

Chapter 5 Analytic Trigonometry

Section 5.1 Using Fundamental Identities

Objective: In this lesson you learned how to use fundamental trigonometric identities to evaluate trigonometric functions and simplify trigonometric expressions.

Course Number

Instructor

Date

I. Introduction (Page 352)

Name four ways in which the fundamental trigonometric identities can be used:

- 1)
- 2)
- 3)
- 4)

What you should learn

How to recognize and write the fundamental trigonometric identities

The Fundamental Trigonometric Identities

List six reciprocal identities:

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)

List six cofunction identities:

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)

List two quotient identities:

- 1)
- 2)

List six even/odd identities:

- 1)
- 2)
- 3)

List three Pythagorean identities:

- 1)
- 2)
- 3)

- 4)
- 5)
- 6)

II. Using the Fundamental Identities (Pages 352–356)

Example 1: Explain how to use the fundamental trigonometric identities to find the value of $\tan u$ given that $\sec u = 2$.

What you should learn

How to use the fundamental trigonometric identities to evaluate trigonometric functions, simplify trigonometric expressions, and rewrite trigonometric expressions

Example 2: Explain how to use the fundamental trigonometric identities to simplify $\sec x - \tan x \sin x$.

Example 3: Explain how to use a graphing utility to verify whether $\sec x \sin^3 x + \sin x \cos x = \tan x$ is an identity.

Homework Assignment

Page(s)

Exercises