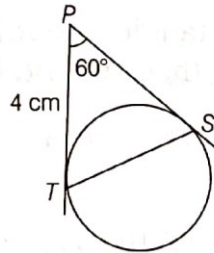


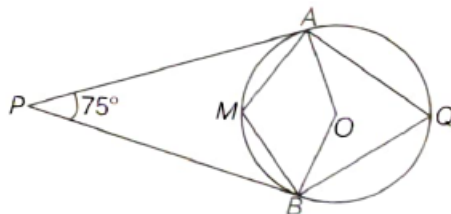
10. CIRCLES

2 MARK QUESTIONS

1. Prove that the line segment joining the point of contact of two parallel tangents to a circle is a diameter of the circle.
2. In the given figure, PT and PS are tangents to a circle from a point P, such that $PT = 4$ cm and $\angle TPS = 60^\circ$. Find the length of chord TS. How many lines of same length TS can be drawn in the circle?



3. AB is a diameter and AC is a chord of a circle such that $\angle BAC = 30^\circ$. If the tangent at C intersects AB produced in D, prove that $BC = BD$.
4. Two circles $C(O, r)$ and $C(O', 2r)$ touch each other internally at point P. A chord PQ of bigger circle meets the smaller circle at M. Show that M bisects PQ.
4. In the given figure, O is the centre of the circle. Determine $\angle AQB$ and $\angle AMP$, if PA and PB are tangents.



5. If a, b and c are the sides of a right angled triangle, where c is hypotenuse, then prove that the radius r of the circle which touches the sides of the triangle is given by

$$r = \frac{a + b - c}{2}$$

ANSWERS

- 1.- 2. Infinite lines 3. 4. 52.5° and 127.5°

5.-

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