# Unit 11: Proving Trig Identities

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

## Standards

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|---|---|
| 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