UNIT-3: CONSTRUCTIONS

- 1.1 Draw a line segment of length 7.6cm and divide it in the ratio 5:8 Measure the two parts.
- Draw a line segment AB = 7.6cm and divide it in the ratio 5:8.Measure the two parts.
- 1.3 Draw a line segment of length 7.6cm and divide internally in the ratio 5:8. Measure the two parts.
- 1.4 Draw a line segment of length 7.6cm and divide it in the ratio $\frac{5}{8}$. Measure the two parts.
- 1.5 Draw a line segment AC=7.6cm and mark a point C on AB such that AC:CB = 5:8. Measure AC and CB.
- 1.6 Draw a line segment AC=7.6cm and mark a point C on AB such that $AC = \frac{5}{13}AB$. Measure AC and CB.
- 1.7 Draw a line segment of length 7.6cm. if m=5 and m+n=13 then divide the given line segment in the ratio m:n.
- 2.1 Construct a triangle of sides 4cm, 5cm and 6cm and then a triangle is similar to it whose sides are $\frac{2}{3}$ of the corresponding sides of the first triangle.
- 2.2 Construct a triangle of sides 4cm, 5cm and 6cm and then a triangle similar to it whose sides are 2:3 of the corresponding sides of the first triangle.
- 2.3 Construct a triangle ABC with sides AB=4cm, BC=5cm and AC=6cm. Then construct a triangle similar to it, whose sides are $\frac{2}{3}$ of the corresponding sides of the triangle ABC.

- 2.4 Construct a triangle ABC of its sides BC=4cm, AB=5cm and AC=6cm then construct a triangle $AB^{I}C^{I}$ which is similar to triangle ABC such that $AB^{I}: AB = 2:3$.
- 3.1 Construct an isosceles triangle whose base is 8cm and altitude 4cm and then another triangle whose sides are $1\frac{1}{2}$ times the corresponding sides of the isosceles triangle.
- 3.2 Construct a triangle ABC with sides AB=8cm, AC=BC=5.5cm.
 Then construct a triangle AB^IC^I is similar to triangle ABC, whose sides are 3:2 of the corresponding sides of the triangle ABC.
- 3.3 Construct an isosceles triangle whose base is 8cm and altitude 4cm and then another triangle whose sides are $\frac{3}{2}$ times the corresponding sides of the isosceles triangle.
- 3.4 Construct an isosceles triangle whose base is 8cm and altitude 4cm and then construct a triangle $AB^{I}C^{I}$ is similar to triangle ABC with $2AB^{I} = 3AB$.
- 3.5 Construct an isosceles triangle whose base is 8cm and altitude 4cm and then construct a triangle AB^IC^I is similar to triangle ABC with $AB' = \frac{3}{2}AB$.
- 3.6 Construct an isosceles triangle whose base is 8cm and altitude 4cm and then construct a triangle $AB^{I}C^{I}$ is similar to triangle ABC with AB': AB = 3:2.
- 4.1 Draw a circle of radius 6 cm. From a point 10cm away from its centre, construct the pair of tangents to the circle and measure their length.
- 4.2 Draw a circle of diameter 12 cm. From a point 10cm away from its

centre, construct the pair of tangents to the circle and measure their length.

- 4.3 Draw a circle of radius 6 cm. construct the pair of tangents to the circle from a point 4 cm away from circle and measure their length.
- 4.4 Construct a pair of tangents to a circle of radius 6 cm from an external point 10cm away from the centre.
- 4.5 Draw a line segment AB=10cm, Construct a pair of tangents fromB to a circle of radius 6cm with centre A.
- 5.1 Draw a pair of tangents to a circle of radius 5cm which are inclined to each other at an angle of 60°.
- 5.2 Construct a pair of tangents to a circle of radius 5cm, with angle between them is 60°.
- 5.3 Construct a pair of tangents to a circle of radius 5cm, if angle between them is half of the angle between radii, which are drawn from an end points of those radii.
- 5.4 Construct a pair of tangents AP and BP to a circle of radius 5cm, with an angle between AP and BP is 60°.
- 5.5 Construct a pair of tangents AP and BP to a circle of radius 5cm, with an angle \square APB=60°.
- 5.6 Construct a pair of tangents at the end points of radii which are inclined an angle 120°, to a circle of radius 5cm.