Math 4 Honors Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lesson 4-1: *Graphs of Identities* Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Learning Goals:**

* *I can factor polynomials and trigonometric functions when necessary and appropriate.*
* *I can use and define the six trigonometric functions: sine, cosine, tangent, cosecant, secant, and cotangent.*
* *I can evaluate trigonometric functions without a calculator.*
* *I can use the fundamental trigonometric identities to simplify expressions and verify equivalences.*

List the six trigonometric functions:

1. 4.
2. 5.

1. 6.

A. Graph the following in your calculator and describe what you see. 

B. Graph the following in your calculator and describe what you see. 

C. Graph the following in your calculator and describe what you see. 

D. Graph the following in your calculator and describe what you see. 

What can you conclude about the expressions ?

This is an example of an ***identity***. An ***identity*** is

Some Useful Trig Identities:

1. (Pythagorean Identity)

2.

3.

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**Day 1 Examples: Simplify.**



1. 2.



3.

**Day 2 Examples: Simplify.**