Unit 12: Trig Identities (Part II)

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

Standards

MA.K-12.8	Look for and express regularity in repeated reasoning.
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.

Enduring Understandings

Students will be able to evaluate angles using trigonometric formulas.

Changing the notation of an expression can allow it to be dectonstructed into known values.

Essential Questions

How can you derive the sum/difference trig identities?

How can you derive the double angle trig identities?

How can you use trig identities to solve for other trig expressions?

How can you prove trig identities using sum/difference.double angle?

Knowledge and Skills

- Derive sum/difference formulas
- Derive double angle formulas.
- Derive half angle formulas.
- Apply formulas to verification proofs.
- Prove trig identities

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