

## Warmup

$$1.) 16x^2 - 80x$$

$$\underline{16x}(1x - 5)$$

$$2.) 35x^3 + 10x$$

$$5x(7x^2 + 2)$$

$$3.) 24x + 144x^2$$

$$24x(1 + 6x)$$

$$4.) 27x^4y^7z^3 - 63x^2y^8z^4$$

$$9x^2y^7z^3(3x^2 - 7yz)$$

# Factoring Trinomials

## Section 10.5

# Factoring Trinomials

- Trinomial is of the form:  $ax^2 + bx + c$
- Steps: If  $a=1$ 
  - › Find factors of  $c$  that add to get the  $b$ -term
  - › Fill in the parenthesis using the correct signs

## Examples

$$1.) x^2 + 8x + 15$$

$$(x+3)(x+5)$$

$$x^2 + \underline{5x} + \underline{3x} + 15$$

$$x^2 + 8x + 15$$

$$\begin{array}{r} 1.15 \\ 3.5 \end{array}$$

$$2.) x^2 + 5x + 6$$

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

$$\begin{array}{r} 1.6 \\ 2.3 \end{array}$$

$$\begin{array}{r} 6 -1 \\ 2 3 \end{array}$$

$$\begin{array}{r} 2+3=5 \\ -2-3=-5 \end{array}$$

## Examples (cont.)

$$2-3=-1$$

$$3-2=1$$

$$3.) x^2 + x - 6$$

$$\begin{array}{r} 1.6 \\ 2.3 \end{array}$$

$$4.) x^2 - 3x - 18$$

$$\begin{array}{r} 3.6 \\ 3.6 \end{array}$$

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

$$(x+3)(x-6)$$

## Examples (cont.)

$$5.) x^2 + x - 20 \quad \begin{matrix} 1.20 \\ 2.10 \end{matrix}$$

$$(x-4)(x+5) \quad \begin{matrix} 4.5 \\ (x+4)(x-8) \end{matrix}$$

1.32  
2.16  
4.8

## Class work

- Blue book page 309 # 1-9
- If time- pg 311# 1-9

HMWK

• Pg 607# 15-26