

Some common language...

$$h(x) = 4x^2 + 5 \quad \text{h of x}$$

$$g(t) = 5 - 3t \quad \text{g of t}$$

① Let $f(x) = 5x^2 - 7$. Evaluate the following:

$$A. f(-2) = 5(-2)^2 - 7 = 13 \quad \begin{matrix} x & y \\ (-2, 13) \end{matrix}$$

$$B. -f(0) = 7 \quad (0, 2) \quad (0, 7) \quad (0, -7)$$

$$C. -f(n) = -5n^2 + 7$$

$$-1(5n^2 - 7)$$

$$D. f(-3n) = -45n^2 + 7$$

$$= +45n^2 + 7$$

$$5(-3n)^2 - 7$$

$$5 \cdot -3n \cdot -3n - 7$$

$$45n^2 - 7$$

$$E. f(x+3) \quad f(x) = 5x^2 - 7$$

$$f(x+3) = 5(x+3)^2 - 7$$

$$= 5(x^2 + 6x + 9) - 7$$

$$= 5x^2 + 30x + 45 - 7$$

$$= 5x^2 + 30x + 38$$

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

$$= x^2 + 3x + 3x + 9$$

$$= x^2 + 6x + 9$$

$$F. f(2x-3) = 5(2x-3)^2 - 7$$

$$= 5(4x^2 - 12x + 9) - 7$$

$$= 20x^2 - 60x + 45 - 7$$

$$= 20x^2 - 60x + 38$$

$$= 2(10x^2 - 30x + 19)$$

② Let $h(m) = 5 - 3m$. Evaluate the following:

A. $h(-2) = 5 - 3(-2) = 11$

B. $h(17) = 5 - 3 \cdot 17 = -46$

C. $-h(4x) = -(5 - 3 \cdot 4x) = -5 + 12x$

★ Is $h(q+2) = h(q) + h(2)$?

★ solve for m if $h(m) = -55$.

$$5 - 3m = -55$$

$$-3m = -60$$

$$m = 20$$

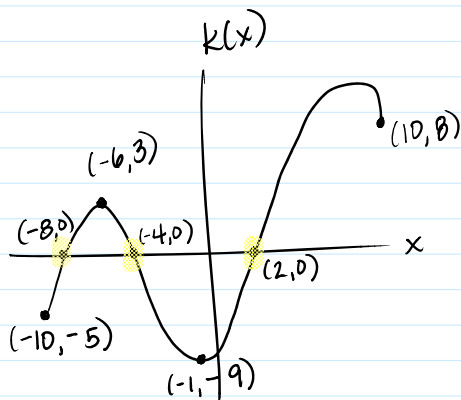
③ A. Evaluate $h(5) = 0$

x	h(x)
-4	2
5	0
6	8
7	-1
8	4
9	2

B. Evaluate $h(9) = 2$

C. solve for x if $h(x) = 8$. $x = 6$

④



A. Evaluate $k(-6) = 3$

B. Evaluate $k(10) = 8$

C. solve for x if $k(x) = 0$

$$2, -8, -4$$

5) Let $z(x) = 3x^2 - 4x$. Evaluate:

A. $z(-5)$

$$A. z(-5) = 3 \cdot 25 + 20 = 95$$

B. $z(2m)$

$$B. z(2m) = 3(2m)^2 - 4(2m)$$

C. $z(x+5)$

$$= 3 \cdot 4m^2 - 8m = 12m^2 - 8m$$

D. $z(3x-2)$

$$C. z(x+5) = 3(x+5)^2 - 4(x+5)$$

E. $z(4-3m)$

$$= 3(x^2 + 10x + 25) - 4x - 20$$

$$= 3x^2 + 30x + 75 - 4x - 20$$

$$= 3x^2 + 26x + 55$$

$$D. z(3x-2) = 3(3x-2)^2 - 4(3x-2)$$

$$= 3(9x^2 - 12x + 4) - 12x + 8$$

$$= 27x^2 - 36x + 12 - 12x + 8$$

$$= 27x^2 - 48x + 20$$

$$E. z(4-3m) = 3(4-3m)^2 - 4(4-3m)$$

$$= 3(16 - 24m + 9m^2) - 16 + 12m$$

$$= 48 - 72m + 27m^2 - 16 + 12m$$

$$= 27m^2 - 60m + 32$$