Guided Lesson Notes

Name:_____ Date:_____

Verifying Trigonometric Identities

Directions: Complete this study guide as you move through the lesson. By taking notes, you are more likely to remember what you are learning. The completed study guide can be used to complete practice activities and to prepare for quizzes and exams. Be sure to save each study guide so you can access it when you need it.

Essential Vocabulary

As you encounter these mathematical terms from within the lesson, enter the meaning and an example (or two) for each of the terms. You can even draw a picture. If there are other unfamiliar words you find, enter them in the blank spaces provided.

verifying a trigonometric identity	

Trigonometric Identities Review

1. What are the quotient identities?

2. What are the reciprocal identities?

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3. What are the Pythagorean identities?

4. What are the even-odd identities?

5. What are the cofunction identities?

Simplifying Trigonometric Identities Review

1. What is the simplified expression of $\csc x - \csc x \cos^2 x$?

2. What is the simplified expression of $\frac{\sec x - \sin x \tan x}{\cos x}$?

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Verifying Identities: Changing One Side

1. Verify that the trigonometric equation $\sec^2 x - \sec^2 x \sin^2 x = 1$ is an identity.

2. Verify that the trigonometric equation $\frac{1+\cos x}{\sin x} = \csc x + \cot x$ is an identity.

3. Verify that the trigonometric equation $\sin x\,(\tan x + \cot x) = \sec x$ is an identity.

Verifying Identities: Changing Both Sides

1. Verify that the trigonometric equation $\frac{\sec x+1}{\tan x} = \frac{\sin x}{1-\cos x}$ is an identity.

2. Verify that the trigonometric equation $\frac{\cos x}{1+\sin x} = \sec x - \tan x$ is an identity.