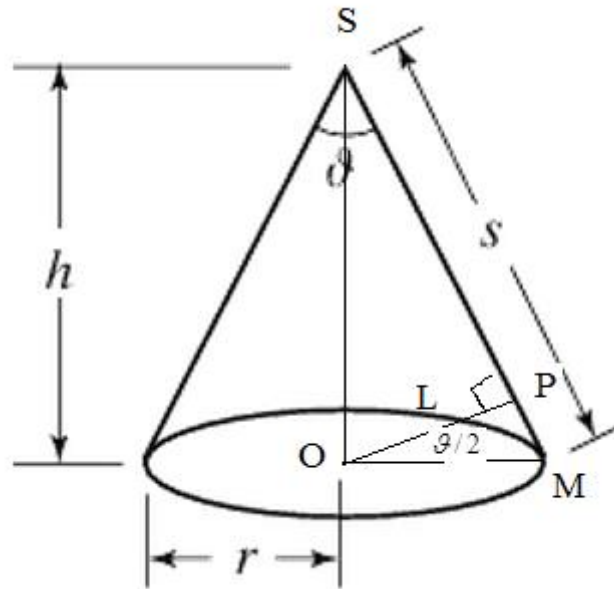


### Answer on Question #52827 – Math – Geometry

check your answer the given condition for the plane to touch cone is that the normal distance of the centre from the plane.

#### Solution



From triangle  $OSM$   $\Delta_{OSM}$  : angles  $\angle OSM = \theta/2$ ,  $\angle SOM = \pi/2$ . From triangle  $OPM$   $\Delta_{OPM}$  : angle  $\angle OPM = \pi/2$ , then angle  $\angle POM = \theta/2$

So  $L = |OP| = |OM| \cos(\angle POM) = r \cos(\theta/2)$