

Exam 2

⚠ This is a preview of the published version of the quiz

Started: Jun 12 at 10:17am

Quiz Instructions

Please answer all questions to the best of your ability. All of the questions on the exam require a typed response and I want you to include as much detail as possible. If you aren't familiar with using the insert equation feature on Canvas I would suggest you look over the link on our module page before you get started with the exam. This feature will allow you to include Greek letters, and other features of mathematical formulas in your answers.

After you start the exam, you will have a total of 60 minutes to answer all the questions and submit the exam. This is an open notes exam, but you are not allowed to get help from any other source including but not limited to tutors, or your fellow classmates.

Best of luck!

Question 1

15 pts

A 10 ft. long plank is used as a ramp onto a 3ft. tall stage. What is the distance from the edge of the platform to the end of the plank and what is the angle between the plank and the stage?

p

  | 0 words |   

Question 2

12 pts

Find the exact solutions of the equation, in radians, that lie in the interval $[0, 2\pi)$.

$$\sin\left(2x - \frac{\pi}{4}\right) = 0$$

p



0 words



Question 3

10 pts

Verify the following Identity:

$$\sin^2(-x) + \cos^2(-x) = 1$$

p



0 words



Question 4

10 pts

Verify the following Identity:

$$(\sec(x) - \tan(x))^2 = 1 - \sin(x)$$

p



0 words



Question 5

10 pts

Verify the following Identity:

$$\cos(x + y) + \cos(x - y) = 2 \cos(x) \cos(y)$$

p



0 words



Question 6**10 pts**

Find the exact value of the sine, cosine, and tangent of the angle $\frac{7\pi}{12} = \frac{\pi}{4} + \frac{\pi}{3}$

p



0 words

**Question 7****10 pts**

Write the following function in the form $C \sin(x + \theta)$ where θ is in the interval $[0, 2\pi)$.

$$f(x) = \sin(x) - \sqrt{3} \cos(x)$$

p



0 words

**Question 8****10 pts**

Verify the following identity:

$$\csc^2(x) = \frac{2}{1 - \cos(2x)}$$

p



0 words

**Question 9****13 pts**

Find the exact solutions of the equation, in radians, that lie in the interval $[0, 2\pi)$.

$$\sin^3(x) = \sin(x)$$

p



0 words



Quiz saved at 10:17am

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