Unit 09: Trigonometric Identities (Part 1)

Content Area: **Mathematics**
Course(s): **PreCalc Trig H**
Time Period: **Semester 1**
Length: **1.5 weeks**
Status: **Published**

Standards - NJCCS/CCSS

CCSS.Math.Content.HSF-TF.C	Prove and apply trigonometric identities
CCSS.Math.Content.HSF-TF.C.8	Prove the Pythagorean identity sin²(θ) + cos²(θ) = 1 and use it to find sin(θ), cos(θ), or tan(θ) given sin(θ), cos(θ), or tan(θ) and the quadrant of the angle.

Enduring Understandings

Trignometic identities can be used to simplify trignometric expressions.

Essential Questions

How can we prove that a trignometric identity is true?

What are the three basic identities?

What strategies are used when proving trignometric identities?

Knowledge and Skills

$\sin^2 x + \cos^2 x = 1$

$1 + \cot^2 x = \csc^2 x$

$\tan^2 x + 1 = \sec^2 x$

SWBAT develop the three pythagorean identities.

SWBAT simplify trigonometric expressions using the identities.

SWBAT prove trigonometric identites.

Resources

Trigonometry

Authors: Lial, Hornsby, Schneider

Graphing Calculator

www.desmos.com

www.flipgrid.com

www.graphfree.com