

Board – CBSE

Class – 10

Topic – Construction

1. Divide a line segment in given ratio.
2. Draw a line segment $AB=8\text{cm}$ and divide it in the ratio 4:3.
3. Divide a line segment of 7cm internally in the ratio 2:3.
4. Draw a circle of radius 4 cm. Take a point P on it. Draw tangent to the given circle at P.
5. Construct an isosceles triangle whose base 7.5 cm and altitude is 4.2 cm.
6. Construct a triangle of sides 4cm, 5cm and 6cm and then triangle similar to it whose sides are $\frac{2}{3}$ of corresponding sides of the first triangle.
7. Construct a triangle similar to a given ΔABC such that each of its sides is $\frac{2}{3}$ rd of the corresponding sides' of ΔABC . It is given that $AB=4\text{cm}$ $BC=5\text{cm}$ and $AC=6\text{cm}$ also write the steps of construction.
8. Draw a right triangle ABC in which $\angle B = 90^\circ$ $AB=5\text{cm}$, $BC=4\text{cm}$ then construct another triangle ABC whose sides are $\frac{5}{3}$ times the corresponding sides of ΔABC .
9. Draw a pair of tangents to a circle of radius 5cm which are inclined to each other at an angle of 60°
10. Draw a circle of radius 5cm from a point 8cm away from its centre construct the pair of tangents to the circle and measure their length.
11. Construct a triangle PQR in which $QR=6\text{cm}$ $\angle Q = 60^\circ$ and $\angle R = 45^\circ$
12. Construct another triangle similar to ΔPQR such that its sides are $\frac{5}{6}$ of the corresponding sides of ΔPQR .
13. Construct an isosceles triangle whose base is 6 cm and altitude 4 cm. Then construct another triangle whose sides are $\frac{3}{4}$ times the corresponding sides of the isosceles triangle.
14. Draw a right triangle ABC in which $AB = 6\text{ cm}$, $BC = 8\text{ cm}$ and $\angle B = 90^\circ$. Draw BD perpendicular from B on AC and draw a circle passing through the points, B, C and D. Construct tangents from A to this circle
15. Draw a right triangle in which the sides (other than hypotenuse) are of lengths 8 cm and 6 cm. Then construct another triangle whose sides are $\frac{3}{4}$ times the corresponding sides of the given triangle.
16. Construct a triangle ABC in which $AB=8\text{cm}$ $BC = 10\text{ cm}$, $AC= 6\text{cm}$ construct another triangle whose sides are $\frac{3}{4}$ of the corresponding sides of ΔABC