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← MAT2550, section ONL6FA_ONL6F, Summer 2 2021

Week 7 Quiz Math 2550 (Quiz)

INSTRUCTOR
Bradford Thompson
South College

Current Score										
QUESTION	1	2	3	4	5	6	7	8	9	10
POINTS	-/10	-/10	-/10	-/10	-/10	-/10	-/10	-/10	-/10	-/10
TOTAL SCORE -/1000.0%										
Due Date										
TUE, SEP 7, 2021										

11:59 PM EDT



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Assignment Submission & Scoring

Assignment Submission

For this assignment, you submit answers by question parts. The number of submissions remaining for each question part only changes if you submit or change the answer.

Assignment Scoring

Your last submission is used for your score.

1. [-/10 Points]

DETAILS

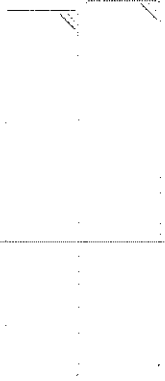
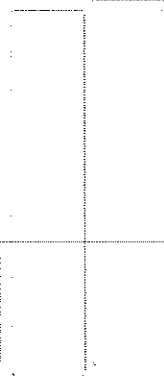
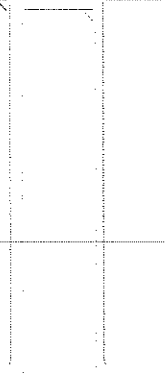
LARPCALC10 5.1.010.

MY NOTES

ASK YOUR TEACHER

Use the given conditions to find the values of all six trigonometric functions. (If an answer is undefined, enter UNDEFINED.)

$$\cos(\theta) = \frac{1}{3}, \quad \sin(\theta) < 0$$

 $\sin(\theta) =$  $\cos(\theta) =$  $\tan(\theta) =$  $\csc(\theta) =$  $\sec(\theta) =$  $\cot(\theta) =$ 

2. [-/10 Points]

DETAILS

LARPCALC10 5.3.015.

MY NOTES

ASK YOUR TEACHER

Solve the equation. (Enter your answers as a comma-separated list. Use n as an integer constant. Enter your response in radians.)

$$3 \sec^2 x - 4 = 0$$

 $x =$

3. [-/10 Points]

DETAILS

LARPCALC10 5.2.013.

MY NOTES

ASK YOUR TEACHER

Verify the identity. (Simplify at each step.)

$$7 \cos^2 \beta - 7 \sin^2 \beta = 7 - 14 \sin^2 \beta$$

$$7 \cos^2 \beta - 7 \sin^2 \beta = (7 -$$

$$) - 7 \sin^2 \beta = 7 - 14 \sin^2 \beta$$

4. [-/10 Points]

DETAILS

LARPCALC10 5.1.008.

MY NOTES

ASK YOUR TEACHER

Use the given conditions to find the values of all six trigonometric functions. (If an answer is undefined, enter UNDEFINED.)

$$\csc(x) = -\frac{9}{7}, \quad \tan(x) > 0$$

$\sin(x) =$

$\cos(x) =$

$\tan(x) =$

$\csc(x) =$

$\sec(x) =$

$\cot(x) =$

5. [-/10 Points]

DETAILS

LARPCALC10 5.3.021.

MY NOTES

ASK YOUR TEACHER

Solve the equation. (Enter your answers as a comma-separated list. Use n as an integer constant. Enter your response in radians.)

$$\cos^3 x - \cos x = 0$$

 $x =$

6. [-/10 Points]

DETAILS

LARPCALC10 5.1.019.

MY NOTES

ASK YOUR TEACHER

Use the fundamental identities to simplify the expression. (There is more than one correct form of the answer.)

$$\frac{\tan(\theta) \cot(\theta)}{\sec(\theta)}$$

7. [-/10 Points]

DETAILS

LARPCALC10 5.3.006.

MY NOTES

ASK YOUR TEACHER

Verify that each x-value is a solution of the equation.

$$6 \sec(x) - 12 = 0$$

$$(a) \quad x = \frac{\pi}{3}$$

$$6 \sec\left(\frac{\pi}{3}\right) - 12 =$$

$$\begin{array}{r} -12 \\ = 0 \end{array}$$

$$(b) \quad x = \frac{5\pi}{3}$$

$$6 \sec\left(\frac{5\pi}{3}\right) - 12 =$$

$$\begin{array}{r} -12 \\ = 0 \end{array}$$

8. [-/10 Points]

DETAILS

LARPCALC10 5.2.021.

MY NOTES

ASK YOUR TEACHER

Verify the identity algebraically. Use the *table* feature of a graphing utility to check your result numerically. (Simplify at each step.)

$$\frac{1 + \sin(\theta)}{\cos(\theta)} + \frac{\cos(\theta)}{1 + \sin(\theta)} = 2 \sec(\theta)$$

(

$$\frac{1 + \sin(\theta)}{\cos(\theta)} + \frac{\cos(\theta)}{1 + \sin(\theta)} =$$

$$\left. \right)^2 + \cos^2(\theta)$$

$$\frac{\cos(\theta)(1 + \sin(\theta))}{\cos(\theta)(1 + \sin(\theta))}$$

(

=

$$\left. \right) + \sin^2(\theta) + \cos^2(\theta)$$

$$\frac{\cos(\theta)(1 + \sin(\theta))}{2 + 2($$

$$2 + 2($$

=

)

$$\frac{\cos(\theta)(1 + \sin(\theta))}{2($$

$$2($$

$$\begin{aligned}
 &= \frac{\cos(\theta)(1 + \sin(\theta))}{\cos(\theta)} \\
 &= 2 \sec(\theta)
 \end{aligned}$$

9. [-/10 Points]

DETAILS

LARPCALC10 5.3.012.MI.

MY NOTES

ASK YOUR TEACHER

Solve the equation. (Enter your answers as a comma-separated list. Use n as an integer constant. Enter your response in radians.)

$$\tan x + \sqrt{3} = 0$$

x =

10. [-/10 Points]

DETAILS

LARPCALC10 5.2.010.

MY NOTES

ASK YOUR TEACHER

Verify the identity. (Simplify at each step.)

$$\frac{\tan x \cot x}{\cos x} = \sec x$$

$$\frac{\tan x \cot x}{\cos x} = \frac{\text{[input box]} \text{[input box]}}{\cos x} = \sec x$$

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