

Warm-up:

Factor each polynomial.

$9x^2 + 16$
 Prime

$22x^2 + 33x$
 $11x(2x+3)$

$18a^3 - 50a$
 $2a(a^2 - 25)$
 $2a(3a-5)(3a+5)$

Algebra 1

Factoring Trinomials

HW: Will be assigned at the end of class.

Factoring Trinomials

$x^2 + 11x + 24$

$(x^2 + 8x + 3x + 24)$
 $x(x+8) + 3(x+8)$
 $(x+8)(x+3)$

* Two numbers that multiply to 24.
 * Same two numbers that add to 11.

Factoring Trinomials

$6x^2 + 19x + 3$

$(6x^2 + 18x + 1x + 3)$
 $6x(x+3) + 1(x+3)$
 $(1x+3)(6x+1)$

Factoring Trinomials

$$m^2 - 6m + 8$$

$$(m^2 - 2m) - 4m + 8$$

$$m(m-2) - 4(m-2)$$

$$(m-2)(m-4)$$

$$\begin{array}{r} 8 \\ -2 \quad -4 \\ -6 \end{array}$$

Factoring Trinomials

$$7b^2 + b - 8$$

$$(7b^2 - 7b) + 8b - 8$$

$$7b(b-1) + 8(b-1)$$

$$(b-1)(7b+8)$$

$$\begin{array}{r} -56 \\ -7 \quad 8 \\ 1 \end{array}$$

$$(7b^2 + 8b)(b-1)$$

$$1b(7b+8) - 1(7b+8)$$

$$(7b+8)(b-1)$$

What Will the Factors Be?

Both factors are +

$$x^2 + 3x + 2$$

$$\begin{array}{r} 2 \\ 2 \quad 1 \\ 3 \end{array}$$

one factor +, one factor -

$$x^2 - 2x - 15$$

$$\begin{array}{r} -15 \\ -5 \quad 3 \\ -2 \end{array}$$

one + factor, one - factor

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

$$\begin{array}{r} -15 \\ 5 \quad -3 \\ 2 \end{array}$$

Both factors are -

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

$$\begin{array}{r} 15 \\ -5 \quad -3 \\ -8 \end{array}$$

Algebra 1

Factoring Trinomials

HW: Page 6, #1-5