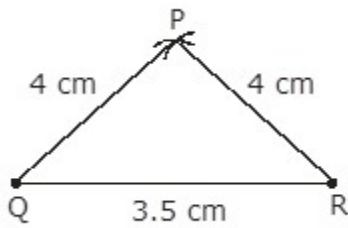


Step 4: Join Q to P and R to P

Hence $\triangle PQR$ is the required triangle.

Since the two sides (PQ and PR) have same length i.e. 4cm.

Thus, $\triangle PQR$ is an isosceles triangle.



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

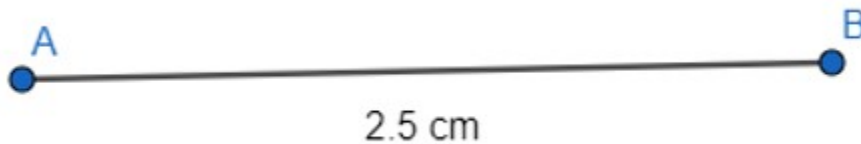
Answer:

Here,

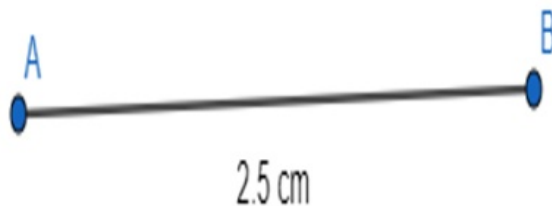
According to the question,

We have to draw figure using following steps of construction:

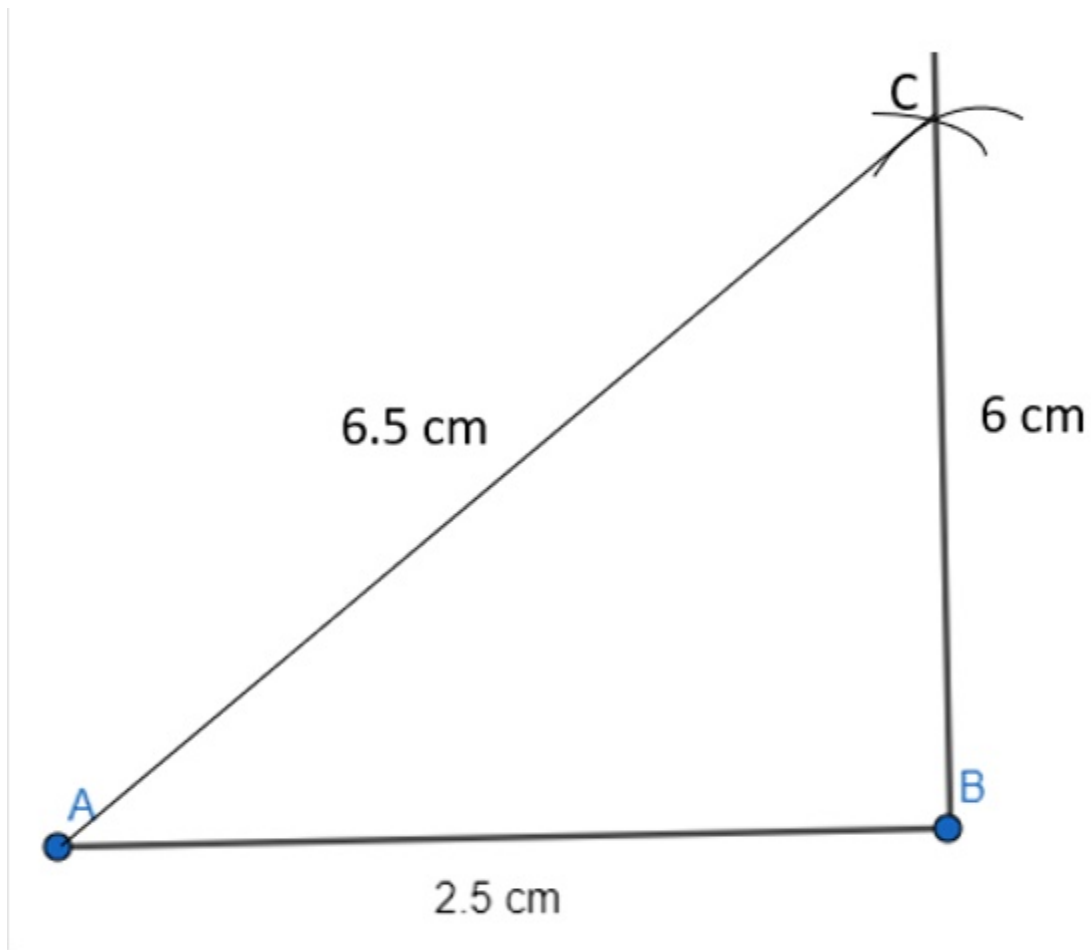
Step 1: Draw a line segment AB of 2.5 cm.



Step 2: Taking B as a center and radius 6 cm mark an arc and from A an arc of 6.5 cm.



Step 3: Join CA and CB .



Hence $\triangle ABC$ is the required triangle.

On measuring we can see

$$\angle ABC = 90^\circ.$$