

# ALG III

## Factoring Day #2

### Factoring Trinomials

Warm-Up: Multiply

$$(2x-3)(x+5)$$

$$2x^2 + 10x - 3x - 15$$

$$2x^2 + 7x - 15$$

$$(y-3)(y+3)$$

$$y^2 + 3y - 3y - 9$$

$$y^2 - 9$$

$$(3z-7)(4z-1)$$

$$12z^2 - 3z - 28z + 7$$

$$12z^2 - 31z + 7$$

$$(a+2b)(3a+4b)$$

$$3a^2 + 4ab + 6ab + 8b^2$$

$$3a^2 + 10ab + 8b^2$$

Ex #1: Factor each polynomial

$$\begin{array}{c}
 F \quad 0+I \quad L \\
 a^2+9a+20 \\
 \underbrace{\hspace{1.5cm}}_{+9} \\
 (a+4)(a+5) \\
 \underbrace{\hspace{1.5cm}}_{+9}
 \end{array}$$

$$\begin{array}{c}
 b^2 - \underline{7b} + \underline{10} \\
 (b-2)(b-5)
 \end{array}$$

$$p^2 - 5pq + 6q^2$$

$$(p-2q)(p-3q)$$

~~$$(p-6q)(p+1q)$$~~

$$p^2 + 2pq - 8q^2$$

$$(p+4q)(p-2q)$$

~~$$(p-2q)(p+4q)$$~~

Ex#2: Factor the polynomial

$$3a^3 + 12a^2 - 15a$$

$$3a(a^2 + 4a - 5)$$

$$3a(a+5)(a-1)$$

$$t^2 + 3t - 5$$

$$(t+5)(t-1)$$

Ex #3: Factor the polynomial

$$2x^2 + 8x + 6$$

$$2(x^2 + 4x + 3)$$

$$2(x+3)(x+1)$$

$$6x^2 + 13x - 5$$

$$(3x - 1)(2x + 5)$$

~~$$(6x - 5)(x + 5)$$~~

## Ex#4 Factor the Polynomial

$$10x^2 + 17x + 3$$

$$(5x + 1)(2x + 3)$$

$$4m^3 + 2m^2 - 6m$$

$$2m(2m^2 + m - 3)$$

$$2m(2m + 3)(m - 1)$$

Homework: p297 #9-14, 19,21,22,23,26,28,31

