

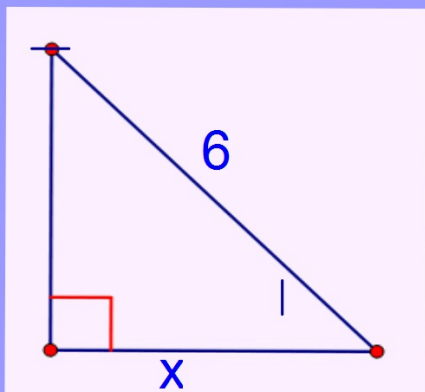


## Do Now

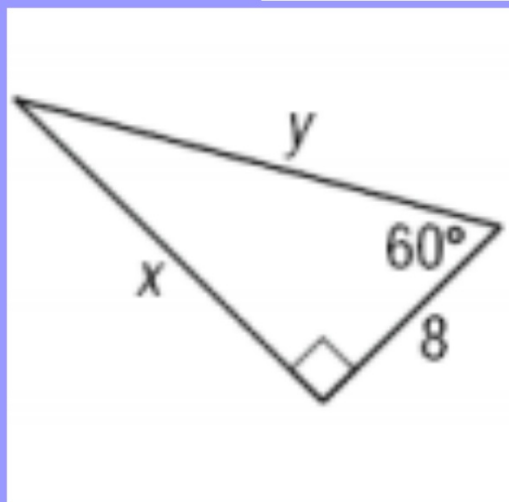
Calculators / Guided Notes / Get your HW out  
Have a seat and work on Do Now! - 2 min



- 1 Below is 45-45-90 degree triangle. Find  $x$



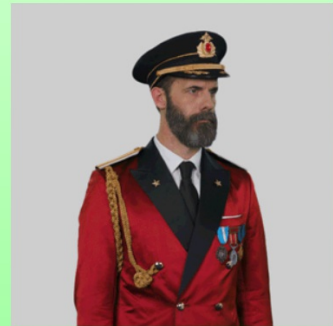
- 2



HW Questions?

## **Agenda!**

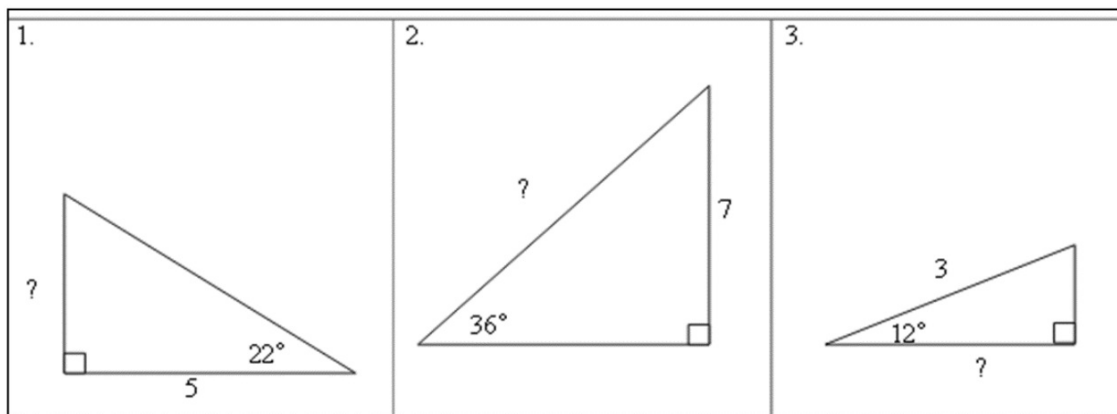
- 1. Very very very brief of Sine, Cosine, and Tangent**
- 2. Use the Trig ratios with Angle of Elevation and Depression**
- 3. MASTERY CHALLENGE - Independent Practice.**
- 4. Group Practice**



## Solving for missing sides of RIGHT TRIANGLES

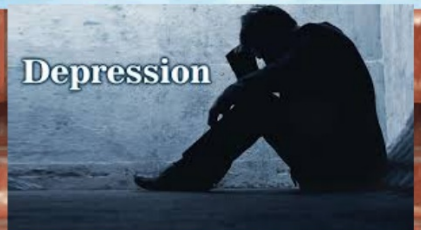
1. label triangle sides
2. Identify the trig function
3. Set up equation
4. Solve

Solving for missing sides of Right Triangles using SOHCAHTOA!





# *Angles Of Elevation*

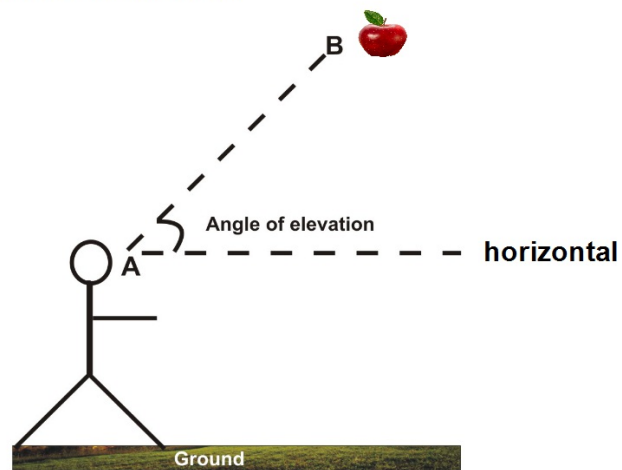


# *And Depression*



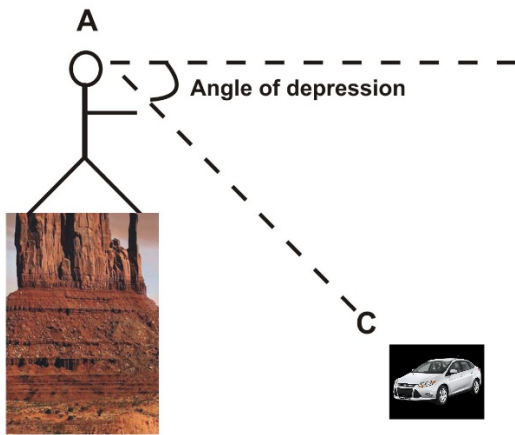


The angle of elevation of an object B from an observer at A who is below the level of B is the angle which the line AB makes with the horizontal.

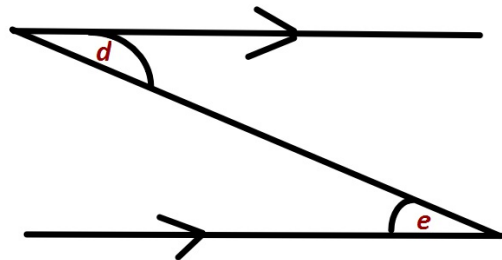




If C is below A, the angle of depression of C from A is the angle which AC makes with the horizontal.



*Note that both angles are measured with the horizontal and that the angle of elevation of B from A is equal to the angle of depression of A from B.*



*angle d is alternate to angle e and alternate angles are equal.*





In your own words, stop and jot:

Angle of Elevation:

Angle of Depression:



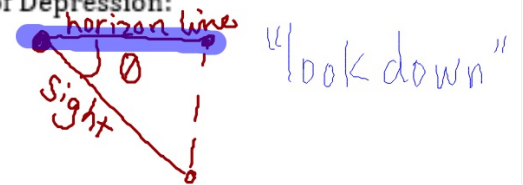


**Word Problems:**

Angle of Elevation:



Angle of Depression:



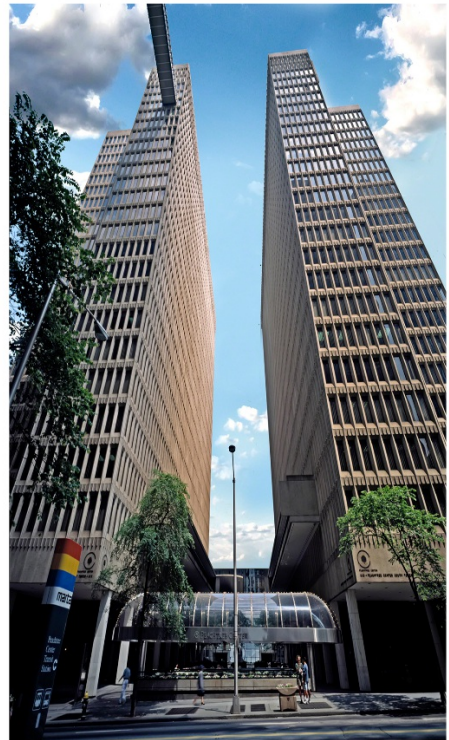
1. Victor is using a 15 foot ladder that is leaning up against a wall. When using the ladder, to be safe, the angle of elevation should not be more than  $75^\circ$ . How high up the wall can the ladder reach?



2. Nakiya is at the top of a vertical cliff 40m high, and is looking down at an object that is level with the base of the cliff. The angle of depression of her sight to the object is  $34^\circ$ . How far is the object from the base of the cliff?



3. Eriberto is 340 feet away from the base of the Peachtree Center Plaza in Atlanta, Georgia. To look at the top of the building the angle of elevation is  $65^\circ$ . Find the height of the building.



4. Cristian is fishing from a dock 10 feet above water level. The fishing line is pulled tight and the angle of depression of the line is  $20^\circ$ . How long is the fishing line between Cristian and the point it enters the water?





Mr. Kim walks 20m directly away from a tree and from this position; the angle of elevation of the top of the tree is  $47^\circ$ . Find the height of the tree.



# MASTERY CHALLENGE!

**Instructions:** You will complete only 7 boxes!

**Goal:** for every student to complete the LAST box!

Check your work at the back!

This is individual!!!

