U2D7 Factoring (a $\ne $ 1, Difference of Squares, Perfect Square Trinomials) Notes

**Factoring Trinomials when a** $\ne $ **1**

-Three methods: “Busting Up the B” or Box Method or Guess and Check

Examples)

1. 2x2 + 5x - 12
2. 5x2 + 17x + 6
3. 6x2 - 23x + 7

You try! 4. 8x2 + 27x + 9 You try! 5. 2x2 - 7x + 3

Difference of Squares

* Two perfect squares are subtracted from each other
* Formula: a2 - b2 = (a + b)(a - b)

Examples)

1. x2 - 49 2. 9x2 – 1 3. 16x2 – 9

4. 4x2 - 25y2 5. x2 + 4

**Perfect Square Trinomials**

* a and b are always perfect squares
* the middle term of the trinomial is 2 times the product of the terms of the binomial
* Formulas: a2 -2ab + b2 = (a - b)2 OR a2 + 2ab + b2 = (a + b)2

Examples)

1. x2 + 6x + 9 2. 4x2 - 4x + 1 3. 49x2 + 28x + 4
2. x2 +2xy + y2