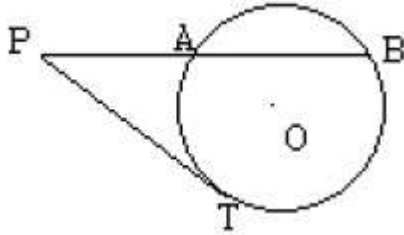
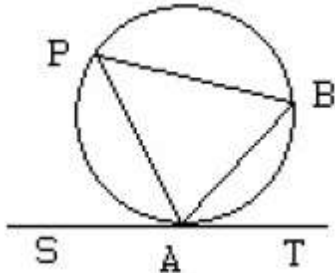


Class 10 Chapter 10. TANGENTS TO A CIRCLE

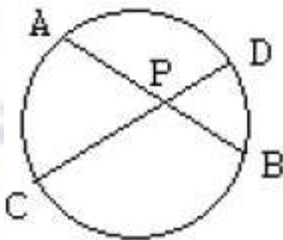
1. If PAB is a secant to a circle intersecting the circle at A and B and PT is a tangent segment, Then $PA \times PB = PT^2$



2. If a chord is drawn through the point of contact of a tangent to a circle, then the angles which this chord makes with the given tangent are equal respectively to the angle formed in the corresponding alternate segment.

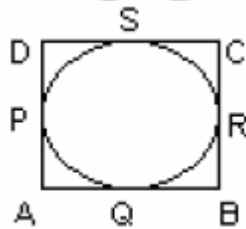


3. If AB and CD are two chords intersecting at a point P inside the circle such that $AP = CP$, show that $AB = CD$.

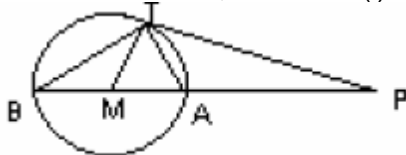


4. In figure, the in circle of $\triangle ABC$ touches the sides BC, CA and AB at D, E and F respectively. Show that $AF + BD + CE = AE + BF + CD = \frac{1}{2}(\text{perimeter of } \triangle ABC)$

5. If all the sides of a parallelogram touch a circle, show that the parallelogram is a rhombus.



6. In the figure TP is a tangent and PAB is a secant to the circle. If the bisector of $\angle ATB$ intersects AB at M, show that (i) $\angle PMT = \angle PTM$ (ii) $PT = PM$



7. Two circles cut at A and B and a straight line PAQ cuts the circles at P and Q. If the tangents at P and Q intersect in T, prove that P, B, Q, T are con cyclic.

