**Pre-Calc/Trig   
2nd Semester Final  
Multiplier 4**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_\_\_  
 Print**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 Signature**

**Test Sections Score**

**Unit 6 Trig Functions/Solving Triangles \_\_\_\_\_\_  
  
Unit 7 Trig Identities \_\_\_\_\_\_  
  
Unit 8 Solving Trig Identities \_\_\_\_\_\_  
  
Unit 9 ACT \_\_\_\_\_\_  
  
Unit 10 Rational Exponent and Logarithms \_\_\_\_\_\_**

**2nd Semester Final \_\_\_\_\_\_**

**Unit 6: Trig Functions/Solving Triangles**

Answer the following [L2]

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

Answer the following [L3]

3.) 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? 3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



4.) Solve the triangle given at right. Round to nearest tenth.

Answer the following [L4]

5.) The lengths of the diagonals of a parallelogram are 10 feet   
and 16 feet. Find the lengths of the sides of the parallelogram if  
the diagonals intersect at 28 degrees. 5.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Unit 7: Trig Identities**

Simplify the following. [L2]

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

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

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

Verify the following. [L3]

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5.) If . Evaluate the other 6 trig functions

Verify the following. [L4]

6.)

**Unit 8: Solving Trig Identities**

Solve the following on the interval [0, 2. [L2]

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

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

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
  
  
Solve the following on the interval [0, 2. [L3]

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

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

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

Solve the following on the interval [0, 2. [L4]  
  
 7.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Unit 9: ACT**

Answer the following. [L2]

1. The monthly fees for a company are $370, $310, $380,  
   $340, $310, respectively. What is the mean of the fees?

**a.) $310 b.) $340 c.) $342 d.) $350 e.) $380** 1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Given,   
   **a.) 0.45 b.) 4.5 c.) 15 d.) 45 e.) 150** 2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. If

**a.) 10 b.) 16 c.) 58 d.) 79 e.) 100** 3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Answer the following. [L3]  
   
 4.) What fractions lies exactly halfway between

**a.) b.) c.) d.) e.)**  4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5.) The formula for surface area (A) of a rectangular prism is  
 where l is length, h is height, and w is  
 width. By doubling each of the dimensions (l, h, w), the surface  
 area will be multiplied by what factor?  **a.) 2 b.) 4 c.) 6 d.) 8 e.) 12** 5.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Answer the following. [L4]

6.) The sides of an acute triangle are 14 cm, 18cm, and 20cm.  
 Which of the following equations, when solved for x, gives the  
 measure of the smallest angle of the triangle? Note: for any triangle  
 with sides a, b, and c that are opposite angles A, B, and C.

**a.) b.) c.)** 6.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**d.) e.)**

**Unit 10: Pre-Calc/Trig Review Main Topics**

Rewrite or evaluate. [L2]

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

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

Solve. [L2]

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

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

Solve. [L3]

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

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

Solve. Check for extraneous solutions [L4]

7.) 7.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_