

Multiplying Polynomials – The FOIL Method

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Preliminaries

- Algebraic Expressions Using Variables
- Distributive Law

$$(x + 3)(x - 2) = x^2 + -2x + 3x + -6$$

$$= x^2 + x - 6$$

Objectives

- Multiply Polynomials

Example 2**Example 3**

$$\begin{aligned}(2 - 4x)(5x - 1) &= 10x - 2 - 20x^2 + 4x \\ &= -20x^2 + 14x - 2\end{aligned}$$

$$\begin{aligned}(x^2 + 4x - 3)(x^2 + 2) &= x^4 + 2x^2 + 4x^3 + 8x - 3x^2 - 6 \\ &= x^4 + 4x^3 - x^2 + 8x - 6\end{aligned}$$