**MATH 30-1**

**TRIG 2**

**YEAR END REVIEW**

**NUMERIC RESPONSE SECTION:**

1. Using your graphing calculator to graph  in radian mode, the largest x- intercept, correct to the nearest tenth is \_\_\_\_\_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

2. Given that  is an acute angle, the value of , correct to the nearest degree, such that  is \_\_\_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

3. The number of solutions to the equation  has over the interval  is \_\_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

4. Given that  is a fourth quadrant angle, determine the exact value of .

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

5. Each of the trigonometric ratios listed below results in a value of zero, or it will be undefined.

 

 

 

 

 Use the following code to indicate that the value of the ratio is zero, or that the ratio is undefined.

 **1** = the ratio is zero

 **2** = the ratio is undefined

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

 RATIO:    

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

6. Each trigonometric expression below can be simplified to a single numerical value.

 1. 

 2. 

 3. 

 4. 

 When the numerical values of the simplified expressions are arranged in ascending order, the expression numbers are \_\_\_\_,\_\_\_\_,\_\_\_\_, and \_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

**WRITTEN RESPONSE:**

1. Prove algebraically that , where .

2. What is the exact value of 

3. Find the general solution to the equation . Express the solution in degrees.

**MULIPLE CHOICE SECTION.**

1. Which of the following is true when if  positive and negative,

 A.  terminates in quadrant II

 B.  terminates in quadrant II

 C.  terminates in quadrant IV

 D.  terminates in quadrant IV

2. The solution to , for  is

 A. 

 B. 

 C. 

 D. 

3. If , find two possible values of .

 A. 

 B. 

 C. 

 D. none of the above

4. If the left side of an identity is , then the right side of the identity could be

 A. 0

 B. 1

 C. 

 D. 

5. Angles x and y terminate in the same quadrant. If  and , then  is

 A. 

 B. 

 C. 

 D. 

6. When the identity  is verified for , the left and right sides of the identity are

 A. 0

 B. 3

 C. 

 D. 

7. For the identity  to be valid, which of the following restrictions must be stated?

 A. 

 B. 

 C. 

 D. 

8. The exact value of  can be determined by using

 A. 

 B. 

 C. 

 D. 

9. If  and , then the value of  is:

 A. 

 B. 

 C. 

 D. 

10. If the point  lies on the terminal arm of an angle  in standard position, determine the exact value of .

 A. -

 B. 

 C. 

 D. 

11. The value of  is

 A. 

 B. 

 C. 

 D. 0

12. In the interval , the solutions of the equation  are

 A. 

 B. 

 C. 

 D. 

13. The complete set of solutions for , , is

 A. 

 B. 

 C. 

 D. 

14. If  where , then one of the factors used to solve for  is

 A. 

 B. 

 C. 

 D. 

15. Simplify 

 A. 

 B. 

 C. 

 D. 

16. The expression  is equivalent to

 A. 

 B. 

 C. 

 D. 