**Warm-Up Fill in the blank.**

1) 2) 3) 4)

5) ) 6) 7) 8)

9) 10) 11)

**5.1 Verifying Trig Functions**

**To VERIFY AN IDENTITY…**

* We show that one side of the identity can be simplified so that it is identical to the other side.
* Each side of the equation is manipulated ***INDEPENDENTLY*** of the side of the equation.
* Usually, start with the side containing the more complicated expression.
* Unfortunately, no one method or technique can be used to verify every identity.
* Usually, rewrite the more complicated side so that it only contains sine and/or cosine.
* You must learn the basic identities similar to the warm-up (this will only make them easier)
* Use pencil **Common Mistakes**
* These will take time to master, do NOT give up. Stay positive!
* Solve the “puzzle” using your algebra skills (must be MATH LEGAL)
* *Good Luck!*

**Ex 1) Changing to Sines and Cosines to Verify an Identity 🡨 Hint**

Verify the identity:

**Ex 2) Changing to Sines and Cosines to Verify an Identity**

Verify the identity:

**Ex 3) Using Factoring to Verify an Identity**

Verify the identity:

**Ex 4) Using Two Techniques to Verify an Identity Think…**

Verify the identity:

**Ex 5) Combining Fractional Expressions to Verify an Identity**

Verify the identity:

**Ex 6) Multiplying the Numerator and Denominator by the Same Factor to Verify an Identity**

Verify the identity:

**Ex 7)** Verify the identity:

**Ex 8) Working with Both Sides SEPERATELY to Verify an Identity**

Verify the identity: