**UNIT: Factoring Review Total Number of Days: 2**

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| --- | --- | --- |
| Day | Key Concepts | Assignment |
| 1 | * Common Factor
* Trinomial Factoring
 | * Factoring Review Worksheet

#1, 2, 3, 4a-r |
| 2 | * Trinomial Factoring
* Difference of Squares
 | * Factoring Review Worksheet

#4s-x, 5* Factoring Worksheet #1-30
 |
| 3 | * ***Quiz*** (14 questions)
 |  |

**Common Factors of a Polynomial**

**Note: You must always do this step first!!!**

**Example 1:** Factor the polynomial 3x2 + 9x.

**Example 2:** Factor the following polynomials.

1. 8d + 12d2 b. -5z2 – 10z + 5 c. 6 - 12m + 18m2

d. 6xy2 + 8x2y - 10xy e. -20pq3 + 15pq2 – 10p2q

**Factoring Trinomials of the Form x2 + bx + c**

**Rules for factoring a trinomial in the form x2 + bx + c**

Look for a \_\_\_\_\_\_\_\_\_\_\_\_, which is the \_\_\_\_\_\_\_\_\_ number.

Look for a \_\_\_\_\_\_\_\_\_\_\_\_, which is the \_\_\_\_\_\_\_\_\_ number.

|  |  |  |
| --- | --- | --- |
| **Product** | **Sum** | **Factors** |
| 12 | 7 |  |
| -10 | -3 |  |
| 35 | -12 |  |
| 24 | -10 |  |
| 15 | -16 |  |
| -24 | 5 |  |

**Example 1:** Factor x2 + 12x + 20.

**Example 2:** Factor the following.

1. x2 - 7x + 12 b. x2 - 2x – 15 c. x2 + 8x + 12

d. x2 – 5x + 6 e. -24 – 5d + d2 f. 4m2 + 4m – 80

**Factoring Trinomials of the Form ax2 + bx + c**

**Rules for factoring a trinomial in the form ax2 + bx + c**

Look for a \_\_\_\_\_\_\_\_\_\_\_\_, which is the \_\_\_\_\_\_\_\_\_ number.

Look for a \_\_\_\_\_\_\_\_\_\_\_\_, which is the \_\_\_\_\_\_\_\_\_ number.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **a** | **b** | **c** | **Product** | **Sum** | **Factors** |
| 2 | 7 | 3 |  |  |  |
| 3 | 4 | 1 |  |  |  |
| 3 | -7 | 2 |  |  |  |
| 2 | -1 | -3 |  |  |  |
| 2 | -1 | -10 |  |  |  |
| 3 | 1 | -4 |  |  |  |

**Example 1:** Factor 2x2 + 5x + 2.

**Example 2:** Factor the following.

1. 4x2 + 20x + 9 b. 6x2 - 11x – 35 c. 4x2 + 11x + 6

d. 6x2 – 7x – 10 e. 2 – 5d + 3d2 f. 3m2 - 8m + 4

**Difference of Squares**

**Difference of Squares: ­­­­­­­­­­­**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Example 1:** Factor the following.

1. x2 – 4 b. x2 – 25 c. x2 – 25y2
2. 36 – x2 e. 36x2 – 25 f. 162x2 – 2y2

g. 5x2 – 80y2 h. 81m2 – 49 k. 3x2 – 75