Unit 5 Day 4
5-4 Binomial Products

Simplify

1) $2x(3x^2 - 6x + 5)$

$= 6x^3 - 12x^2 + 10x$

2) $\dfrac{-18x^3}{-42x^8}$

$= \dfrac{3}{7x^5}$

Products of Binomials

$$(x+a)(x+b) = x^2 + bx + ax + ab$$

3) $(x+2)(x+4)$

$= x^2 + 4x + 2x + 8$

$= x^2 + 6x + 8$

4) $(x+3)(x-5)$

$= x^2 - 5x + 3x - 15$

$= x^2 - 2x - 15$

5) $(x-7)^2$

$= (x-7)(x-7)$

$= x^2 - 7x - 7x + 49$

$= x^2 - 14x + 49$

6) $(3x-4)(2x+1)$

$= 6x^2 + 3x - 8x - 4$

$= 6x^2 - 5x - 4$

7) $(2x-5)^2$ FOIL (an unnecessary mnemonic)

$= (2x-5)(2x-5)$

$= 4x^2 - 10x - 10x + 25$

$= 4x^2 - 20x + 25$

First
Outside
Inside
Last

Practice 5-4