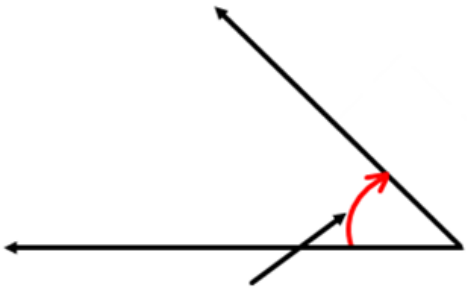
Def. ∠ of Elevation

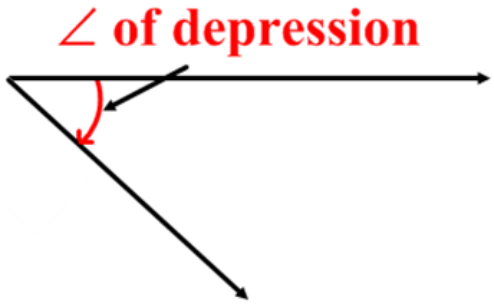
An ∠ formed by a horizontal line up to the line of sight of an object.

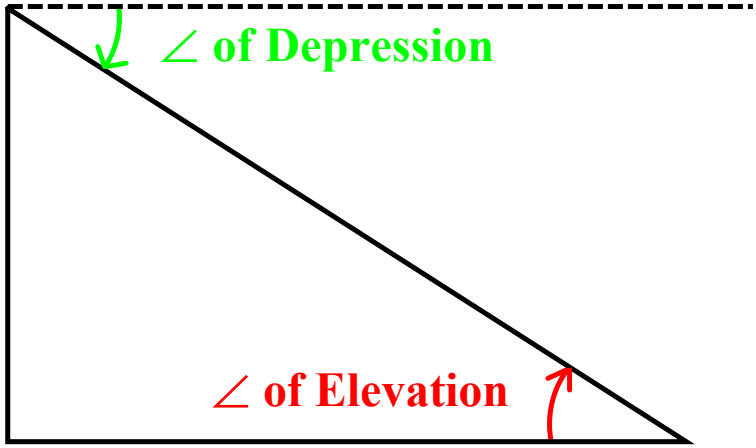


∠ of elevation

Def. ∠ of Depression

An ∠ formed by a horizontal line down to the line of sight of an object.




∠ of Depression
∠ of Elevation

The $\angle$ of elevation from the top of a small building to the top of a nearby taller building is calculated to be 46.7° while from the same spot the $\angle$ of depression to the base of the taller building is calculated to be 14.1°.
If the smaller building is 91.9 feet, find the height of the taller building.

The Space Needle in Seattle Washington was built in 1962 as a landmark for that year's World Fair. The Needle is a Historic Landmark built in downtown Seattle overlooking the city and the Puget Sound. A boat on the Puget Sound measures the angle of elevation from the water level to the top of the Space needle to be 39.8°. The boat then moves 250.1 feet closer and measures the angle of elevation from the water to now be 50.1°. If the base of the Space needle is 83 feet above sea level, find its height to the nearest tenth.