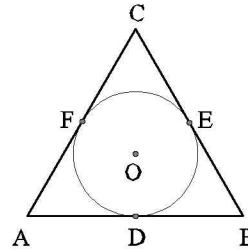


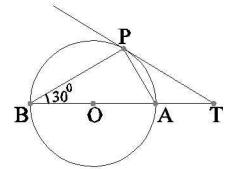
- 19) From an external point P, two tangents PA & PB are drawn to the circle with centre O. Prove that OP is the perpendicular bisector of AB.

- 20) In the figure O is the center of the circle.
If AB = 12 cm, BC = 8 cm & CA = 10 cm.
Find AD, BE & CF.

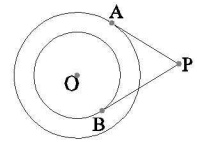
[ans. 7 cm, 5 cm, 3 cm]



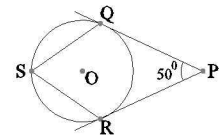
- 21) In the figure O is the centre of the circle and TP is a tangent to the circle, from the external point T. If $\angle PBT = 30^\circ$ prove that BA : AT = 2 : 1



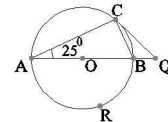
- 22) O is the centre of concentric circles of radii 5 cm and 3 cm. PA & PB are the tangents to the circles from an external point P. If PA = 12 cm find PB.



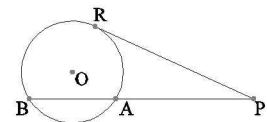
- 23) In the figure O is the centre of the circle and PQ and PR are tangents such that $\angle QPR = 50^\circ$, find $\angle QSR$. (ans. 65°)



- 24) In the figure AB is a diameter of the circle with centre O and QC is a tangent at C. If $\angle CAB = 25^\circ$ find $\angle CQA$ and $\angle BCQ$ (ans. $30^\circ, 25^\circ$)



- 25) In the figure, PT is a tangent and PAB is a secant. If PT = 6 cm, AB = 5 cm, find PA. (ans. 4 cm)



Sheeja James