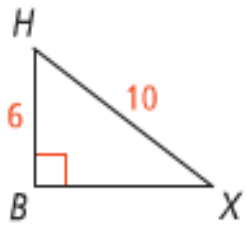
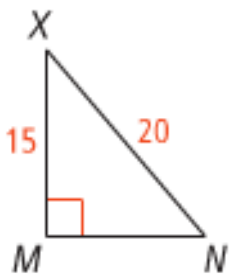
Warm Up:

What is $m\angle X$ to the nearest degree?

A



B



Quiz Word Problem

You are standing 15 feet away from the base of a cliff. The angle to the top of the cliff is 37°. How tall is the cliff?
Draw a picture to support your answer.

Learning Goal: Today I will learn about angles of elevation and depression.

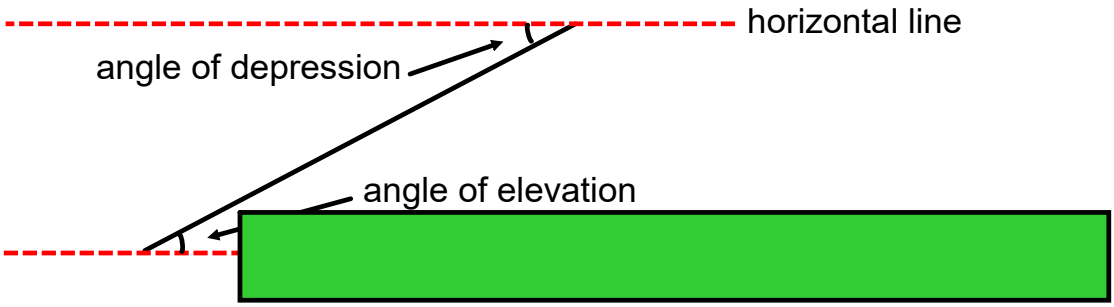
Success Criteria: I am able to correctly label angles of elevation and depression.

8.4 Angles of Elevation and Depression

Angle of Elevation and Depression

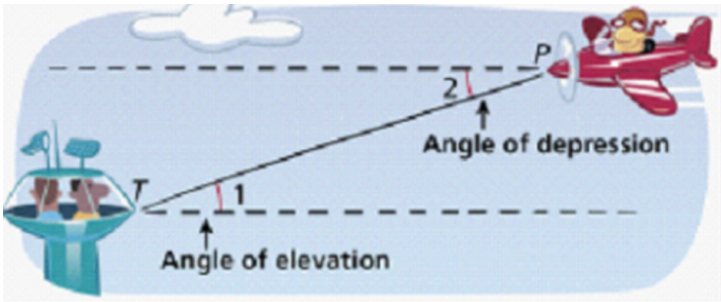
Angle of elevation - from horizontal line up to an object

Angle of depression - from horizontal line down to an object



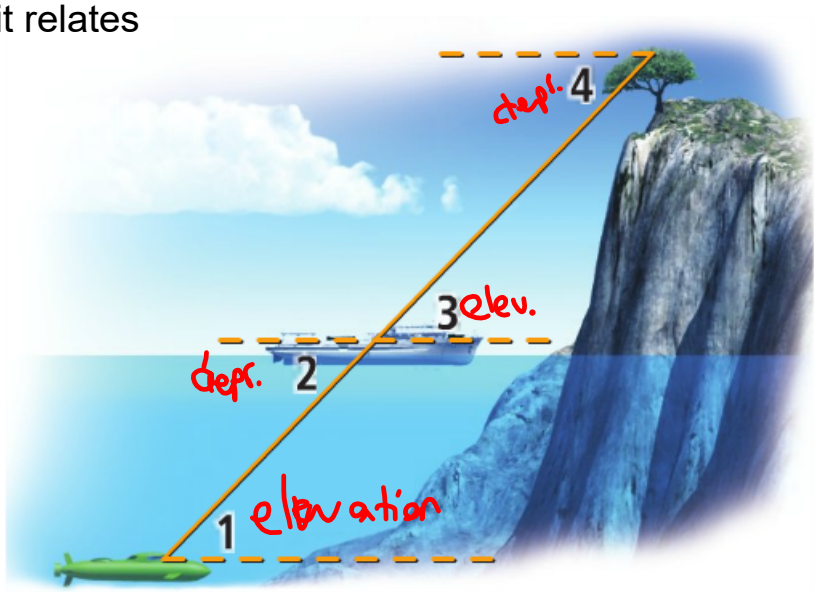
angle of elevation ≅ angle of depression

Angle of Elevation and Depression

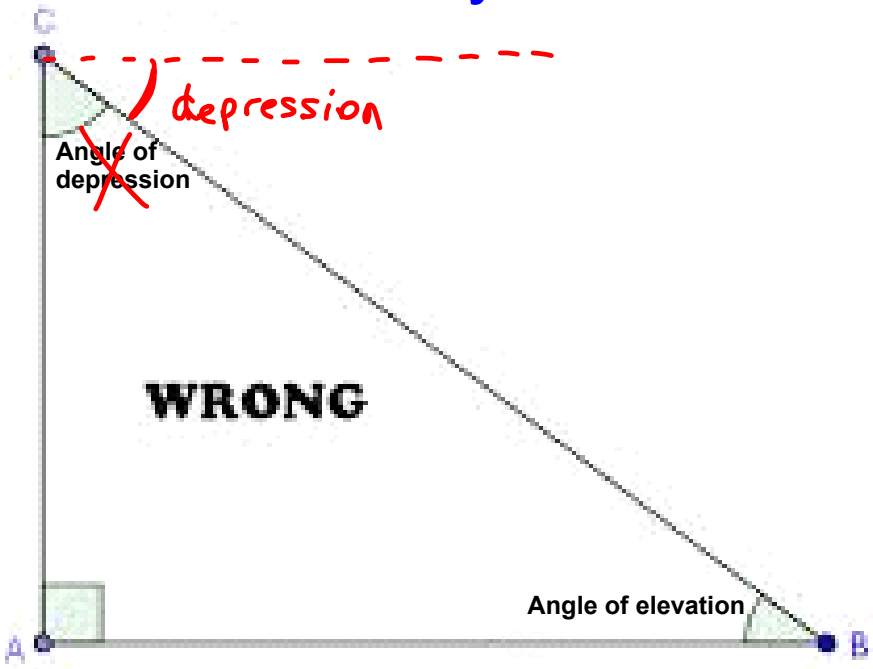


Example

Describe each angle as it relates to the situation.

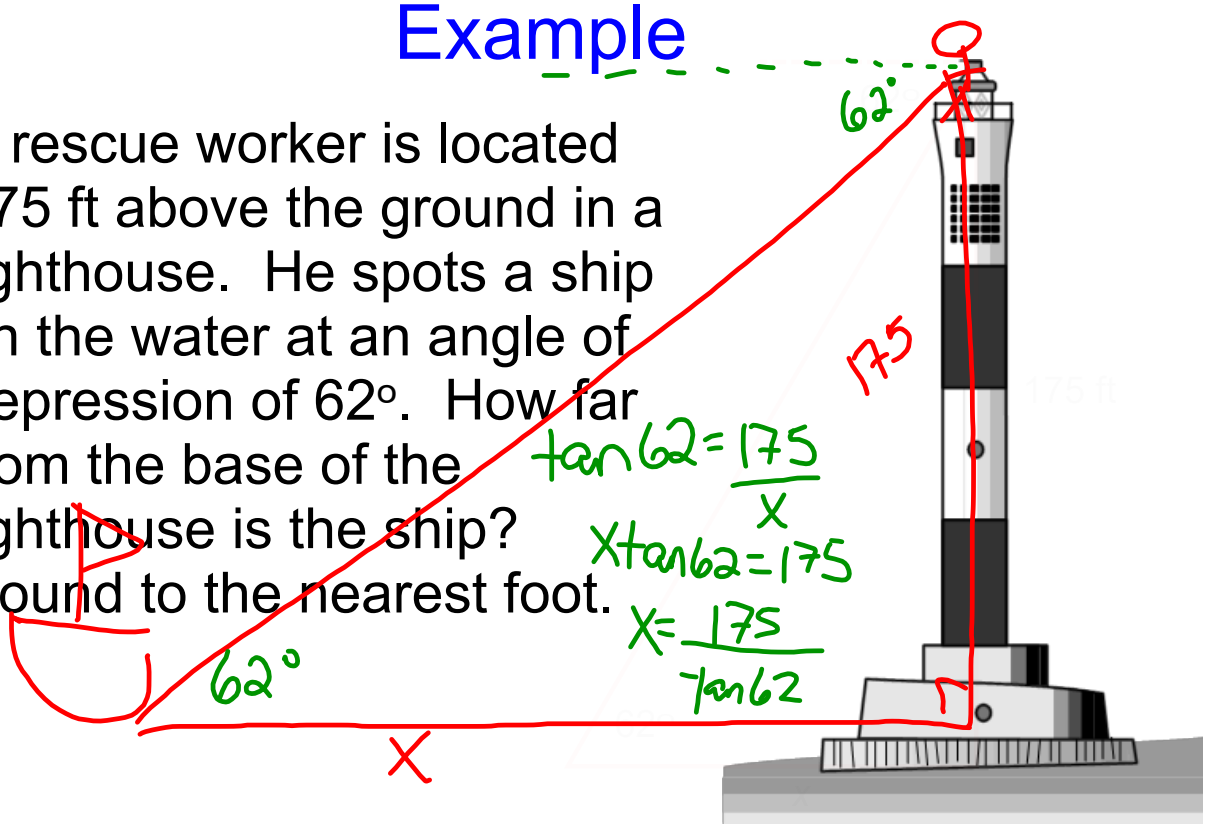


Why?



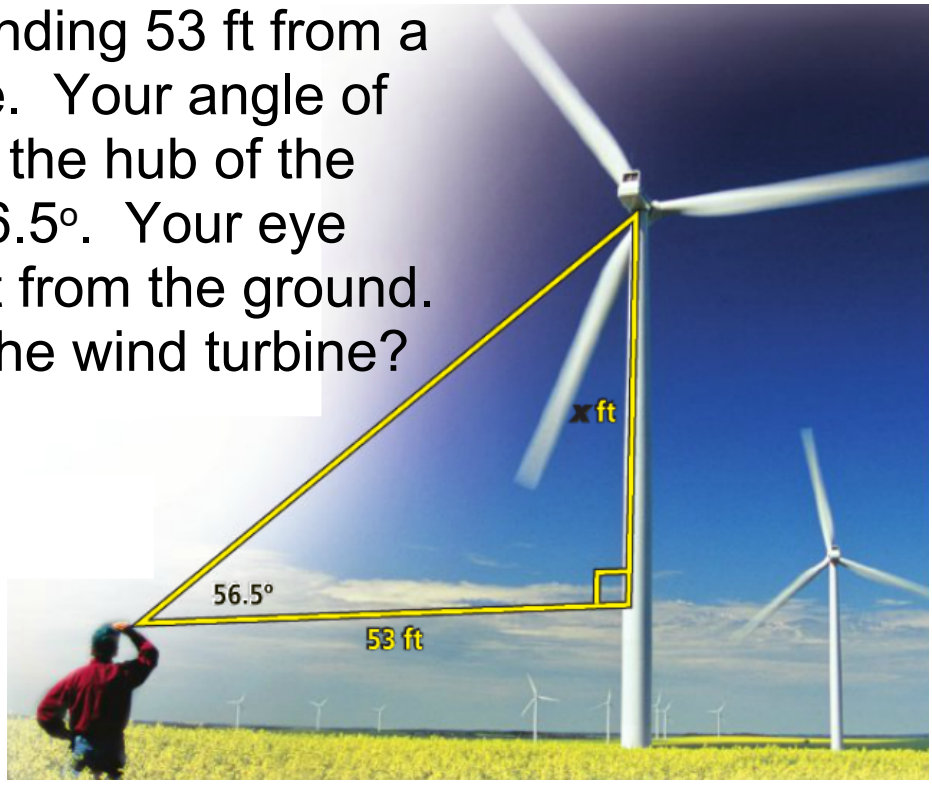
Example

A rescue worker is located 175 ft above the ground in a lighthouse. He spots a ship on the water at an angle of depression of 62°. How far from the base of the lighthouse is the ship? Round to the nearest foot.



Example

You are standing 53 ft from a wind turbine. Your angle of elevation to the hub of the turbine is 56.5°. Your eye level is 5.5ft from the ground. How tall is the wind turbine?



Closure: Today I learned how to label the angle of elevation and depression.