

CHAPTER 10- Circle

1. How many tangents can a circle have?

- (a) 0 (b) 1 (c) 2 (d) Infinite

2. A tangent intersects the circle at:

- (a) One point (b) Two distinct point (c) At the circle (d) None of the above

3. A line through point of contact and passing through centre of circle is known as

- (a) Tangent (b) Chord (c) Normal (d) Segment

4. The length of the tangent from an external point A on a circle with centre O is

- (a) Always greater than OA (b) equal to OA (c) always less than OA (d) cannot be estimated

5. A line intersecting a circle in two points is called a _____.

- (a) Secant (b) Chord (c) Diameter (d) Tangent

6. The tangent to a circle is _____ to the radius through the point of contact.

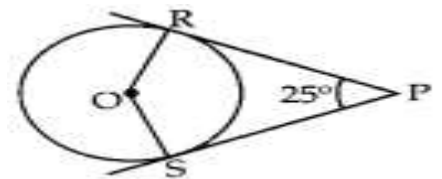
- (a) Parallel (b) Perpendicular (c) Perpendicular bisector (d) Bisector

7. The distance between two parallel tangents of a circle of radius 4 cm is

- (a) 2 cm (b) 4 cm (c) 6 cm (d) 8 cm

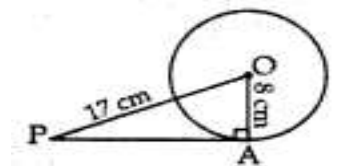
8. In the given figure, if $\angle RPS = 25^\circ$, the value of $\angle ROS$ is

- (a) 135° (b) 145° (c) 165° (d) 155°



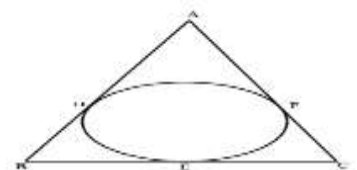
9. A tangent is drawn from a point at a distance of 17 cm of circle C (0, r) of radius 8 cm. The length of its tangent is

- (a) 5 cm (b) 9 cm (c) 15 cm (d) 23 cm



10. The length of tangents drawn from an external point to the circle

- (a) are equal (b) are not equal
(c) sometimes are equal (d) are not defined



11. A Circle is inscribed in triangle ABC having sides $AB=8$ cm, $BC=10$ cm, and $AC=12$ cm as shown in the given figure. Find the length of AD?

- (a) 2.8 cm (b) 3cm (c) 5 cm (d) 3.5 cm

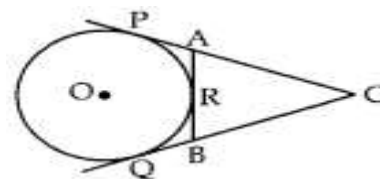
12. The tangents drawn at the extremities of the diameter of a circle are

- (a) Perpendicular (b) Parallel (c) equal (d) none of these

13. In given figure, CP and CQ are tangents to a circle with centre O.

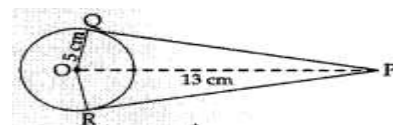
ARB is another tangent touching the circle at R. If $CP = 11$ cm and $BC = 6$ cm then the length of BR is

- (a) 6 cm (b) 5 cm (c) 4 cm (d) 3 cm



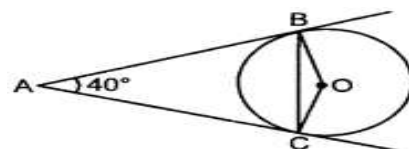
14. From a point P which is at a distance of 13 cm from the centre O of a circle of radius 5 cm, the pair of tangents PQ and PR to the circle are drawn. Then the area of the quadrilateral PQOR is

- (a) 60 cm^2 (b) 65 cm^2 (c) 30 cm^2 (d) 32.5 cm^2



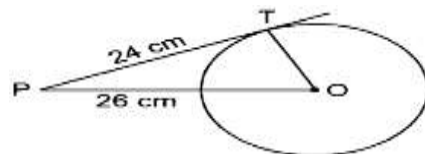
15. In the given figure, AB and AC are tangents to the circle with centre O such that $\angle BAC = 40^\circ$, then $\angle BOC$ is equal to

- (a) 40° (b) 50° (c) 140° (d) 150°



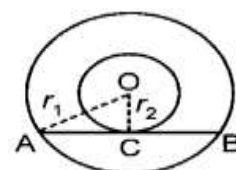
16. In the given figure, point P is 26 cm away from the centre O of a circle and the length PT of the tangent drawn from P to the circle is 24 cm. Then the radius of the circle is

- (a) 25 cm (b) 26 cm (c) 24 cm (d) 10 cm



17. $C_1(O, r_1)$ and $C_2(O, r_2)$ are two concentric circles with $r_1 > r_2$ AB is a chord of $C_1(O, r_1)$ touching $C_2(O, r_2)$ at point C then which one statement is true

- (a) $AB = r_1$ (b) $AB = r_2$ (c) $AC = BC$ (d) $AB = r_1 + r_2$

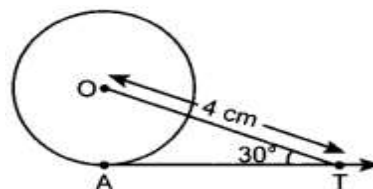


18. Two parallel lines touch the circle at points A and B respectively. If area of the circle is $25\pi\text{cm}^2$, then AB is equal to

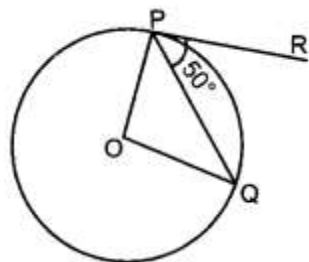
- (a) 5 cm (b) 8 cm (c) 10 cm (d) 25 cm

19. In figure AT is a tangent to the circle with centre O such that $OT = 4\text{ cm}$ and $\angle OTA = 30^\circ$. Then AT is equal to

- (a) 4 cm (b) 2 cm (c) $2\sqrt{3}\text{cm}$ (d) $4\sqrt{3}\text{ cm}$

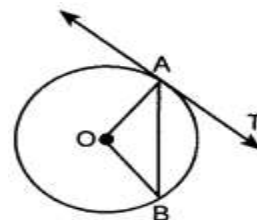


20. In figure if O is centre of a circle, PQ is a chord and the tangent PR at P makes an angle of 50° with PQ, then $\angle POQ$ is equal to



- (a) 100° (b) 80° (c) 90° (d) 75°

21. In figure, O is the centre of a circle, AB is a chord and AT is the tangent at A. If $\angle AOB = 100^\circ$, then $\angle BAT$ is equal to



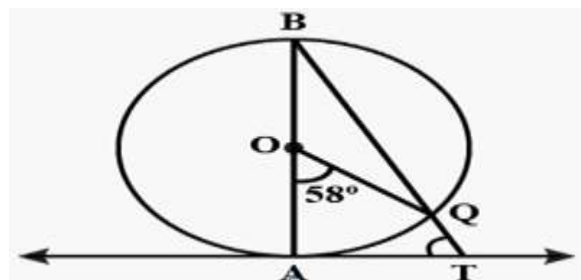
- (a) 100° (b) 40° (c) 50° (d) 90°

22. If the angle between two radii of a circle is 110° , then the angle between the tangents at the ends of the radii is:

- (a) 90° (b) 50° (c) 70° (d) 40°

23. AB is a chord of the circle and AOC is its diameter such that $\angle ACB = 50^\circ$. If AT is the tangent to the circle at the point A, then $\angle BAT$ is equal to

- (a) 65° (b) 60° (c) 50° (d) 40°



24. In the given figure, AB is a diameter of a circle with centre O and AT is a tangent. If $\angle AOQ = 58^\circ$, find $\angle ATQ$

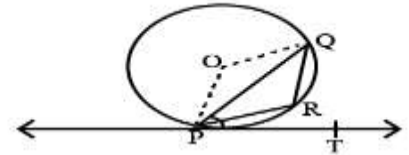
- (a) 56° (b) 61° (c) 65° (d) 72°

25. If a parallelogram circumscribes a circle, then it is a:

- (a) Square (b) Rectangle (c) Rhombus (d) None of the above

26. In figure, PQ is a chord of a circle with centre O and PT is a tangent. If $\angle QPT = 60^\circ$, find $\angle PRQ$.

- (a) 110° (b) 160° (c) 120° (d) 100°



27. If angle between two radii of a circle is 130° , the angle between the tangents at the ends of the radii is

- (a) 90° (b) 50° (c) 70° (d) 40°

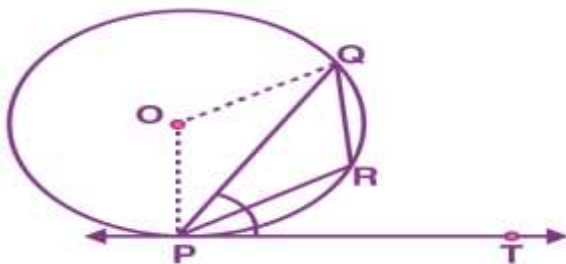
28. A tangent PQ at a point P of a circle of radius 5 cm meets a line through the centre O at a point Q so that $OQ = 12$ cm. Length PQ is:

- (A) 12 cm (B) 13 cm (C) 8.5 cm (D) $\sqrt{119}$ cm

29. If two tangents inclined at an angle 60° are drawn to a circle of radius 3 cm, then length of each tangent is equal to

- (a) $\frac{3}{2}\sqrt{3}$ cm (b) 6 cm (c) 3 cm (d) $3\sqrt{3}$ cm

30. In the figure below, PQ is a chord of a circle and PT is the tangent at P such that $\angle QPT = 60^\circ$. Then $\angle PRQ$ is equal to



- (a) 135° (b) 150° (c) 120° (d) 110°

ANSWERS

1	(d)	Infinite	11	(c)	5 cm	21	(c)	50°
2	(a)	One Point	12	(b)	Parallel	22	(c)	70°
3	(c)	Normal	13	(b)	5 cm	23	(c)	50°
4	(c)	Always less than OA	14	(a)	60 cm^2	24	(b)	61°
5	(a)	Secant	15	(c)	140°	25	(c)	Rhombus
6	(b)	Perpendicular	16	(d)	10 cm	26	(c)	120°
7	(d)	8 cm.	17	(c)	AC = BC	27	(b)	50°
8	(d)	155°	18	(c)	10 cm	28	(d)	$\sqrt{119}$ cm
9	(c)	15 cm	19	(c)	$2\sqrt{3}$ cm	29	(d)	$3\sqrt{3}$ cm
10	(a)	Are equal	20	(a)	100°	30	(c)	120°