



INDIAN SCHOOL DARSAIT

DEPARTMENT OF MATHEMATICS



Subject : MATHEMATICS

Topic : CIRCLES

Date of Worksheet : 24/10/2019

Worksheet no:10

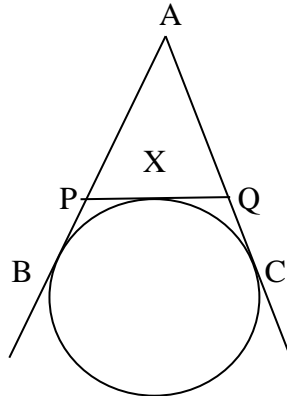
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Name of the Student _____ Class & Division: _____ Roll Number : _____

Section A - [Chapter based questions]

Marks

1. If AB, AC and PQ are tangents in the given figure and AB = 5cm, find the perimeter of ΔAPQ .



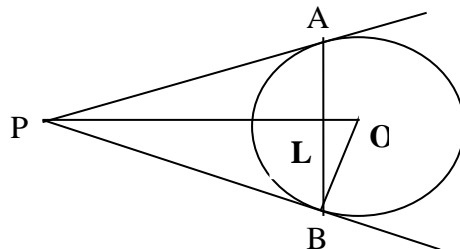
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2. If ΔABC is isosceles with $AB = AC$ and $C(O, r)$ is the incircle of the ΔABC touching BC at L, prove that L bisects BC.

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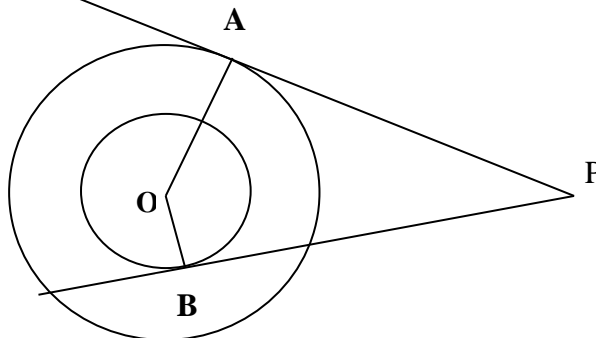
3. In the figure, AB is a chord of length 16 cm of a circle of radius 10 cm. The tangents at A and B intersect at a point P. Find the length of PA.

4



4. In the figure, there are two concentric circles with centre O of radii 5 cm and 3 cm. From an external point P, tangents PA and PB are drawn to these circles. If $AP = 12$ cm, find the length of BP.

2



5. Two tangents PA and PB are drawn to a circle with centre O such that $\angle APB = 120^\circ$. Prove that $OP = 2AP$.

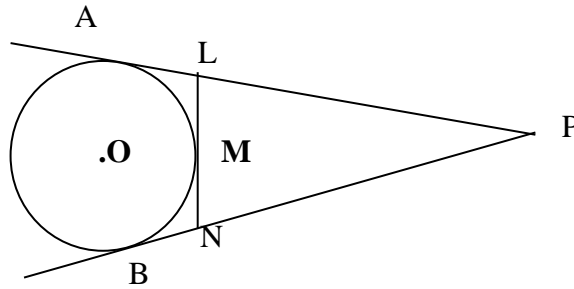
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6. In figure PA and PB are tangents drawn from an external point P to a circle with centre O. LN touches the circle at M. Prove that $PL + LM = PN + MN$.

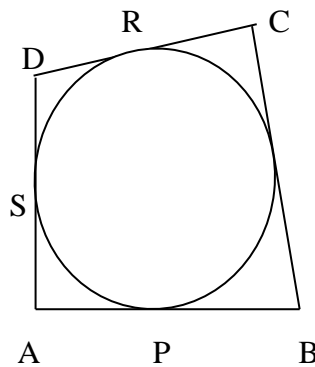
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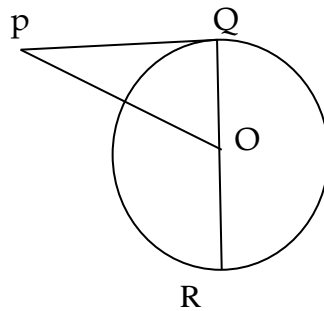
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7. In figure , a circle touches all the four sides of a quadrilateral ABCD with $AB = 6$ cm , $BC = 7$ cm and $CD = 4$ cm . Find AD. 4



8. In the given figure $OQ : PQ = 3 : 4$ and perimeter of $\Delta POQ = 60$ cm. Find the length of PQ, QR and OP. 4



9. In the given figure, a circle is inscribed in PQR with $PQ = 10$ cm, $QR = 8$ cm and $PR = 12$ cm. Find the lengths of QM, RN and PL. 4

