Unit 6 Trig Identities

Content Area: **Math**
Course(s): **Accelerated PreCalculus, CP PreCalculus**
Time Period: **Marking Period 3**
Length: **5**
Status: **Published**

Unit Overview

In this unit, students will learn strategies for simplifying expressions and solving equations using trigonometric identities and formulas.

Enduring Understandings

- Students will be able to verify and use trig identities.

Essential Questions

How do you simplify trig expressions in order to rewrite and evaluate trig functions?

How do you verify a trig identity?

How do you solve trig equations written in quadratic form or containing more than one angle?

How do you simplify expressions and solve equations that contain sums or difference of angles?

How do you rewrite trig expressions that contain functions of multiple angles or half angles, or functions that involve squares or products of trigonometric expressions?

New Jersey Student Learning Standards (No CCS)

MA.F-TF.B.7	Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.
MA.F-TF.C	Prove and apply trigonometric identities
MA.F-TF.C.8	Prove the Pythagorean identity $sin^2(\theta) + cos^2(\theta) = 1$ and use it to find $sin(\theta)$, $cos(\theta)$, or $tan(\theta)$ given $sin(\theta)$, $cos(\theta)$, or $tan(\theta)$ and the quadrant of the angle.

MA.F-TF.C.9	Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.

Formative Assessments

- Daily homework checks
- Quiz
- Chapter Test
- Exit Tickets
- Warm-ups
- Webassign

Summative Assessment

- Unit Test
- Unit Project

Alternate Assessments

- Modified homework
- Modified quizzes
- Modified tests
- Modified projects

Closure

- Low-Stakes Quizzes - Give a short quiz using technologies like Kahoot or a Google form.
- Have students write down three quiz questions (to ask at the beginning of the next class).
- Have students dramatize a real-life application of a skill.
- Ask a question. Give students ten seconds to confer with peers before you call on a random student to answer. Repeat.
- Have kids orally describe a concept, procedure, or skill in simple terms.
- Direct kids to raise their hands if they can answer your questions. Classmates agree (thumbs up) or disagree (thumbs down) with the response.
- Have kids create a cheat sheet of information that would be useful for a quiz on the day's topic.
- Students write notes to peers describing what they learned from them during class discussions.
- Have students fill out a checklist with the objectives for the day.
- Have students complete an exit ticket without putting their name on it. Hand back exit tickets the next day in class and have students correct as a warm up.
- Ask students to write what they learned, and any lingering questions on an "exit ticket". Before they

leave class, have them put their exit tickets in a folder or bin labeled either "Got It," "More Practice, Please," or "I Need Some Help!"

- After writing down the learning outcome, ask students to take a card, circle one of the following options, and return the card to you before they leave: "Stop (I'm totally confused.)" Go (I'm ready to move on.)" or "Proceed with caution (I could use some clarification on . . .)"