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Affiliated to CBSE up to +2 Level

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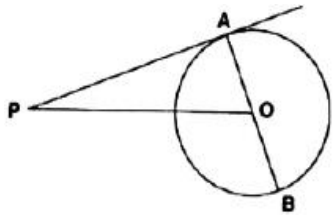
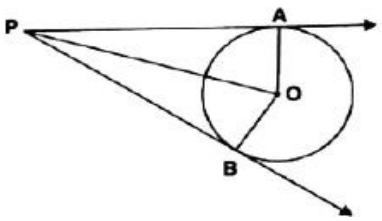
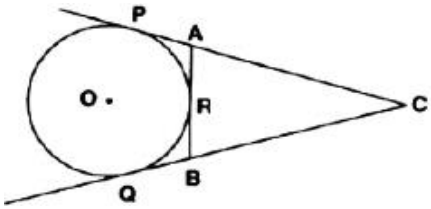
1. In the figure, PA is a tangent from an external point P to a circle with centre O. If ∠POB = 115° then find ∠APO.



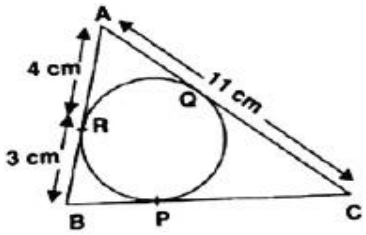
2. In the following figure, PA and PB are tangents drawn from a point P to the circle with centre O. If ∠APB = 60°, then what is ∠AOB?



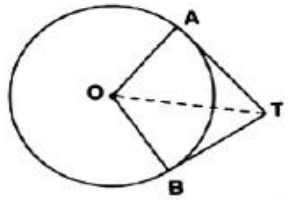
3. In the figure, CP and CQ are tangents to a circle with centre O. ARB is another tangent touching the circle at R. If QC = 11 cm, BC = 7 cm then find, length of BR.



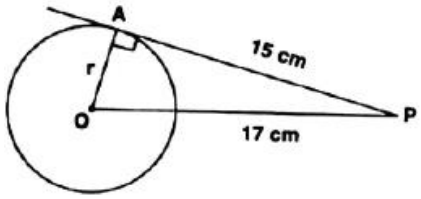
4. In the figure, ΔABC is circumscribing a circle. Find the length of BC.



5. In the figure, if ∠ATO = 40°, find ∠AOB.

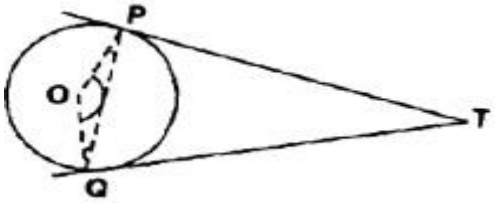


6. From a point P, the length of the tangent to a circle is 15 cm and distance of P from the centre of the circle is 17 cm, then what is the radius of the circle?



7. The two tangents from an external point P to a circle with centre O are PA and PB. If ∠APB = 70°, then what is the value of ∠AOB?

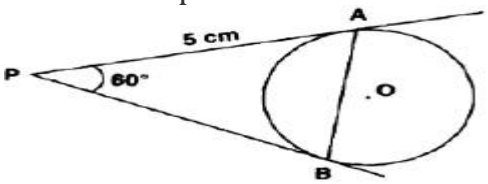
8. Two tangents TP and TQ are drawn to a circle with centre O from an external point T. Prove that ∠PTQ = 2 ∠OPQ.



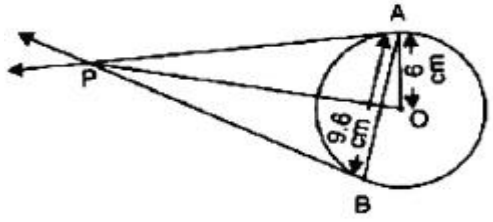
9. A circle is touching the side BC of a Δ ABC at P and touching AB and AC produced at Q and R. Prove that $AQ = \frac{1}{2}$ (Perimeter of ΔABC)

10. In two concentric circle, a chord of the larger circle touches the smaller circle. If the length of this chord is 8 cm and the diameter of the smaller circle is 6 cm, then find the diameter of the larger circle.

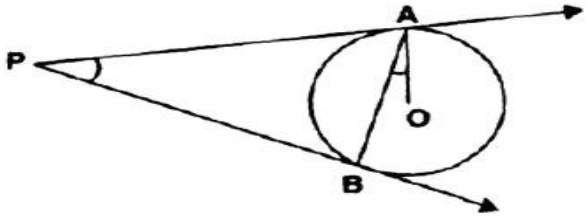
11. In the following figure, PA and PB are two tangents drawn to a circle with centre O, from an external point P such that PA = 5 cm and ∠APB = 60°. Find the length of chord AB.



12. In the following figure, AB is a chord of length 9.6 cm of a circle with centre O and radius 6 cm. The tangents at A and B intersect at P. Find the length PA.



13. Two tangents PA and PB are drawn to a circle with centre O from an external point P. Prove that ∠APB = 2∠OAB



14. ABC is an isosceles triangle, in which AB = AC, circumscribed about a circle. Show that BC is bisected at the point of contact.

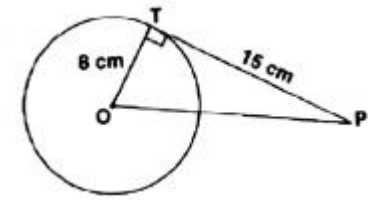
15. Prove that the angle between the two tangents to a circle drawn from an external point is supplementary to the angle subtended by the line segment joining the points of contact at the centre.

Or

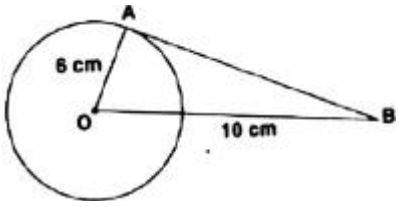
Two tangents PA and PB are drawn from an external point P to a circle with centre O. Prove that AOBP is a cyclic quadrilateral.

16. In the adjoining figure, PA and PB are tangents from P to a circle with centre. C If ∠APB = 40° then find ∠ACB.

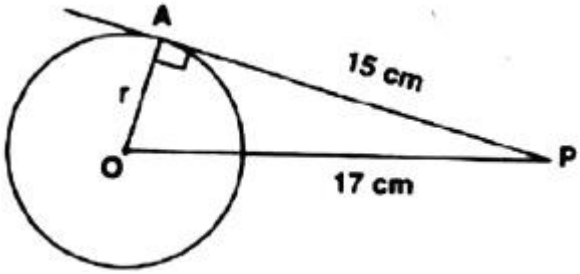
17. In the given figure, PT is a tangent to the circle and O is its centre. Find OP.



18. If O is the centre of the circle, then find the length of the tangent AB in the given figure.



19. From a point P, the length of the tangent to a circle is 12 cm and distance of P from the centre of the circle is 17 cm, then what is the radius of the circle?



20. Prove that the tangents drawn at the ends of a chord of a cricle make equal angles with the chord.

21. Two concentric circle have a common centre O. The chord AB to the bigger circle touches the smaller circle at P. If OP = 3 cm and AB = 8 cm then find the radius of the bigger circle.

22. Given two concentric circle of radii 10 cm and 6 cm. Find the length of the chord of the larger circle which touches the other circle.

23. In a right ΔABC, right angled at B, BC = 5 cm and AB = 12 cm. The cirlce is touching the sides of ΔABC. Find the radius of the circle.

24. Prove that the parallelogram circumscribing a circle is a rhombus.

25. In the following figure, OP is equal to diameter of the circle. Prove that ABP is an equilateral triangle.