Warm Up

I. Add/Subtract

$(2x^3 + 5x^2 - 7) + (-2x^3 + 6x^2 - 1)$

$2x^3 + 5x^2 - 7 - 2x^3 + 6x^2 - 1$

$11x^2 - 8$

$(3x^2 - 4x - 6) - (-2x^2 + 7x - 3)$

$3x^2 - 4x - 6 + 2x^2 - 7x + 3$

$5x^2 - 11x - 3$

II. Multiply

$(3x + 5)(6x - 2)$

$18x^2 - 6x + 30x - 10$

$18x^2 + 24x - 10$

$(2x - 3)^2$

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

$4x^2 - 6x - 6x + 9$

$4x^2 - 12x + 9$

$(5x-2)^2 = (5x-2)(5x-2)$
$= 25x^2 - 10x - 10x + 4$
$= 25x^2 - 20x + 4$

$(3x+5)^2 = (3x+5)(3x+5)$
$= 9x^2 + 15x + 15x + 25$
$= 9x^2 + 30x + 25$

$(3x-7)^2 = (3x-7)(3x-7)$
$= 9x^2 - 21x - 21x + 49$
$= 9x^2 - 42x + 49$

$(5x+1)^2 = 25x^2 + 10x + 1$

$(7x+2)^2 = 49x^2 + 28x + 4$

$(x-1)^2 = x^2 - 2x + 1$

Squaring a Binomial

- To **expand** a product of polynomials means to remove brackets by multiplying and then simplify by adding/subtracting "Like" terms.

- We must use the Distributive Property to multiply polnomials.

What is the 3-Step rule???   Ex: $(2x - 7)^2$

$$4x^2 - 28x + 49$$

- is used when you want to square a binomial.
- here is how it goes...
  - (1) Square the first
  - (2) Product of the first and last, then double
  - (3) Square the last

Another example???   Example - Squaring a Binomial.avi

Let's do some examples...

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

$$9x^2 - 30x + 25$$

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

$$2(x^2 - 6x + 9) - 3(x^2 + 3x - x - 3)$$
$$2x^2 - 12x + 18 - 3x^2 - 9x + 3x + 9$$
$$-x^2 - 18x + 27$$

Add, Subtract & Multiply Polynomials

Page 186: #6 to #12 & #15
Page 187: #16, #17 & #19

Attachments

Add Subtract & Multiply Polynomials NS.pdf

Example - Squaring a Binomial.avi