

Angle of Elevation

vs

Angle of Depression

In a Right Triangle, we define the following ratios:

sine:

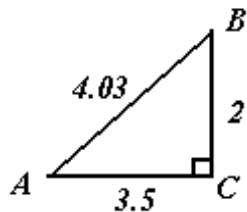
cosine:

tangent:

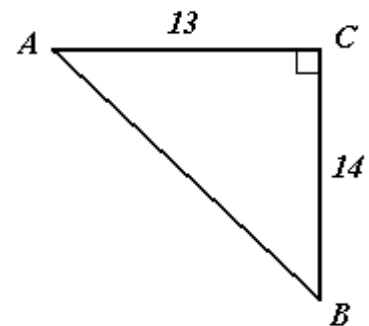
In each triangle, find $\sin A$, $\cos A$, $\tan A$, $\sin B$, $\cos B$, and $\tan B$.

(Figures are not necessarily drawn to scale.)

1.)

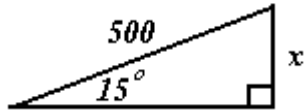


2.)

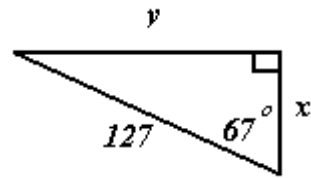


Find the value of the variable(s) in each problem.

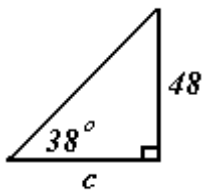
1.)



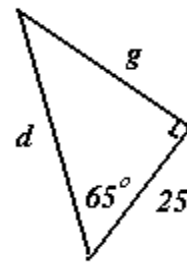
2.)



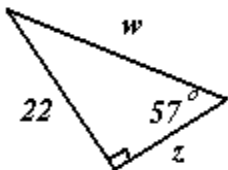
3.)



4.)



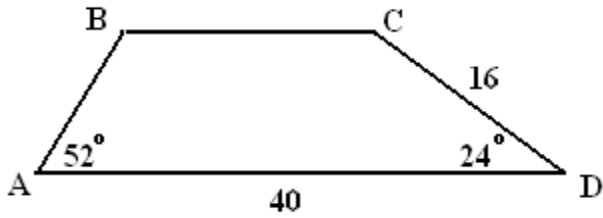
5.)



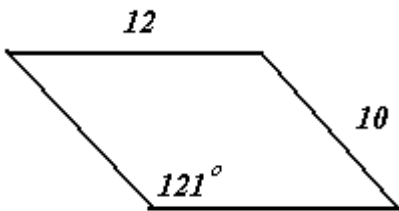
Advanced Geometry
An Introduction to Trigonometry (Part 2)

Name: _____

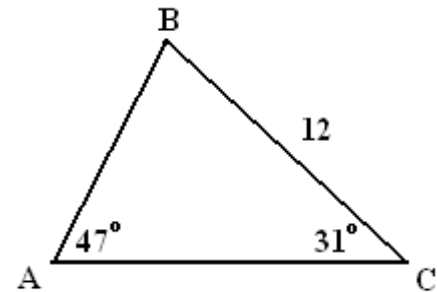
6.) Given the trapezoid, find BC and AB.



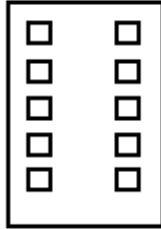
7.) Find the height of the parallelogram.



8.) Find AB and AC.



9.) John stands 110 feet away from a large office building. He looks up at a 72° angle to see the top of the structure. If John's eyes are 5.5 feet off of the ground, how tall is the building to the nearest foot?



10.) Using "laser" technology, Dr. Frankenstein estimates the distance from himself to a flying saucer to be 1200 miles. If the object forms a 32° angle with the laser (which is stationed 1 mile off the ground), how high in the sky is the saucer?

11.) A tree forms an angle of elevation of 40° with a spot on the ground 36 meters away. How tall is the tree?

12.) A para glider is behind a boat, attached by a 400 foot rope to a point on the boat 15 feet above the water. A passenger on the boat sees that the rope makes a 35° angle with the horizontal. How high above the water is the para glider?