Honors Pre-Calc/Trig Unit 2 Assessment

Trig Functions/Solving Triangles/Graphs

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_\_\_\_\_\_\_

Level 2/Basic

1. Find the values of the six trigonometric functions of the angle ** shown in the right triangle.   
[NOTE: Use SOH-CAH-TOA. *NOT* looking for an angle measure!]

 

2. Find each value to 4 decimal places:

a) cos(9/13) =\_\_\_­\_\_\_\_\_\_\_ b) sin 241° =\_\_\_­\_\_\_\_\_\_\_ c) tan (2/11) =\_\_\_­\_\_\_\_\_\_\_

d) cot 69° =\_\_\_­\_\_\_\_\_\_\_ e) csc(7/15) =\_\_\_­\_\_\_\_\_\_\_ f) sec 22° =\_\_\_­\_\_\_\_\_\_\_

3. Solve the triangle. Find each angle to the nearest tenth of a degree. Find each side to the nearest tenth.

 *a*=\_\_\_\_\_\_\_\_\_\_\_\_\_ *A*=\_\_\_\_\_\_\_\_\_\_\_\_\_ *B*=\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Solve the triangle. Find each angle to the nearest tenth of a degree. Find each side to the nearest tenth.

 *a*=\_\_\_\_\_\_\_\_\_\_\_\_\_ *c*=\_\_\_\_\_\_\_\_\_\_\_\_\_ *B*=\_\_\_\_\_\_\_\_\_\_\_\_\_

Find the area of each triangle (#5-6) to the nearest tenth of a square unit:

5. 6.

5. area= \_\_\_\_\_\_\_\_\_\_\_\_\_ 6. area= \_\_\_\_\_\_\_\_\_\_\_\_\_

Simplify

7. cos-1(cos(169°))=\_\_\_\_\_\_\_

Level 3/Proficient

1. A 40 ft. ladder leans against a wall. If the top of the ladder hits a spot 36 feet

above the ground on the wall, what is the measure of the angle the ladder makes

with the ground to the nearest tenth of a degree?

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solve each triangle. Find each angle to the nearest tenth of a degree. Find each side to the nearest tenth.

2. 3.

*B*=\_\_\_\_\_\_\_\_\_\_\_\_\_ A=\_\_\_\_\_\_\_\_\_\_\_\_\_

*a* =\_\_\_\_\_\_\_\_\_\_\_\_\_ B=\_\_\_\_\_\_\_\_\_\_\_\_\_

*b* =\_\_\_\_\_\_\_\_\_\_\_\_\_ C=\_\_\_\_\_\_\_\_\_\_\_\_\_

4. A building is 75 meters high. At what angle does a person on top of the building

look down to see a person that is 82 meters from the base of the building?

4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Level 4/Advanced

1. Andrew, Betty, and Carl are standing around. The distance between Andrew and Carl is 11 feet. The distance between Carl and Betty is 8 feet. As Andrew turns his head from Betty to Carl, he turns 39°. There are two possible values for the distance from Andrew to Betty. Find both values in feet to the nearest thousandth.

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Find the area of the shape below, *and* identify the measure of its angles. (Assume measures that appear 90 degrees are in fact 90 degrees)

10 feet

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7 feet

14 feet