Unit 11: Proving Trig Identities

Content Area: **Mathematics**
Course(s): **PreCalc Trig A**
Time Period: **Semester 2**
Length: **3 weeks**
Status: **Published**

Standards

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
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.

Enduring Understandings

Students will use their reasoning skills to prove identities true using mathematical facts.

Students will understand that substitution and Algebra can allow for the expressing of ideas.

Essential Questions

How can we prove that a trig identity is true?

What are the three basic identities?

What strategies are used when proving identities?

Knowledge and Skills

- Develop three main trig identities.
- Simplify trig expressions using the identities.
- Prove trig identities true.

Transfer Goals

Recognize and solve practical or theoretical problems involving mathematics, including those for which the solution approach is not obvious, by using mathematical reasoning and strategic thinking.

Resources

1. Pre-Calculus with Limits - Aufmann

2. Trigonometry 6th edition - Lial

3. Classkick

4. Khan Academy

5. PurpleMath

6. KutaSoftware

7. CK-12

8. Quizlet

9. Albert I/O

10. Desmos

11. Problem Attic