**Name** **MAT 231**
**Date** **Assessment#6**

## ASSESSMENT#6-Chapter 3.1-3.5

1. Evaluate the function at the indicated value of *x*. Round your result to three decimal places if necessary.

| *Function* | *Value* |
|---|---|
| $f(x) = 0.7^x$ | $x = 1.7$ |

2. Evaluate the function at the indicated value of *x*. Round your result to three decimal places.

| *Function* | *Value* |
|---|---|
| $f(x) = 2^x$ | $x = -\pi$ |

3. Write the logarithmic equation in exponential form.

$\log_4 16 = 2$

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4. Rewrite the logarithm as a ratio of common logarithms.

log5 16

5. Solve for *x*.

$6^x = 36$

6. Solve for *x*. Approximate the result to three decimal places.

$\ln x = -5$

(7) Evaluate the following trigonometric expressions:

a. $\tan\left(\frac{\pi}{2}\right)$

b. $\cos\left(\frac{\pi}{3}\right)$

c. $\csc\left(\frac{\pi}{6}\right)$

d. $\tan^{-1}\left(\csc\left(\frac{\pi}{6}\right)\right)$

e. $\sin(\tan^{-1}(1))$

(8) Prove that the following equation is an identity:

a. $\frac{\tan \emptyset}{\sec \emptyset} = \sin \emptyset$

b. $\frac{\csc \emptyset}{\sec \emptyset} = \cot \emptyset$

c. $\frac{1}{sin\emptyset cos\emptyset} - \frac{cos\emptyset}{sin\emptyset} = tan\emptyset$

d. $\frac{sin^2\emptyset}{1+cos\emptyset} = 1 - cos\emptyset$