1.2 | Function Notation

$y = 3x - 2$

$\downarrow$

$f(x) = 3x - 2$

- f of x
- f at x
- the function evaluated at x

$y = 3x - 2$

$y = 3(5) - 2$

$y = 15 - 2$

$y = 13$

$f(x) = 3x - 2$

$f(5) = 3(5) - 2$

$f(5) = 13$

1) $f(x) = 3x^2 - 3x$; Find $f(2)$

$f(2) = 3(2)^2 - 3(2)$

$f(2) = 12 - 6$

$f(2) = 6$

2) $w(x) = 3x - 4$; Find $w(7)$

$w(7) = 3(7) - 4$

$w(7) = 17$

3) $f(n) = n^2 - 4n$; Find $f(8)$

$f(8) = 8^2 - 4(8)$

$f(8) = 64 - 32$

$f(8) = 32$

4) $k(t) = t^2 - 3t$; Find $k(9)$

$k(9) = 9^2 - 3(9)$

$k(9) = 81 - 27$

$k(9) = 54$

5) $g(t) = t^2 + 1$; Find $g(t+3)$

$g(t+3) = (t+3)^2 + 1$

$g(t+3) = t^2 + 6t + 9 + 1$

$g(t+3) = t^2 + 6t + 10$

6) $k(n) = n^3 + 5$; Find $k(4a)$

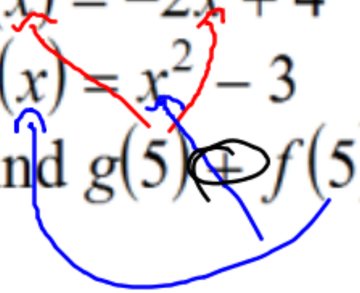
$k(4a) = (4a)^3 + 5$

$k(4a) = 64a^3 + 5$

7) $g(x) = -2x + 4$

$f(x) = x^2 - 3$

Find $g(5) + f(5)$



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

$-10 + 4 + 25 - 3$

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8) $h(n) = n^3 - n$

$g(n) = 3n + 1$

Find $h(2) \cdot g(2) =$

$= (2^3 - 2)(3(2) + 1)$

$= (6)(7)$

$= 42$

$f(x) = 2x - 3$. If $f(x) = 19$, find x.

$19^{+3} = 2x - 3^{+3}$

$22 = 2x$

$11 = x$

$\therefore f(11) = 19$