**Factoring Polynomials**

To factor polynomials we have to find the GMF, or the greatest monomial factor. Once we find it, we factor it out of the polynomial to simplify it.

**Example #1** Factor 

Step 1: Find the Greatest Monomial Factor.





What do these two monomials have in common? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Step 2: Take the GMF out by *undoing* the Distributive Property.

Since both terms had an x in common, we will take “x” out of both terms. Then we write what we have left on the inside of the parenthesis.



Step 3: Check your answer by multiplying the polynomial back out.

Take the x that we took out and re-multiply it to both the 5x and the -3. If we’ve done our factoring correctly, we should get back to what the original problem was.

Multiply the polynomial out below. Show your work and steps.

**Practice Problem #1** Factor 

Step 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_







What do these three monomials have in common? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Step 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Step 3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

When you are done come show me your work to all three steps so I know you’re on the right track and understanding the material!

You should now be able to say:

* I can factor polynomials by finding the greatest monomial factor

**Assignment: pg 535 #1-10, 27-35**