

Name \_\_\_\_\_

## Section 2.2

### Algebra II: Multiplying Polynomials

**Essential Question:**

- How do I multiply polynomials?  
What do you do if you don't understand a lesson?  
(you get more practice)

Examples:

1)

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

	$4b$	$+5$
$3b$	$12b^2$	$+15b$
$+2$	$+8b$	$+10$

$$12b^2 + 23b + 10$$

2)

$$(8x+4)(2x-1)$$

	$2x$	$-1$
$8x$	$16x^2$	$-8x$
$+4$	$+8x$	$-4$

$$16x^2 + 0x - 4 \text{ or } 16x^2 - 4$$


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Class Practice

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

	$2x$	$-3$
$5x$	$10x^2$	$-15x$
$+6$	$12x$	$-18$

$10x^2 - 3x - 18$

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

	$6x^2$	$+4x$	$-3$
$x$	$6x^3$	$4x^2$	$-3x$
$+3$	$18x^2$	$12x$	$-9$

$6x^3 + 22x^2 + 9x - 9$

★

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

$9x^3 - 12x^2 + 18x$  (1<sup>st</sup> term)  
 $+ 6x^2 - 8x + 12$  (2<sup>nd</sup> term)

$9x^3 - 6x^2 + 10x + 12$

★

$(x-2)(2x^2-4x+4)$

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

$2x^3 - 5x^2 + 4x - 8$

	$2x^2$	$-3x$	$-2$
$2x$	$4x^3$	$-6x^2$	$-4x$
$-1$	$-2x^2$	$+3x$	$+2$

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

Algebra 1

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## Assignment

Date \_\_\_\_\_ Period \_\_\_\_\_

**Find each product.**

1)  $4(3n + 1)$

2)  $2(6m - 5)$

3)  $5(8r + 2)$

4)  $2x(3x - 2)$

5)  $(5n - 2)(n + 8)$

6)  $(4b + 6)(2b - 3)$

7)  $(5a - 6)(3a + 4)$

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

9)  $(3x + 6)(5x + 8)$

10)  $(6v + 3)(2v - 6)$

11)  $(7n + 8)(2n^2 - 5n + 5)$

12)  $(2p - 4)(8p^2 - 5p + 1)$

