Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Units 4, 5, and 6 Study Guide!

1. The expression is equivalent to

A B

C D

2. What is the value of cos(270)?

A) 0 B) -1

C) D) -

3. When simplified, cos2 θ (1 + cot 2 θ) is equivalent to which expression below:

A. sin2 θ + cos2 θ

B. -1

C. tan2 θ

D. cot2 θ

4. When simplified, the expression: (cosθ)(tanθ) is equivalent to

A. cotθ

B. tanθ

C. sinθ

D. 1

5. The Pythagorean identity that contains csc2x is

A. sin2x + csc2x = 1

B. 1 + cot2x = csc2x

C. 1 + csc2x= cot2x

D. sin2x + cos2x = 1

6. Solve the equation for all Θ: sinx + 1 = 0

A. 270

B. 180

C. 90

D. -270

7. Simplify the expression below. Make sure to circle your final answer.

8. Prove the following expression will give you the final answer of **csc(θ)**

cot(θ)cos(θ) + sin(θ) = **csc(θ)**

1. What are the equations of the asymptotes and the initial value for the function?

|  |  |
| --- | --- |
| A | Horizontal asymptotes: . Max: . Initial value . |
| B | Horizontal asymptotes: . Max: . Initial value . |
| C | Horizontal asymptotes: . Max: . Initial value . |
| D | Horizontal asymptotes: . Max: . Initial value . |

2. Explain how you know that the **amplitude** of the function

*f(x) = -2cos(3x) – 2* is **2**. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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3. What is the period of the function f(x) = 3cos(4x – 8)?

A) B)

C) π D)

4. Analyze the range of the function: f(x) =

A. (0, ∞)

B. (0, -∞)

C. (-∞, ∞)

D. (0, 20]