

9.2 Notes

"Multiplying Polynomials"

Today is a day that will live infamously.

Using the
DISTRIBUTIVE PROPERTY
to Multiply Polynomials:

Example #1

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

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

$$10x^2 + 5x$$

Example #2

$$-4a^5(-4a^3 + 2a^2 - 7a + 8)$$

$$-4a^5(-4a^3) - 4a^5(2a^2) - 4a^5(-7a)$$

$$16a^8 - 8a^7 + 28a^6 - 32a^5 - 4a^5(8)$$

Using the
"FOIL" Method

to Multiply Polynomials:

(First / Outer / Inner / Last)

Example #3

$$(x - 1)(x + 9)$$

$$(x)(x) + (x)(9) + (-1)(x) + (-1)(9)$$

$$x^2 + 9x - 1x - 9$$

$$x^2 + 8x - 9$$

Continue Multiplying Monomials

$$4) (x + 5)(x + 2)$$

$$x^2 + 2x + 5x + 10$$

$$x^2 + 7x + 10$$

$$6) x(x + 4)(3x - 7)$$

$$x(3x^2 - 7x + 12x - 28)$$

$$x(3x^2 + 5x - 28)$$

$$3x^3 + 5x^2 - 28x$$

$$5) (5x - 2y)(4x + 3y)$$

$$20x^2 + 15xy - 8xy - 6y^2$$

$$20x^2 + 7xy - 6y^2$$

$$7) (x^2y + 9y)(2x + 3y)$$

$$2x^3y + 3x^2y^2 + 18xy + 27y^2$$