# **Mathematics**

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(Chapter – 10) (Practical Geometry) (Class – VII)

# Exercise 10.2

### **Question 1:**

Construct  $\triangle$  XYZ in which XY = 4.5 cm, YZ = 5 cm and ZX = 6 cm. **Answer 1: To construct:**  $\triangle$  XYZ, where XY = 4.5 cm, YZ = 5 cm and ZX = 6 cm. **Steps of construction:** 

- (a) Draw a line segment YZ = 5 cm.
- (b) Taking Z as centre and radius 6 cm, draw an arc.
- (c) Similarly, taking Y as centre and radius 4.5 cm, draw another arc which intersects first arc at point X.
- (d) Join XY and XZ.
- It is the required  $\Delta XYZ$ .



## **Question 2:**

Construct an equilateral triangle of side 5.5 cm.

### Answer 2:

**To construct**: A  $\triangle$  ABC where AB = BC = CA = 5.5 cm

### **Steps of construction**:

- (a) Draw a line segment BC = 5.5 cm
- (b) Taking points B and C as centers and radius 5.5 cm, draw arcs which intersect at point A.
- (c) Join AB and AC.

It is the required  $\Delta ABC$ .



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#### **Question 3:**

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

**To construction**:  $\triangle$  PQR, in which PQ = 4 cm, QR = 3.5 cm and PR = 4 cm. **Steps of construction**:

- (a) Draw a line segment QR = 3.5 cm.
- (b) Taking Q as centre and radius 4 cm, draw an arc.
- (c) Similarly, taking R as centre and radius 4 cm, draw an another arc which intersects first arc at P.
- (d) Join PQ and PR.

It is the required isosceles  $\triangle$  PQR.



### **Question 4:**

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

**To construct**:  $\triangle$  ABC in which AB = 2.5 cm, BC = 6 cm and AC = 6.5 cm. **Steps of construction**:

(a) Draw a line segment BC = 6 cm.

- (b) Taking B as centre and radius 2.5 cm, draw an arc.
- (c) Similarly, taking C as centre and radius 6.5 cm, draw another arc which intersects first arc at point A.
- (d) Join AB and AC.
- (e) Measure angle B with the help of protractor.

It is the required  $\triangle$  ABC where  $\angle$  B = 80°.

