Section 5.4: Multiplying Polynomials

Multiplying polynomials

- If all of the polynomials are monomials, use the associative and commutative properties.
- If any of the polynomials are not monomials, use the distributive property before the associative and commutative properties. Then combine like terms.

Example 1: Multiply.

a. $(-7a^3b^2)(3ab^4)$

b. $5x(x^2 + 3x + 2)$

c. $-3mn^3(4m^2 - mn + 5n^2)$

d. $(2y - 3)(y^2 + 4y + 5)$

Multiplying Two Binomials

When multiplying 2 binomials, the distributive property can be easily remembered as the ***FOIL method***.

F – product of **First** terms
O – product of **Outside** terms
I – product of **Inside** terms
L – product of **Last** terms

Example 2: Multiply.

a. $(x + 4)(x + 1)$

b. $(3v + 5)(2v - 3)$