

Name

8.2

# Multiply Polynomials

Alg I

I can multiply polynomials.

Example 1:

$$1) \quad x(7x^2 + 4)$$
$$\boxed{7x^3 + 4x}$$

Ch. 8 Quiz

Ch. 7/8 Test

Example 2:

$$2) \quad (a+3)(2a+1)$$
$$2a^2 + a + 6a + 3$$
$$\boxed{2a^2 + 7a + 3}$$

$$3) \quad (4n-5)(n+5)$$
$$4n^2 + 20n - n - 5$$
$$\boxed{4n^2 + 19n - 5}$$

Example 3/4:

$$4) \quad (x^2 + 2x + 1)(x + 2)$$
$$x^2(x+2) + 2x(x+2) + 1(x+2)$$
$$x^3 + 2x^2 + 2x^2 + 4x + x + 2$$
$$\boxed{x^3 + 4x^2 + 5x + 2}$$

$$5) \quad (3y^2 - y + 5)(2y - 3)$$
$$3y^2(2y-3) - y(2y-3) + 5(2y-3)$$
$$\underline{6y^3} - \underline{9y^2} - \underline{2y^2} + \underline{3y} + \underline{10y} - 15$$
$$\boxed{6y^3 - 11y^2 + 13y - 15}$$

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I can multiply polynomials.

FOIL

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

First outer Inside Last

$$8x^2 + 2x + 12x + 3$$

$$8x^2 + 14x + 3$$

Ch. 8 Quiz

Example 5:

Ch. 7/8 Test

$$6) (4b-5)(b-2)$$

$$4b^2 - 8b - 5b + 10$$

$$\boxed{4b^2 - 13b + 10}$$

Example 6/7:

\* Complete Skills Practice, pg. 407, #

$$7) (x+5)(x+9)$$

$$x^2 + 9x + 5x + 45$$

$$\boxed{x^2 + 14x + 45}$$

$$8) (2x+9)(2x+10)$$

$$4x^2 + 20x + 18x + 90$$

$$a) \boxed{4x^2 + 38x + 90}$$

$$b) x=4 \quad 4(4)^2 + 38(4) + 90$$

$$4 \cdot 16 + 38 \cdot 4 + 90$$

$$64 + 152 + 90$$

$$\boxed{306 \text{ ft}^2}$$