SEGMENT THREE: HOW TO APPLY

BY MARK KARADIMOS

AVAILABLE ON VIDEO AT...

HTTPS://WWW.YOUTUBE.COM/WATCH?V=PP2CW2_ILLK
Assign Videos

- Flipped Instruction
- Launch into Topics and Subtopics
Assign Reading of Lessons

- Flipped Instruction
- Utilize a Jigsaw Approach
- Provide for Learners Who Need More Time with Topic/Skill

Trigonometric Expressions

Introduction
In this section, you will learn how to simplify trigonometric expressions. Here are the sections within this lesson:

- Trigonometric Identities
- Deriving the Pythagorean Trigonometric Identities
- Prerequisite Skills for Simplifying Trigonometric Expressions
- Strategies for Simplifying Trigonometric Expressions
- Example #1
- Example #2
- Verifying Trigonometric Identities
- Instructional Videos
- Interactive Quizzes
- Activities
- Related Lessons

Trigonometric Identities
Trigonometric expressions are non-routine appearing problems. They are unfamiliar because the language of trigonometry looks foreign and complicated. In order to learn how to simplify or reduce the complexity of trigonometric expressions, we first need to examine the identities we need to utilize.

Rooted within right triangle trigonometry, there are:

Pythagorean Identities
\[
\sin^2 x + \cos^2 x = 1 \\
1 + \cot^2 x = \csc^2 x \\
\tan^2 x + 1 = \sec^2 x
\]

The Pythagorean Identities are proven to be true in the following section: Deriving the Pythagorean Identities.

These expressions are reciprocal trigonometric identities by definition.
Assign Quizmasters

- Openers
- Closers
- Check for Understanding
- Supplement Text-Based Assignments
Use Project Templates

- Review Strategy
- Multiple Intelligence Approach
- Whole-Student Approach
Assign Games & Puzzles

- Creative Launch into Topic
- Great Transition Device for Ramping Up Difficulty
- Address Higher Order Thinking
Utilize the Bulletin Board
• Method for Delivering MATHguide Content
• Space for Students to Ask Questions
• Space for Students to Engage in Dialogue