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CHAPTER-10 | CIRCLES

QUIZ PART-04

1. The length of the tangent from Q to the circle is 24 cm, and the distance from Q to the center is 25 cm. The radius is:
   A. 7 cm
   B. 12 cm
   C. 15 cm
   D. 24.5 cm (A)

Explanation : $r = \sqrt{(25^2 - 24^2)} = 7$ cm.

2. If ∠POQ = 110°, ∠PTQ is:
   A. 60°
   B. 70°
   C. 80°
   D. 90° (B)

Explanation: ∠PTQ = 180° − 110° = 70°.

3. If PA and PB make an angle of 80° at P, ∠POA is:
   A. 50° B. 60°
   C. 70° D. 80° (A)

Explanation: ∠POA = (180° − 80°)/2 = 50°.

4. Tangents at the ends of a diameter are:
   A. Perpendicular
   B. Parallel
   C. Intersecting
   D. None (B)

Explanation: Tangents at the ends of a diameter are parallel.

5. The perpendicular at the point of contact passes through the:
   A. Center
   B. Point of contact
   C. Tangent
   D. External point (A)

Explanation : Perpendicular passes through the center.

6. The length of the tangent from point A, 5 cm from the center, is 4 cm. The radius is:
   A. 3 cm B. 4 cm
   C. 5 cm D. 6 cm (A)

Explanation : $r = \sqrt{(5^2 - 4^2)} = 3$ cm.

7. Two concentric circles with radii 5 cm and 3 cm. Length of the chord of the larger circle touching the smaller circle:
   A. 4 cm B. 5 cm
   C. 8 cm D. 10 cm (C)

Explanation : Length $= 2\sqrt{(5^2 - 3^2)} = 8$ cm.

8. The length of a tangent from an external point to a circle is always:
   A. Less than the distance from the external point to the center.
   B. Equal to the distance from the external point to the center.
   C. Greater than the distance from the external point to the center.
   D. None of the above. (C)

Explanation : The length of the tangent is always greater than the distance from the external point to the center.

9. If two tangents are drawn from an external point to a circle, the angles formed by the tangents with the line joining the center and external point are:
   A. Equal
   B. Complementary
   C. Supplementary
   D. None of the above. (A)

Explanation : The angles formed by the tangents are always equal to each other.

10. The angle between two tangents from an external point is:
   A. 90°
   B. 60°
   C. 45°
   D. Dependent on the circle's radius. (D)

Explanation : The angle between two tangents depends on the distance between the external point and the center of the circle.

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