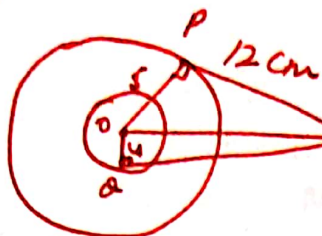


(Class ~~IX~~)

CIRCLES

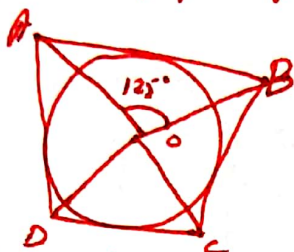
(full test)

Q1.



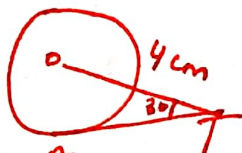
In the given fig. if $PR = 12\text{ cm}$, $OP = 5\text{ cm}$ & $OQ = 4\text{ cm}$. Find RQ .

Q2. In the given fig, if $\angle AOB = 125^\circ$, then $\angle COD$ is equal to

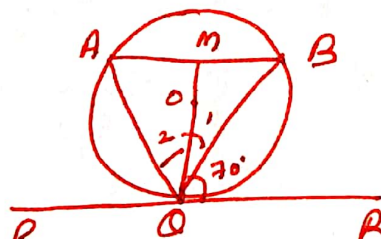


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Q3. In the given fig, AT is a tangent to the $\odot$ with centre 'O' such that $OT = 4\text{ cm}$ & $\angle OTA = 30^\circ$, then AT is equal to:

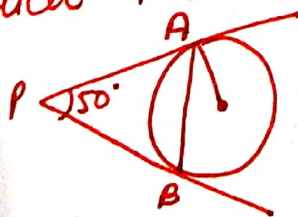


Q4. In the given fig, if PQR is the tangent to a circle at Q, whose centre is O, AB is a chord parallel to PQ & $\angle BQR = 70^\circ$, then $\angle AQB$ is equal to:



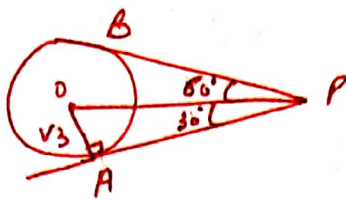
Q5. Two circles touch each other externally at P. AB is a common tangent to the circle touching them at A & B. The value of $\angle APB$ is: —

Q6. In fig. PA & PB are tangents to the circle with centre O such that $\angle APB = 50^\circ$, write the measure of $\angle OAB$.

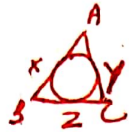


Q7. Two tangents making an angle of 60° between them are drawn to a circle of radius $\sqrt{3}\text{ cm}$, then find the length of each tangent.

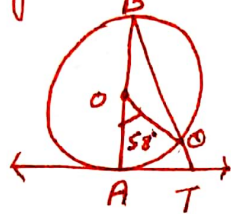




Q8. $\triangle ABC$ is an isosceles $\triangle$ in which $AB = AC$ which is circumscribed about a circle as shown in fig. Show that BC is bisected at the pt. of contact.

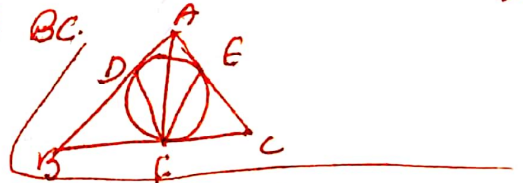


Q9. In given fig. AB is the diameter of a $\odot$ with centre O & AT is a tangent. If $\angle AOT = 58^\circ$, find $\angle ATQ$.



Q10. From a pt. T outside a circle of centre O , tangents TP & TQ are drawn to the circle. Prove that OT is the right bisector of line segment PQ .

Q11. In $\triangle ABC$, $AB = AC$. If the interior circle of $\triangle ABC$ touches the side AB , BC & CA at D , E & F resp. Prove that E bisects BC .



Q12. Two tangents TP & TQ are drawn to a $\odot$ with centre O from an ext. pt T . Prove that $\angle PTO = 2\angle OPQ$.

Q13. Prove that the lengths of two tangents drawn from an external pt. to a circle are equal.

Q14. a , b & c are the sides of a rt. $\triangle$ where c is the hyp. A circle, of radius r , touches the sides of the $\triangle$. Prove that $r = \frac{a+b-c}{2}$.

Q15. In fig., PQ is a chord of length 16cm, of a circle of radius 10cm. The tangents at P & Q intersect at a pt. T . Find the length of TP .



Q16. In the given fig. XY & $X'Y'$ are two parallel tangents to a circle with centre O & another tangent AB with pt. of contact C , is intersecting XY at A & $X'Y'$ at B . Prove that $\angle AOB = 90^\circ$.

