**Honors Math II Notes Unit 1 ~ Day 1**

**Factoring Review**

* Factors
  + Recall: When 2 or more numbers are multiplied to form a product, each number is a “factor” of the product.
    - Factors of 12: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Factoring Polynomials
  + ALWAYS factor out the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_) FIRST!!!
  + A polynomial that can not be factored is \_\_\_\_\_\_\_\_\_\_\_\_.
  + A polynomial is considered to be completely factored when it is expressed as the product of prime polynomials.

# \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Factoring out the GCF:
   1.  b. 
   2.  d. 24a3b4c – 72ab4
2. Factor by grouping—for polynomials with 4 or more terms
   1.  b. 
   2.  d. 6x3 + 9x2y – 15y2 – 10xy
3. Difference of “Two Squares”

Rule: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.  b. 
2.  d. 3x2 - 75

Factoring Review Unit 1 Day 2

A. Factoring trinomials into the product of two binomials

a. When leading coefficient is not one

1)  2) 

3)  4) 

b. When leading coefficient is one.

5)  6) 

7)  8) 

8) 

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The area in square meters of a rectangular parking lot is x2 – 95x + 2100. The width is x – 60. What is the length of the parking lot in meters?

**Concept Summary: Polynomial Factoring Techniques**

|  |  |
| --- | --- |
| **Techniques** | **Examples** |
| **1. Factoring out the GCF**  Factor out the greatest common factor of all the terms |  |
| **2. Factoring by Grouping** |  |
| **3. Quadratic Trinomials**  “Bustin up the B” |  |
| **4. Difference of Two Squares** |  |

**Unit 1 ~ Day 4**

**Solving Quadratic Equations by Factoring**

**Zero Product Property:**

* Let A and B be real numbers or algebraic expressions. If AB=0, then A=0 or B=0.
* This means that If the product of 2 factors is zero, then at least one of the 2 factors had to be zero itself!

**Solving or Finding the Zeros of an Equation**

* The zeros of an equation are the \_\_\_\_\_\_\_\_\_\_\_\_!
* First, change y to a \_\_\_\_\_\_\_\_\_. Now, solve for \_\_\_\_.
* The solutions will be the \_\_\_\_\_\_\_\_ of the equation.

Ex: Solve.

A)x2 + 3x - 18 = 0 B)2t2 - 17t + 45 = 3t – 5

C)3x - 6 = x2 – 10 D) y = x2-x-6

**You TRY!!!**

1. 2x2 + 15 = 13x 2. 16x2 = 8x