

## Quick Quiz

1. Write the expression in standard form and state the leading coefficient.

$$11x + 2x^2 + 3 + x^5$$

2. Simplify:

$$(3c^2 - 7) + (4c + 7) - (c^2 + 5c - 8)$$

3. Simplify:

$$-5w^2(8w^2x - 11wx^2) + 6x(9wx^4 + 4w - 3x^2)$$

4. Solve:

$$a(a + 3) + a(a - 6) + 35 = a(a - 5) + a(a + 7)$$

## 8.2 Multiplying a Polynomial and a Polynomial

use distributive property  
or FOIL

Find:  $(4a - 5)(2a - 9)$

1. FOIL

Distributive

Simplify:

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

$$(5a + 2)(3a - 4)$$

$$(x+3)^2$$

*Quadratic expressions* are polynomial expressions with degree of 2

Multiplying 2 linear expressions results in a quadratic expression  $(x+3)(x-4)$

What about the product of 3 linear expressions?

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

Simplify:

$$(3x-5)(2x^2 + 7x - 8)$$

$$(m^2 + 2m - 3)(4m^2 - 7m + 5)$$

Hugo is designing a frame as pictured. The width of the frame is  $x$  inches all the way around. Write an expression that represents the total area of picture and frame.

