

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Learning Goal 5.3**

I can multiply and divide polynomials.

**Recall** the area model for multiplying and dividing polynomials by a constant.

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

$$\frac{6x^2 - 9x + 6}{-3}$$

The same rules apply if that constant is replaced with a monomial (\_\_\_\_\_).

**Example** Expand and simplify, if possible.

a.  $2x(4x)$

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

c.  $2x(x^2 + 4x - 3)$

**Example** Simplify where possible.

a.  $\frac{6x^2}{3x}$

b.  $\frac{6x^2 + 3x}{3x}$

c.  $\frac{6x^2 + 3x - 12x^3}{3x}$

A harder (or extending) problem would be

Find the greatest common factor of the following expression, then factor the expression.

$$12x^2 - 4x$$