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## Unit 9 day 4 notes

## How do you find the measure of an angle?



1. Find Sin A and Sin B
2. Find $\operatorname{Cos} \mathrm{A}$ and $\operatorname{Cos} \mathrm{B}$


Angle of Elevation: When you look up at an object, the angle that your line of sight makes with a line drawn horizontally.

Angle of Depression: When you look down at an object, the angle that your line of sight makes with a line drawn horizontally.


4.

5. A lifeguard is watching a beach from a line of sight 6 feet above the ground. He sees a swimmer at angle of depression of $8^{\circ}$. How far away from the tower is the swimmer?
6. A dog is looking at a squirrel at the top of a tree. The distance between the two animals is 55 feet and the angle of elevation is $64^{\circ}$. How high is the squirrel and how far is the dog from the base of the tree?

7. A jet is flying at an altitude of 30,000 feet. An air traffic controller measures the angle of elevation to the plane to be $16.5^{\circ}$. Find the horizontal distance of the plane from the airport.
8. At a point on the ground 50 feet from the foot of a tree, the angle of elevation to the top of the tree is $53^{\circ}$. Find the height of the tree.
9. From the top a lighthouse 210 feet high, the angle of depression to a boat is
$27^{\circ}$. Find the distance from the boat to the foot of the lighthouse. The lighthouse was built at sea level.

