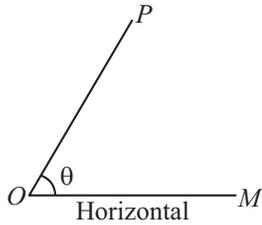


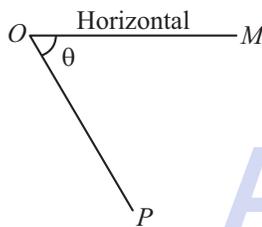


Heights and Distances

Angle of Elevation

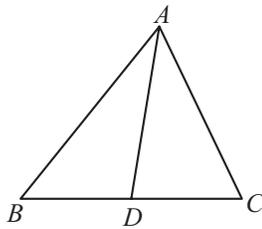


Angle of Depression



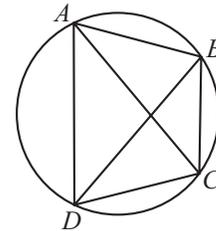
Apollonius Theorem

$$AB^2 + AC^2 = 2(AD^2 + BD^2) \text{ or } 2(AD^2 + DC^2)$$

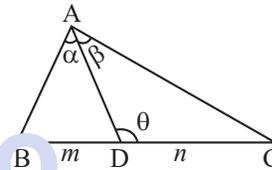


Ptolemy's Theorem

$$AC \cdot BD = AB \cdot CD + AD \cdot BC$$



m-n Theorem



$$(i) (m+n) \cot \theta = m \cot \alpha + n \cot \beta$$

$$(ii) (m+n) \cot \theta = n \cot C - m \cot B$$

Properties of Circles

- ❖ If AB subtends equal angles at two points P and Q , the points A, B, P and Q are concyclic. (\because Angles on the same segment of a circle are equal)
- ❖ Angle subtended by a chord at the center is twice the angle subtended at any point on the circumference.
- ❖ Let AP be the tangent at a point A on the circumference of a circle passing through A, B and C . Then $\angle BAP = \angle ACB$.

ATDB.uno