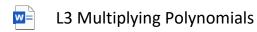
L3 Multiplying Polynomials

Tuesday, September 6, 2022 6:53 PM



Intro Applied & Pre-Calculus 10 Enriched Factors and Products

Lesson 3 Multiplying Polynomials

Distributive property: Multiply each term of the first polynomial by each term in 2(x-3) the second polynomial.

Recall:

2x-6

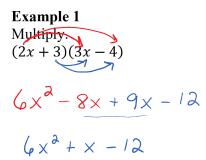
Polynomial: an algebraic expression containing one or more terms

Multiplying Two Binomials

Binomial: a polynomial containing two terms

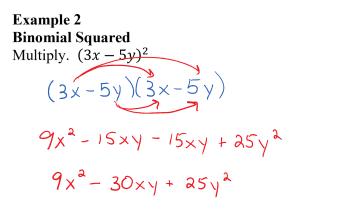
Steps:

- 1.) Multiply each term of the first binomial with each term of the second binomial.
- 2.) Combine like terms.



Multiply, using distributive property Combine like terms

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Multiplying Binomial by Trinomial

Trinomial: a polynomial containing three terms

 $3 \xrightarrow{\text{Example 3}}_{\text{Multiply. } y}^{\text{Example 3}} - 18x^{2}y^{2} - 2x^{2}y + 2x^{2}y^{2} + 12y^{3}$ $(3x^{2} - 2y)(x^{2} - xy - 6y^{2})$

Multiplying Trinomial by Trinomial
Example 4
Multiply:

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

 $2x^4 - 6x^3 + 4x^2 - 3x^3 + 9x^2 - 6x + 2x^2 - 6x + 4$
 $2x^4 - 9x^3 + 15x^2 - 12x + 4$

Factors and Products

Example 5 Simplifying Sums and Differences of Polynomial Products

Follow order of operations.

BEDMAS Follow order of operations. R Expand and simplify. PEDMAS a) $(2x-7)(3x+5) - (2x-1)^2$ (ax-7)(3x+5) - (ax-1)(ax-1) $6x^{2} + 10x - 21x - 35 - (4x^{2} - 2x - 2x + 1)$ 6x2 - 11x - 35 -1(4x2 - 4x+1) $6x^2 - 11x - 35 - 4x^2 + 4x - 1$ $2x^2 - 7x - 36$ b) $(4m+1)^3 - 2(2m-1)(-3m+4)$ (4m+1)(4m+1)(4m+1) - 2(am-1)(-3m+4) $(4m+1)(16m^{2}+4m+4m+1) - 2(-6m^{2}+8m+3m-4)$ $(4m+1)(16m^{2}+8m+1) - 2(-6m^{2}+11m-4)$ 64m² + 32m² + 4m + 16m² + 8m + 1 + 12m² - 22m + 8 $64m^3 + 60m^2 - 10m + 9$ Finish maze Finis. P9 128 # 1 1, j, n 2f, g, h 3g, 6b, d