

Warm Up

1) $5x(2x^2 - 5)$
 $10x^3 - 25x$

2) $(4x - 3y^3)(2x - y^2)$
 $8x^2 - 4xy^2 - 6xy^3 + 3y^5$

3) $2(7w^2 - 1)$

4) $(3w$

5) $5(4$

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 polynomials.

$$(2x)(-7) \\ - 14x$$

What is the 3-Step rule???

Ex: $(2x - 7)^2$

- 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

$$4x^2 - 28x + 49 \\ (2x - 7)(2x - 7) \\ 4x^2 - 14x - 14x + 49$$

Another example???

Example - Squaring a Binomial.avi

Let's do some examples...

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

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

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

$$2(x^2 - 6x + 9)$$

$$2x^2 - 12x + 18 - 3(x - 1)(x + 3)$$

$$2x^2 - 12x + 18 + 3x^2 + 6x - 9$$

$$5x^2 - 6x + 9$$

Now the grand finale!!!

- Put it all together to expand and simplify

$$\begin{aligned}
 & (x+3)(2x-5) + 2(x-1)^2 - (2x+3)(4x-1) \\
 & 2x^2 - 5x + 6x - 15 + 2(x^2 - 2x + 1) \quad \begin{matrix} (-2x-3)(4x-1) \\ -8x^2 + 2x + 12x \\ +3 \end{matrix} \\
 & \cancel{2x^2} - \cancel{5x} + \cancel{6x} - 15 + \cancel{2x^2} - \cancel{4x} + \cancel{2} - \cancel{8x^2} - \cancel{10x} + \cancel{3}
 \end{aligned}$$

$$-4x^2 - 13x - 10$$

Attachments

Puzzle Worksheet - Grouping Like Terms.pdf

Puzzle Worksheet - Distribution Property.pdf

Example - Squaring a Binomial.avi

Worksheet - Factor GCF & Simple Trinomials.doc

Worksheet - Factoring Review.doc

Puzzle Worksheet - GCF.pdf

Puzzle Worksheet - Simple Trinomials.pdf

Worksheet - Expanding.pdf

Puzzle Worksheet - Difference of Squares.pdf

Puzzle Worksheet - Review of Factoring.pdf

Assignment - Expand_Simplify_Factor Mar. 2014.pdf

Review - Factoring.pdf