Multiplying Polynomials – The FOIL Method
Preliminaries and Objectives

Preliminaries

• Algebraic Expressions Using Variables
• Distributive Law

Objectives

• Multiply Polynomials
Distributive Law

$$2(x + 3) = 2x + 6$$
Example 1

\[(x + 3)(x - 2) = x^2 + -2x + 3x + -6\]

\[= x^2 + x - 6\]
Example 2

\[(2 - 4x)(5x - 1) = 10x - 2 - 20x^2 + 4x\]

\[= -20x^2 + 14x - 2\]
Example 3

\[(x^2 + 4x - 3)(x^2 + 2)\]

\[= x^4 + 2x^2 + 4x^3 + 8x - 3x^2 - 6\]

\[= x^4 + 4x^3 - x^2 + 8x - 6\]
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