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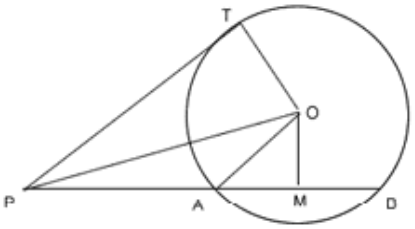
JSUNIL TUTORIAL

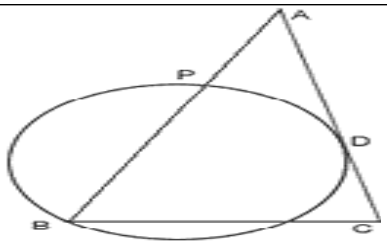
Tangent to a circle X

Test paper -4

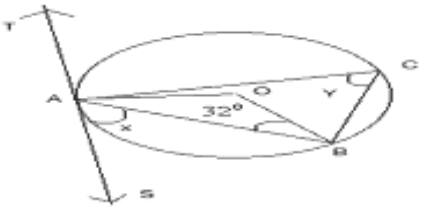
1. In the figure, ABC is an isosceles triangle in which AB = AC. A circle through B Touches the side AC at D and intersects the side AB at P. If D is the midpoint of side AC, Then AB = 4AP



For Q1→



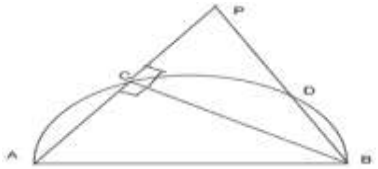
for Q 2→



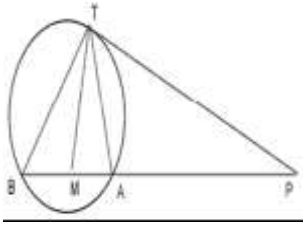
for Q3.

2. If a line is drawn through an end point of a chord of a circle so that the angle formed by it with the Chord is equal to the angle subtend by chord in the alternate Segment, and then the line is a tangent to the circle.

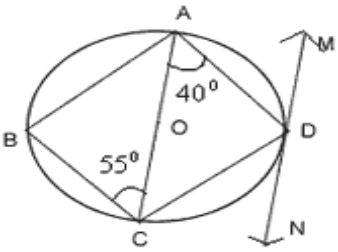
3. In the given figure TAS is a tangent to the circle, with centre O, at the point A. If ∠OBA, find the value of x and y.



For Q4



for Q 7.



for Q 8

4. in the given figure.∠C is right angle of ∆ ABC. A semicircle is drawn on AB as diameter. P is any point on AC produced. When joined, BP meets the semi-circle in point D. Prove that: AB2 = AC.AP + BD.BP.

5. Two circles intersect at A and B. From a point P on one of these circles, two lines segments PAC and PBD are drawn intersecting the other circles at C and D respectively. Prove that CD is parallel to the tangent at P.

6. Two circles intersect in points P and Q. A secant passing through P intersects the circles at A an B respectively. Tangents to the circles at A and B intersect at T. Prove that A, Q, T and B are concyclic.

7. In the given figure. PT is a tangent and PAB is a secant to a circle. If the bisector of <ATB intersect AB in M, Prove that: (i) ∠PMT =∠ PTM (ii) PT = PM

8. In the adjoining figure, ABCD is a cyclic quadrilateral. AC is a diameter of the circle. MN is tangent to the circle at D, < CAD =40 and <ACB=55. Determine < ADM and <BAD

10. A circle is drawn with diameter AB interacting the hypotenuse AC of right triangle ABC at the point P. Show that the tangent to the circle at P bisects the side BC.