

LP 39

Wed., Dec. 8

Name _____
Aim: How Do We Multiply Polynomials by Polynomials

HW - Finish Handout

- DO NOW:
- 1. $6(3x - 5) =$ _____
 - 2. $4(2x + 10) =$ _____
 - 3. $9y - 3y =$ _____
 - 4. $7a + 4b + 3a - 2b =$ _____
 - 5. $4(3x + 2) + 2(x + 3) =$ _____

Example 1: Find the product of $(2x + 6)(3x + 1)$
Rule: Use the distributive property called **F**irst **O**uter **I**nner **L**ast

$$\begin{aligned}(2x + 6)(3x + 1) &= \overset{\mathbf{F}}{2x} \cdot \overset{\mathbf{O}}{3x} + \overset{\mathbf{I}}{2x} \cdot \overset{\mathbf{L}}{1} + \overset{\mathbf{O}}{6} \cdot \overset{\mathbf{L}}{3x} + \overset{\mathbf{O}}{6} \cdot \overset{\mathbf{L}}{1} \\ &= 6x^2 + 2x + 18x + 6 \\ &= 6x^2 + 20x + 6\end{aligned}$$

Find each product

1) $(n + 4)(n + 1)$

2) $(2x + 3)(5x + 4)$

3) $(2p - 3)(5p - 4)$

4) $(4p - 1)^2$

5) $(4x - 3)(2x + 10)$

6) $(8x + 5)(8x - 5)$

7) $(4a + 2)(6a^2 + a + 2)$

8) $(2x - 4)(2x + 5)$

9) $(x - 3)(x + 3)$

10) $(x + 4)(x + 4)$

11) $(x - 8)(x - 8)$