

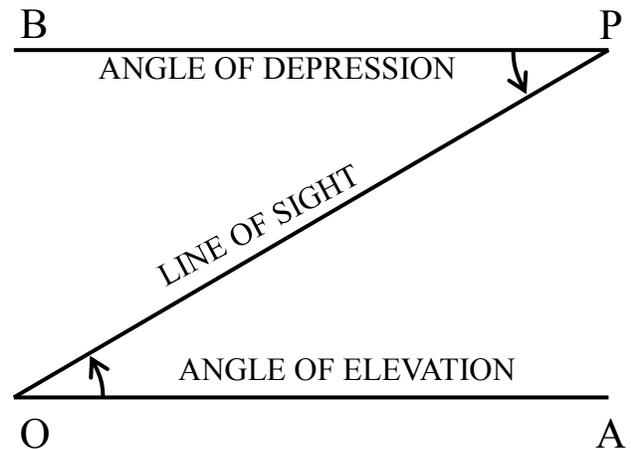
## Applications of Trigonometry

### Angles of Elevation and Depression

Let  $O$  and  $P$  be two points such that the point  $P$  is at higher level. Let  $OA$  and  $PB$  be horizontal lines through  $O$  and  $P$  respectively.

If an observer is at  $O$  and the point  $P$  is the object under consideration, then the line  $OP$  is called the line of sight of the point  $P$  and the angle  $AOP$ , between the line of sight and the horizontal line  $OA$ , is known as the angle of elevation of Point  $P$  as seen from  $O$ .

If an observer is at  $P$  and the object under consideration is at  $O$ , then the angle  $BPO$  is known as the angle of depression of  $O$  as seen from  $P$ .



Obviously, the angle of elevation of a point  $P$  as seen from a point  $O$  is equal to the angle of depression of  $O$  as seen from  $P$ .