Factoring

Warm-up: Multiply the following binomials.

1. $(x + 2)(x + 3)$ 2. $(x + 7)(x + 3)$ 3. $(x + 5)(x - 5)$ 4. $(x + 8)(x - 8)$

Common Monomial Factoring

1. $x^2 - 6x$ 2. $2x^3 + 6x^2 - 14x + 8$ 3. $x^4 - 3x^3 + 2x^2$

Factoring by reversing FOIL

Examples: **Practice Problems:**

4. $x^2 + 6x + 8$ 4. $x^2 + 8x + 12$

5. $x^2 + 3x - 18$ 5. $x^2 - 9x + 18$

6. $3x^2 + 16x + 21$ 6. $2x^2 - 10x - 28$

7. $4x^2 - 5x - 6$ 7. $9x^2 + 30x + 16$

Special Patterns of Factoring: Difference of Two Squares

8. $x^2 - 36$ 8. $x^2 - 64$

9. $x^2 - 4$ 9. $x^2 - 100$

Special Patterns of Factoring: Sum/Difference of Two Cubes:

10. $x^3 + 8$

10. $x^3 + 125$

11. $27x^3 - 64$

11. $8x^3 - 1$