

WORKSHEET

Lesson 3-3 : Polynomial Functions

PERFECT SQUARE TRINOMIALS

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

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

Examples:

$$(x + 3)^2 = x^2 + 2(x)(3) + 3^2 = x^2 + 6x + 9$$

1) Given $f(x) = 2x^3 - 5x + 9$, then $f(2) = 2^3 - 5(\quad) + 9$

$$f(2) =$$

2) Find $f(3b + 2) + 2f(2b)$, if $f(x) = x^2 + 5x + 3$.

$$f(x) = x^2 + 5x + 3$$

$$f(3b + 2) = (\quad)^2 + 5(\quad) + 3$$

$$= (\quad)^2 + 2(\quad)(\quad) + (\quad)^2 + 5(\quad) + 5(\quad) + 3$$

$$= b^2 + (\quad)b + \quad + \quad b + \quad + 3$$

$$= b^2 + \quad b + \quad$$

$$2f(2b) = 2[(\quad)^2 + 5(\quad) + 3]$$

$$2f(2b) = 2(\quad)b^2 + 2(\quad)b + 2(\quad)$$

$$= \quad b^2 + \quad b + \quad$$

$$f(3b + 2) + 2f(2b) = \quad b^2 + \quad b + \quad + \quad b^2 + \quad b + \quad$$

$$= \quad b^2 + \quad b + \quad$$