

IX. PRACTICAL GEOMETRY

EXAMPLE PROBLEMS

1. Draw a circle of radius 3.2 cm. Take a point P on this circle and draw a tangent at P . (using the centre)
2. Draw a circle of radius 3.2 cm. At a point P on it, draw a tangent to the circle using the tangent-chord theorem.
3. Draw a circle of radius 3 cm. From an external point 7 cm away from its centre, construct the pair of tangents to the circle and measure their lengths.
4. Construct a $\triangle ABC$ such that $AB = 6$ cm, $\angle C = 40^\circ$ and the altitude from C to AB is of length 4.2 cm.
5. Construct a $\triangle ABC$ in which $BC = 5.5$ cm., $\angle A = 60^\circ$ and the median AM from the vertex A is 4.5 cm
6. Construct a $\triangle ABC$, in which $BC = 4.5$ cm, $\angle A = 40^\circ$ and the median AM from A to BC is 4.7 cm. Find the length of the altitude from A to BC .
7. Construct a cyclic quadrilateral $ABCD$ in which $AB = 6$ cm, $AC = 7$ cm, $BC = 6$ cm, and $AD = 4.2$ cm.
8. Construct a cyclic quadrilateral $PQRS$ with $PQ = 4$ cm, $QR = 6$ cm, $PR = 7.5$ cm, $QS = 7$ cm
9. Construct a cyclic quadrilateral $ABCD$ when $AB = 6$ cm, $BC = 5.5$ cm, $\angle ABC = 80^\circ$ and $AD = 4.5$ cm.
10. Construct a cyclic quadrilateral $EFGH$ with $EF = 5.2$ cm, $\angle GEF = 50^\circ$, $FG = 6$ cm and $\angle EGH = 40^\circ$.
11. Construct a cyclic quadrilateral $PQRS$ with $PQ = 4$ cm, $\angle P = 100^\circ$, $\angle PQS = 40^\circ$ and $\angle SQR = 70^\circ$.
12. Construct a cyclic quadrilateral $ABCD$ when $AB = 5.8$ cm, $\angle ABD = 35^\circ$, $AD = 4.2$ cm and $AB \parallel CD$.