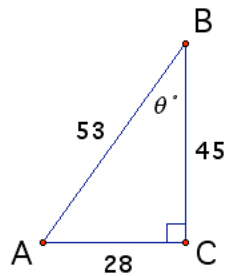


Geometry Test 13 Mr. Holcomb 2008/2009
Milk Shake or Ice Cream Cone?

Problem

1. (6 points) Write the ratio for the sine, cosine, and tangent of angle θ . Simplify any fractions.

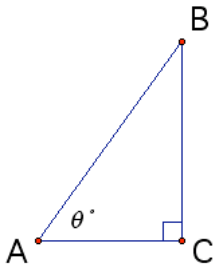


$\sin \theta =$ _____

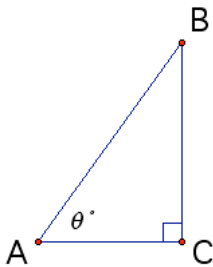
$\cos \theta =$ _____

$\tan \theta =$ _____

2. (5 points) Find AB when $\theta = 35^\circ$ and $AC = 7$. Justify by showing clear work. Round your final answer to the nearest tenth.



3. (5 points) Find the value of θ when $BC = 10$ and $AC = 13$. Justify by showing clear work. Round your answer to the nearest tenth.



Name: _____

ID: A

For problems 4 to 6, create a drawing labeled with the given information and a question mark for what you are trying to find. Justify your solution with clear and complete work. Answer in a complete sentence.

4. (10 points) The angle of elevation from the top of a building to a point on the ground 75 feet from the base of one wall is 68° . Find, to the nearest tenth of a foot, the height of the building.

5. (10 points) A 100 foot tall lighthouse stands at the top of a 150 foot tall vertical cliff. The angle of depression from the top of the lighthouse to a ship is 27° . Find the distance, to the nearest foot, that the ship is from the cliff.

Name: _____

ID: A

6. (10 points) A 17 foot ladder leans against a wall. The top of the ladder touches a point on the wall 15 feet above the ground. What is the measure of the angle formed by the wall and the ladder? Round to the nearest degree.

7. (10 points) Point A is located at $\left(3, 15\frac{1}{2}\right)$ and point B is located at $\left(10, 36\frac{1}{2}\right)$. What are the coordinates of two other points which are between points A and B ? Justify with clear and complete work.