

8-2 Multiplying and Factoring

You have used the Distributive Property before to multiply a number by a sum or difference. Now you will learn to use the Distributive Property for multiplying powers with the same base when multiplying by a monomial.

Example 1: Multiplying a Monomial and a Trinomial

a. Simplify: $-4y^2(5y^4 - 3y^2 + 2)$ Step 1: Distribute $-4y^2$
* use exponent rules...
multiply coefficients, but
add exponents.
$$-20y^6 + 12y^4 - 8y^2$$

b. Simplify: $2x^2y(5x^2y^2 + 6x^3y - 2x + y)$
$$10x^4y^3 + 12x^5y^2 - 4x^3y + 2x^2y^2$$

✓ Understanding Check:

Simplify each product:

a. $3b(5b^2 + b + 6)$ $15b^3 + 3b^2 + 18b$	b. $-7h^3(3h^2 - 8h - 1)$ $-21h^5 + 56h^4 + 7h^3$	c. $2xy(-3x^2y - 6xy + 5x + 1)$ $-6x^3y^2 - 12x^2y^2 + 10xy^2 + 2xy$
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due Monday, 3/16/2015:

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Do HW Page 76

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