

# 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.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.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.

## Enduring Understandings

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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

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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

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

## Transfer Goals

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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**

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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

