7.2 Multiplying Polynomials

We have now learned how to classify and add/subtract polynomials, lets learn how to multiply!

Example 1: Multiplying Binomials Using Distributive Property

a) $x(x+5)$

b) $(x+3)(x-4)$

Example 2: Multiplying Binomials Using a Table

Find $(2x-3)(x+5)$

Using the FOIL Method

Core Concept

FOIL Method

To multiply two binomials using the FOIL Method, find the sum of the products of the

First terms, $(x+1)(x+2)$ → $x(x) = x^2$

Outer terms, $(x+1)(x+2)$ → $x(2) = 2x$

Inner terms, and $(x+1)(x+2)$ → $1(x) = x$

Last terms. $(x+1)(x+2)$ → $1(2) = 2$

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

Example 3: Multiplying Binomials Using the Foil Method

a) $(x-3)(x-6)$

b) $(2x+1)(3x-5)$

Example 4: Multiplying a Binomial and a Trinomial

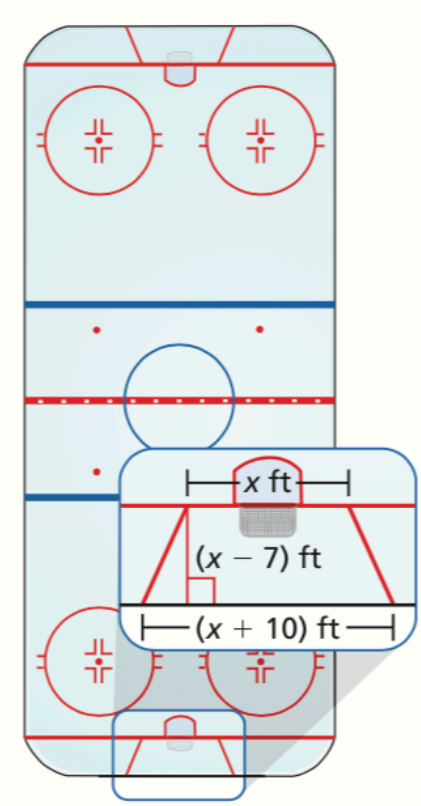
Can you use FOIL? Why?

Find $(x+5)(x^2-3x-2)$

Example 5: Solving a Real-Life Problem

In Hockey, a goalie behind the goal line can only play a puck in the trapezoid region (Crease).

a) Write a polynomial that represents the area of the trapezoidal region.
b) Find the area of the trapezoidal region when the shorter base is 18ft.



Homework: 3, 9, 11, 15, 25, 26, 31, 33, 35, 41, 44, 50