Practice Challenge - Subjective

Subject: Mathematics

Topic : Constructions Theory
Session 1

Class: X

Practice Challenge - Subjective

1. Draw a circle of radius 6 cm. From a point 10 cm away from its centre, construct a pair of tangents to the circle and measure their lengths.

2. Let ABC be a right triangle in which AB = 6 cm, BC = 8 cm and $\angle B = 90^{\circ}$. BD is the perpendicular from B on AC. A circle through B, C, D is drawn. Construct the tangents from A to this circle.

3. Draw a right triangle in which the sides (other than hypotenuse) are of lengths 4 cm and 3 cm. Then construct another triangle whose sides are $\frac{5}{3}$ times the corresponding sides of the given triangle.

4. Construct an isosceles triangle whose base is 8 cm and altitude 4 cm and then another triangle whose sides are 1.5 times the corresponding sides of the isosceles triangle.

5. Construct a triangle of sides 4 cm, 5 cm and 6 cm and then a triangle similar to it whose sides are $\frac{2}{3}$ of the corresponding sides of the first triangle.

6. Draw a line segment of length 7.6 cm and divide it in the ratio 5 : 8 Measure the two parts.

7. Draw an isosceles triangle ABC in which AB=AC = 6 cm and BC=5 cm Construct a triangle PQR similar to ΔABC in which PQ = 8 cm, Also justify the construction.

8. Draw a circle of radius 4 cm. Construct a pair of tangents to it, the angle between which is 60°. Also justify the construction. Measure the distance between the centre of the circle and the point of intersection of tangents.