Mathematics

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(Chapter – 10) (Practical Geometry)

(Class – VII)

Exercise 10.3

Question 1:

Construct ΔDEF such that DE = 5 cm, DF = 3 cm and $m\angle$EDF = 90°.

Answer 1:

To construct: ΔDEF where DE = 5 cm, DF = 3 cm and $m\angle$EDF = 90°.

Steps of construction:

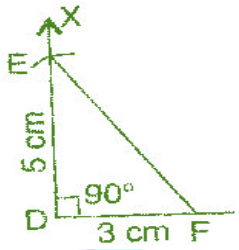
(a) Draw a line segment DF = 3 cm.

(b) At point D, draw an angle of 90° with the help of compass i.e., $\angle$XDF = 90°.

(c) Taking D as centre, draw an arc of radius 5 cm, which cuts DX at the point E.

(d) Join EF.

It is the required right angled triangle DEF.



Question 2:

Construct an isosceles triangle in which the lengths of each of its equal sides is 6.5 cm and the angle between them is 110°.

Answer 2:

To construct: An isosceles triangle PQR where PQ = RQ = 6.5 cm and $\angle$ Q = 110°.

Steps of construction:

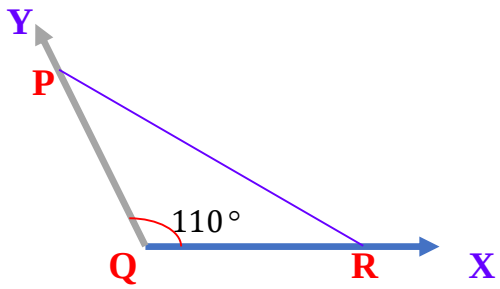
(a) Draw a line segment QR = 6.5 cm.

(b) At point Q, draw an angle of 110° with the help of protractor, i.e., $\angle$ YQR = 110°.

(c) Taking Q as centre, draw an arc with radius 6.5 cm, which cuts QY at point P.

(d) Join PR

It is the required isosceles triangle PQR.



Question 3:

Construct ΔABC with BC = 7.5 cm, AC = 5 cm and $m\angle C = 60^\circ$.

Answer 3:

To construct: ΔABC where BC = 7.5 cm, AC = 5 cm and $m\angle C = 60^\circ$.

Steps of construction:

(a) Draw a line segment BC = 7.5 cm.

(b) At point C, draw an angle of 60° with the help of protractor, i.e., $\angle XCB = 60^\circ$.

(c) Taking C as centre and radius 5 cm, draw an arc, which cuts XC at the point A.

(d) Join AB

It is the required triangle ABC.