

Multiplying Polynomials (9.2, 9.3)**Multiplying Polynomials:** Find the product.

1) $4y(-y^3 - 2y - 1)$

2) $-5b^3(4b^5 - 2b^3 + b - 11)$

Using Tables: Use a table to find the product.

3) $(y-3)(2y+5)$

4) $(5s+2)(s+8)$

5) $(b-2)(b^2 - b + 1)$

6) $(y^2 + 8y - 6)(4y - 3)$

On Your Own!!! Find the product.

7) $(7a-2)(3a-4)$

8) $(8z+3)(5z+4)$

Special Product Patterns

Square of a Binomial:

$$(a + b)^2 = a^2 + 2ab + b^2$$

$$(a - b)^2 = a^2 - 2ab + b^2$$

$$(2x + 5)^2 = 4x^2 + 20x + 25$$

$$(2x - 5)^2 = 4x^2 - 20x + 25$$

Sum and Difference Pattern:

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

Example:

$$(2x + 5)(2x - 5) = 4x^2 - 25$$

Square of a Binomial: Find the product.

9) $(x + 8)^2$

10) $(6b - 1)^2$

Sum and Difference Pattern: Find the product.

11) $(m - 6)(m + 6)$

12) $(3x + 2)(3x - 2)$