Today's Learning Goal(s):

Date: _____

By the end of the class, I will be able to:

a) prove trigonometric identities.

Last day's work:

5.5 Trigonometric Identities

Date: _____

Equations are valid for only certain values of the variable.

For example:

$2x + 1 = 7$ $x^2 - 5x - 14 = 0$

Identities are valid for **all values** of the variable.

For example:

$2(x + 3) = 2x + 6$ $x^2 + 6x + 9 = (x + 3)^2$

Let's start with the circle definitions to develop some identities that we can use later.

SYR CXR TYX

Ex.1 Prove that $\tan\theta = \frac{\sin\theta}{\cos\theta}$

Ex.2 Prove that $\sin^2\theta + \cos^2\theta = 1$

Ex.3 Prove that

a) $\dfrac{\cos\alpha\tan\alpha}{\sin\alpha}=1$

b) $\cos\phi=\dfrac{1}{\cos\phi}-\sin\phi\tan\phi$

Identities

Reciprocal Identities

Quotient Identities

Pythagorean Identities

Are there any Homework Questions you would like to see on the board?

Last day's work:

Today's Homework Practice includes:

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Note: Sometimes using substitution can help simplify a question.
Ex. Simplify $(1 - \cos\theta)(1 + \cos\theta)$ Change to