

Name:

Date:

Topic:

Class:

Main Ideas/Questions

Notes/Examples

# Multiplying Binomials

To multiply binomials, distribute each term in the first binomial to each term in the other binomial, then combine like terms. This order of distributing is frequently referred to as the "FOIL" method.

First **O**uter, **I**nner **L**ast

$$(a + b)(c + d) = ac + ad + bc + bd$$

**Example 1:**  $(x + 2)(x + 4)$

**Example 2:**  $(2x + 1)(x - 5)$

**Directions:** Find each product. Final answers must be in standard form.

1.  $(y + 8)(y + 1)$

3.  $(x - 10)(x - 4)$

5.  $(4x - 7)(x + 3)$

7.  $(3y + 1)(3y + 2)$

9.  $(8h - 3)(3h - 1)$

$$11. (5x + 4y)(x - y)$$

$$13. (2r + s)(2r - s)$$

$$15. (x + 4)^2$$

$$17. (2m - 5)^2$$

**Directions:** Find each product. Final answers must be in standard form.

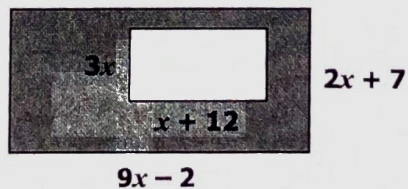
$$19. (x + 4)(x^2 + 3x - 6)$$

$$20. (k - 5)(k^2 - k - 8)$$

$$21. (3a + 1)(5a^2 + 2a - 6)$$

$$22. (2v + 3)(4v^2 - 3v - 6)$$

**23.** Find the area of the shaded region as a simplified expression.



Geometric  
Application