

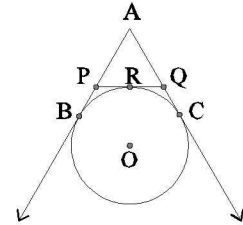
International Indian School-Riyadh

SA 2 Work sheet ... Mathematics

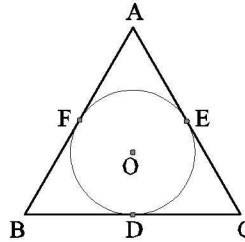
Circles ... Class : X

- 1) In the figure AB , AC and PQ are tangents of the circle with center O , at the points B , C & R respectively . If AB = 5 cm , find the perimeter of $\triangle APQ$.

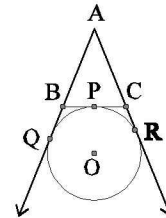
[ans. 10 cm]



- 2) ABC is an isosceles triangle in which AB = AC , circumscribed about a circle with center O . Show that BC is bisected at D .

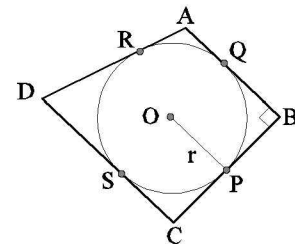


- 3) A circle touches the side BC of $\triangle ABC$ at P and touches AB & AC produced at Q & R respectively as shown in the figure . Show that $AQ = \frac{1}{2} \times (\text{perimeter of } \triangle ABC)$



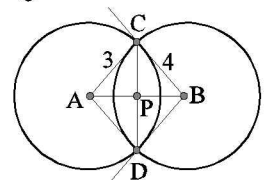
- 4) In the given figure ; a circle is inscribed in a quadrilateral ABCD in which $\angle B = 90^\circ$. If AD = 23 cm , AB = 29 cm and DS = 5 cm find the radius of the circle.

[ans. 11 cm]



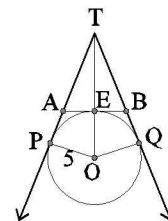
- 5) Two circles with centers A & B of radii 3 cm & 4 cm respectively intersect at points C & D such that AC , BC , AD & BD are tangents to the circles . Find the length of the common chord CD .

[ans. 4.8 cm]



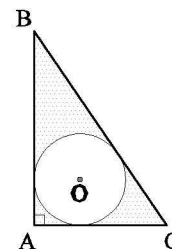
- 6) O is the center of the circle of radius 5 cm . T is a point such that OT = 13 cm , and OT intersect the circle at E . If AB is a tangent to the circle at E , find the length of AB.

[ans. $\frac{20}{3}$ cm]



- 7) In the figure $\triangle ABC$ is right angled with $\angle A = 90^\circ$. Find the area of the shaded region if AB = 6 cm , BC = 10 cm and O is the center of the encircle.

[ans. 11.44 cm^2]



- 8) If PA & PB are tangents from the external point P to the circle with center O , Prove that quadrilateral AOBP is cyclic.