

CHAPTER-10 | CIRCLES

QUIZ
PART-05

1. In a quadrilateral circumscribing a circle, $AB + CD = ?$

- A. $AD + BC$ B. $AB + BC$
C. $AB = CD$ D. $AD = BC$ (A)

Explanation: The sum of opposite sides in a tangential quadrilateral is equal: $AB + CD = AD + BC$.

2. If two parallel tangents XY and $X'Y'$ intersect AB at A and B , $\angle AOB$ is:

- A. 0°
B. 45°
C. 90°
D. 180° (C)

Explanation: The angle between two tangents drawn from an external point is always 90° .

3. The angle between two tangents is supplementary to the angle subtended at the center. True or False?

- A. True B. False
C. 70° D. 80° (A)

Explanation: The angle between the two tangents is supplementary to the angle subtended at the center of the circle.

4. A parallelogram circumscribing a circle is always a:

- A. Rectangle B. Rhombus
C. Square D. Trapezium (B)

Explanation: A parallelogram circumscribing a circle must be a rhombus.

5. If $BD = 8$ cm and $DC = 6$ cm, the sides AB and AC of a triangle circumscribing a circle (radius 4 cm) are:

- A. 10 cm, 12 cm
B. 12 cm, 14 cm
C. 14 cm, 16 cm
D. 16 cm, 18 cm (B)

Explanation: Using the tangent-segment property, $AB = 12$ cm and $AC = 14$ cm.

6. Opposite sides of a quadrilateral circumscribing a circle subtend:

- A. Equal angles
B. Supplementary angles
C. Acute angles
D. Right angles (B)

Explanation: Opposite sides subtend supplementary angles at the center.

7. If $AB = 7$ cm, $BC = 9$ cm, $CD = 8$ cm, $DA = 6$ cm, then:

- A. $AB + CD = AD + BC$
B. $AB + BC = AD + CD$
C. $AB = CD$
D. $AB + DA = BC + CD$ (A)

Explanation: For a tangential quadrilateral, $AB + CD = AD + BC$.

8. The angle between two tangents from an external point is:

- A. Acute B. Obtuse
C. Right angle D. Variable (C)

Explanation: The angle between two tangents drawn from an external point is always a right angle (90°).

9. The sum of the lengths of the tangents from an external point is:

- A. Greater than the radius
B. Equal to the radius
C. Less than the radius
D. Dependent on the center (A)

Explanation: The sum of the tangent lengths is always greater than the radius of the circle.

10. The perpendicular from the center to a chord:

- A. Bisects the chord
B. Does not bisect the chord
C. Perpendicular to the tangent
D. Passes through the external point (A)

Explanation: The perpendicular from the center bisects the chord.