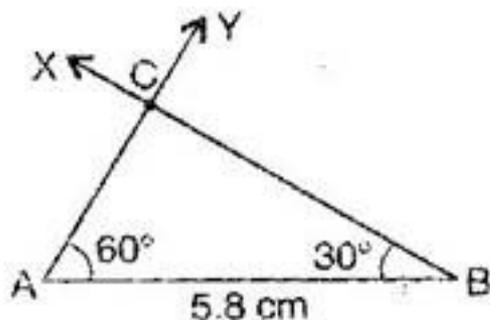


**CBSE Class –VII Mathematics**  
**NCERT Solutions**  
**Chapter 10 Practical Geometry (Ex. 10.4)**

**Question 1.** Construct  $\triangle ABC$ , given  $m\angle A = 60^\circ$ ,  $m\angle B = 30^\circ$  and  $AB = 5.8$  cm.

**Answer: To construct:**  $\triangle ABC$  where  $m\angle A = 60^\circ$ ,  $m\angle B = 30^\circ$  and  $AB = 5.8$  cm.



**Steps of construction:**

- (a) Draw a line segment  $AB = 5.8$  cm.
- (b) At point A, draw an angle  $\angle YAB = 60^\circ$  with the help of compass.
- (c) At point B, draw  $\angle XBA = 30^\circ$  with the help of compass.
- (d) AY and BX intersect at the point C.

It is the required triangle ABC.

**Question 2.** Construct  $\triangle PQR$  if  $PQ = 5$  cm,  $m\angle PQR = 105^\circ$  and  $m\angle QRP = 40^\circ$ .

**Answer: Given:**  $m\angle PQR = 105^\circ$  and  $m\angle QRP = 40^\circ$

We know that sum of angles of a triangle is  $180^\circ$ .

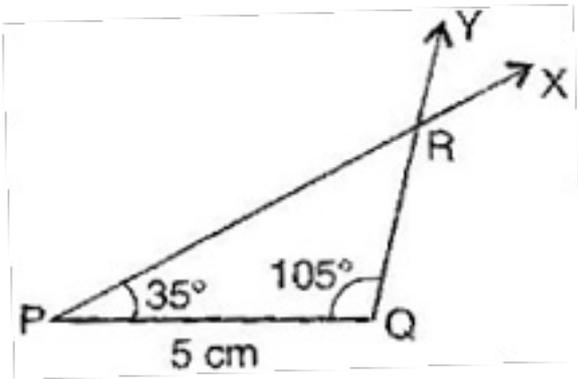
$$\therefore m\angle PQR + m\angle QRP + m\angle QPR = 180^\circ$$

$$\Rightarrow 105^\circ + 40^\circ + m\angle QPR = 180^\circ$$

$$\Rightarrow 145^\circ + m\angle QPR = 180^\circ$$

$$\Rightarrow m\angle QPR = 180^\circ - 145^\circ$$

$$\Rightarrow m\angle QPR = 35^\circ$$



**To construct:**  $\triangle PQR$  where  $m\angle P = 35^\circ$ ,  $m\angle Q = 105^\circ$  and  $PQ = 5$  cm.

**Steps of construction:**

- Draw a line segment  $PQ = 5$  cm.
- At point P, draw  $\angle XPQ = 35^\circ$  with the help of protractor.
- At point Q, draw  $\angle YQP = 105^\circ$  with the help of protractor.
- XP and YQ intersect at point R.

It is the required triangle PQR.

**Question 3.** Examine whether you can construct  $\triangle DEF$  such that  $EF = 7.2$  cm,  $m\angle E = 110^\circ$  and  $m\angle F = 80^\circ$ . Justify your answer.

**Answer:** Triangle DEF cannot be constructed since  $\text{Angle E} + \text{Angle F} = 110^\circ + 80^\circ = 190^\circ$

and the sum of all the angles of triangle is  $180^\circ$ .