

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

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

Notes

Algebra Section 9.3

Pages 569-574

**Goal:** “You will use special product patterns to multiply polynomials”



### Special Products Formulas

1.  $(a + b)^2 =$

2.  $(a - b)^2 =$

3.  $(a + b)(a - b) =$

**\*Foil then try to find the pattern and come up with a formula for  $(a + b)^2$ .\***

**Ex:**  $(x + y)^2$

**Ex:**  $(3 + x)^2$

**Ex:**  $(2x + y)^2$

**Multiply each polynomial by applying the special products formula:**

**Ex:**  $(x + 3)^2$

**Ex:**  $(2x + 1)^2$

**Ex:**  $(3m + n)^2$

**Ex:**  $(x + 5)^2$

**Ex:**  $(3x + 4)^2$

**Ex:**  $(2x + 5)^2$

**\*Foil. Then try and find a pattern to come up with a formula for  $(a - b)^2$ .\***

**Ex:**  $(x - y)^2$

**Ex:**  $(2x - y)^2$

**Ex:**  $(x - 3)^2$

**Multiply each polynomial by applying the special products formula:**

**Ex:**  $(4x - y)^2$

**Ex:**  $(2x - 3)^2$

**Ex:**  $(5x - 2y)^2$

**Ex:**  $(3x - 4y)^2$

**\*Foil. Then try and find a pattern to come up with a formula for  $(a + b)(a - b)$ .\***

**Ex:**  $(x + y)(x - y)$

**Ex:**  $(2x - 3y)(2x + 3y)$

**Ex:**  $(c + 3d)(c - 3d)$

**Multiply each polynomial by applying the special products formula:**

**Ex:**  $(t + 5)(t - 5)$

**Ex:**  $(3x + y)(3x - y)$

**Ex:**  $(x + 10)(x - 10)$

**Ex:**  $(2x + 1)(2x - 1)$

**Ex:**  $(r + 3)(r - 3)$

**Ex:**  $(x + 3y)(x - 3y)$