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(7/11) =\_\_\_\_\_\_\_ b) sin 132° =\_\_\_\_\_\_\_ c) tan (6/17) =\_\_\_\_\_\_\_

d) cot 52° =\_\_\_\_\_\_\_ e) csc(7/23) =\_\_\_\_\_\_\_ f) sec 252° =\_\_\_\_\_\_\_

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 (#5-7) to the nearest tenth of a square unit:

5. 6.

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



7. 8. cos-1(cos(218°))=\_\_\_\_\_\_\_

7. area= \_\_\_\_\_\_\_\_\_\_\_\_\_

9. Sketch each function

  

  

Level 3/Proficient

1. To the nearest degree, find two angles *x,* with 0≤*x*≤360°, such that sin *x*= -0.43

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

2. A 33 ft. ladder leans against a wall. If the top of the ladder hits a spot 29 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?  
 2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

3. 4.

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

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

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

5. A building is 45meters high. At what angle does a person on top of the building

look down to see a person that is 100 meters from the base of the building?

5.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. A parking lot is the shape of a parallelogram. The lengths of adjacent sides are 88 meters and 120 meters. The angle between the two sides is 62 degrees. What is the area of the parking lot?

6.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Level 4/Advanced

1. A flagpole that is vertical on a slope with an angle of elevation of 10°

casts a 16-foot shadow down the hill when the sun is at an angle of elevation of 46°

from the top of the pole. How tall is the flag pole?

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

2. 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.

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

3. 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)

8 feet

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5 feet

14 feet