

**SECTION A 1 Mark each**

- Q1. The word tangent comes from Latin word \_\_\_\_\_.
- Q2. A circle and a line in a plane either \_\_\_\_\_ or \_\_\_\_\_ or \_\_\_\_\_.
- Q3. TP and TQ are the to tangents to a circle with centre O so that  $\angle POQ = 130^\circ$ , then find  $\angle PTQ$
- Q4. From a point Q, the length of the tangent to a circle is 40 cm and the distance of Q from the centre is 41cm. Find radius of the circle.
- Q5. The common point of a tangent to a circle with the circle is called \_\_\_\_\_.

**SECTION B 2 Marks each**

- Q6. Draw a circle and two lines parallel to a given line such that one is a tangent and the other, a secant to the circle.
- Q7. Prove that in two concentric circles, the chord of the bigger circle, which touches the smaller circle, is bisected at the point of contact.
- Q8.  $\Delta PQR$  circumscribes a circle of radius r such that  $\angle Q = 90^\circ$ ,  $PQ = 3\text{cm}$  and  $QR = 4\text{cm}$ . Find r
- Q9. Prove that the parallelogram circumscribing a circle is a rhombus.

**SECTION C 3 Marks each**

- Q10. Prove that opposite sides of a quadrilateral circumscribing a circle subtend supplementary angles at the centre of the circle.
- Q11. The lengths of tangents drawn from an external point to a circle are equal.

**SECTION D 6 Marks each**

- Q12. A triangle PQR is drawn to circumscribe a circle of radius 4cm. The circle touches QR at D such that  $QD = 6\text{cm}$  and  $RD = 8\text{cm}$ . Find PQ and PR.

# Answers

1. Tangere
2. Do not intersect or intersect at a point or intersect at two points.
3.  $50^\circ$
4. 9
5. Point of contact
8.  $r = 1 \text{ cm}$
9. 15cm, 13cm