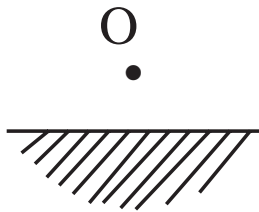
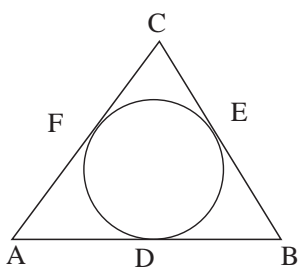


9. TANGENTS & SECANTS TO A CIRCLE

1. The length of the tangents from a point A to a circle of radius 3 cm is 4 cm, then the distance between A and the centre of the circle is _____
2. _____ tangents lines can be drawn to a circle from a point outside the circle.
3. Angle between the tangent and radius drawn through the point of contact is _____
4. A circle may have _____ parallel tangents.
5. The common point to a tangent and a circle is called _____
6. A line which intersects the given circle at two distinct points is called a _____ line.
7. Sum of the central angles in a circle is _____
8. The shaded portion represents _____

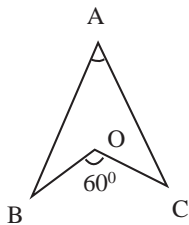


9. If a circle touches all the four sides of a quadrilateral ABCD at points P, Q, R, S then $AB + CD =$ _____
10. If AP and AQ are the two tangents to a circle with centre O so that $\angle POQ = 110^\circ$ then $\angle PAQ$ is equal to _____
11. If two concentric circles of radii 5 cm and 3 cm are drawn, then the length of the chord of the larger circle which touches the smaller circle is _____
12. If the semi perimeter of given $\triangle ABC = 28$ cm then $AF + BD + CE$ is _____

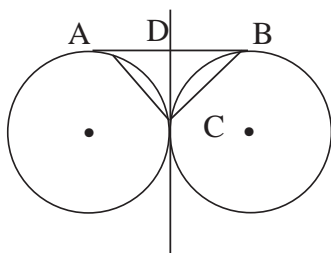


13. The area of a square inscribed in a circle of radius 8 cm is _____ cm^2 .
14. Number of circles passing through 3 collinear points in a plane is _____

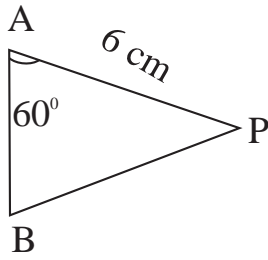
15. In the figure $\angle BAC$ _____



16. If the sector of the circle made at the centre is x° and radius of the circle is r , then the area of sector is _____
17. If the length of the minute hand of a clock is 14 cm, then the area swept by the minute hand in 10 minutes _____
18. If the angle between two radii of a circle is 130° , the angle between the tangents at the ends of the radii is _____
19. If PT is tangent drawn from a point P to a circle touching it at T and O is the centre of the circle, then $\angle OPT + \angle POT$ is _____
20. Two parallel lines touch the circle at points A and B. If area of the circle is $25\pi\text{cm}^2$, then AB is equal to _____
21. A circle have _____ tangents.
22. A quadrilateral PQRS is drawn to circumscribe a circle. If PQ, QR, RS (in cm) are 5, 9, 8 respectively, then PS (in cms) equal to _____
23. From the figure $\angle ACB =$ _____



24. PA and PB are tangents to the circle with centre O touching it at A and B respectively. If $\angle APO = 30^\circ$, then $\angle POB$ _____
25. Two concentric circles of radii a and b where $a > b$ are given. The length of the chord of the larger circle which touches the smaller circle is _____
26. From the figure, the length of the chord AB If $PA = 6\text{ cm}$ and $\angle POB = 60^\circ$ _____



27. Two circles of radii 5 cm and 3cm touch each other internally. The distance between their centres is _____
28. The lengths of tangents drawn from an external point to a circle are _____

ANSWERS

1) 5 cm; 2) 2; 3) 90° ; 4) 2; 5) Point of contact; 6) Secant line; 7) 360° ; 8) Minor segment; 9) $BC + AD$; 10) 70° ; 11) 8 cm; 12) 28cm; 13) 128; 14) 1; 15) 30° ;

16) $\frac{x^\circ}{360} \times \pi r^2$; 17) $102\frac{2}{3}$ sq.cm; 18) 50° ; 19) 90° ; 20) 10cm; 21)

Infinitely many; 22) 4cm; 23) 90° ; 24) 65° ; 25) $2\sqrt{a^2 - b^2}$; 26) 6cm; 27) 2cm; 28) equal.