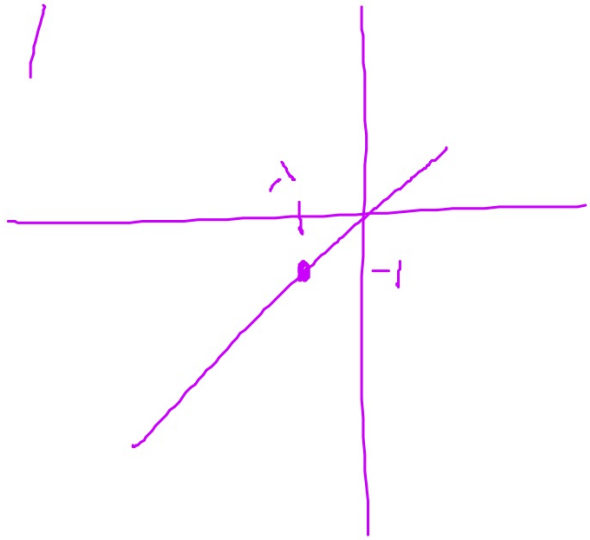
12.) $h(x) = 8$

$$\sqrt{x-3} + 4 = 8$$
$$-4 \qquad -4$$
$$\left(\sqrt{x-3}\right)^2 = (4)^2$$
$$x - 3 = 16$$
$$x = 19$$

27.) $3x^2 - 19x - 9$

$f(x) = -1$

$x = -1$



24.) $(x^2-5)(2x-3)$

$2x^3-3x^2-10x+15$

10.) $\frac{1}{4}(12)-3$

$\frac{1}{4}\cdot\frac{12}{1}$ $\quad$ $\frac{12}{4}$

$3-3$

0

25.) $(2x-3)+(x^2-5)$

x^2+2x-8

9.) $\sqrt{19-3}+4$

$\sqrt{16}+4$

$4+4$

8

$$2(2x-3) = 5(1-4x)$$

$$4x - 6 = 5 - 20x$$

$$+20x \qquad\qquad +20x$$

$$24x - 6 = 5$$

$$+6 \qquad +6$$

$$24x = 11$$

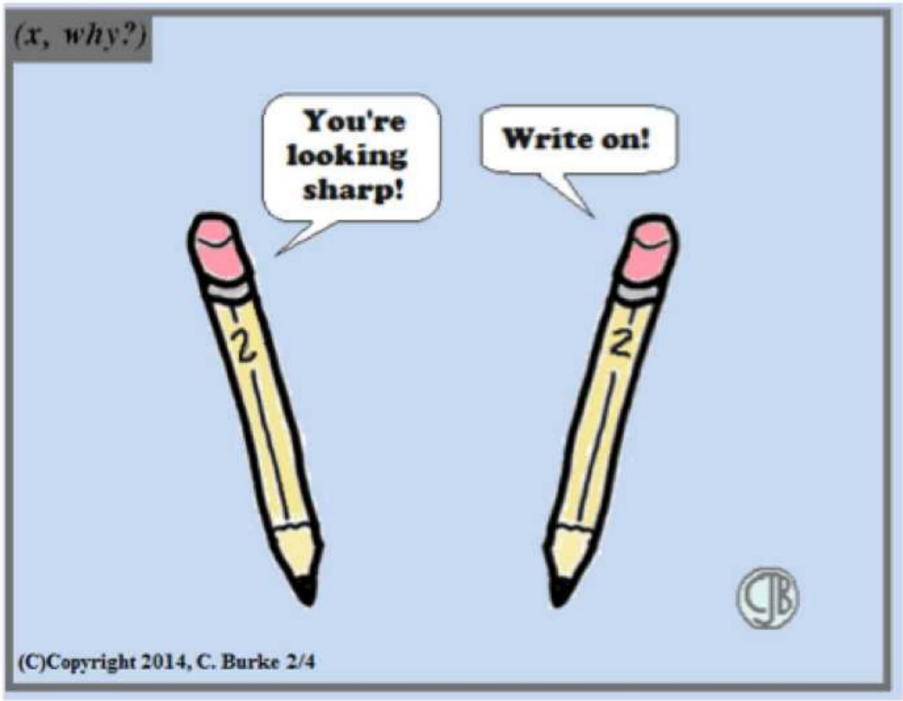
$$x = \frac{11}{24}$$

11) $4\left(\frac{1}{4}x - 3 = 7\right)$

$1x - 12 = 28$

$x = 40$

Evaluating Functions - cont.



*See printout.

HW:

Worksheet: Day 4

ex: Evaluate.

a) $f(x) = -3x + 1$; find $f(-7)$

$$f(-7) = -3(-7) + 1$$

$$= 22$$

ex: Evaluate.

b) $g(x) = 5x + 3$; find $f(4)$

$5(4) + 3$

23

ex: Evaluate.

c) $f(x) = -3x + 1$; find $f(2a)$

$= -3(2a) + 1$

$= -6a + 1$

ex: Evaluate.

d) $g(x) = 5x + 3$; find $(3b)$

$5(3b) + 3$

$15b + 3$

ex: Evaluate.

e) $f(x) = -3x + 1$; find $f(x + 1)$

$-3(x+1) + 1$

$-3x - 3 + 1$

$-3x - 2$

ex: Evaluate.

f) $g(x) = 5x + 3$; find $(2x - 3)$

$5(2x-3) + 3$

$10x - \underline{15} + \underline{3}$

$10x - 12$

ex: Evaluate.

$f(x) = x^2 - 3$ $\qquad$ $g(x) = 2x^2 - 3x + 1$

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

$= a^2 - 3$

ex: Evaluate.

$f(x) = x^2 - 3$ $\qquad$ $g(x) = 2x^2 - 3x + 1$

b) $g(3a) = 2(3a)^2 - 3(3a) + 1$

$2(9a^2) - 9a + 1$

$18a^2 - 9a + 1$

$2(3^2a^2)$

ex: Evaluate.

$f(x) = x^2 - 3$ $\qquad$ $g(x) = 2x^2 - 3x + 1$

c) $f(x+1)$

ex: Evaluate.

$(x-3)^2 \neq x^2+9$

$f(x) = x^2 - 3$ $\qquad$ $g(x) = 2x^2 - 3x + 1$

d) $g(x-3) = 2(x-3)^2 - 3(x-3) + 1$

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

$= (2x-6)(x-3) - 3x + 9 + 1$

$= 2x^2 - 6x - 6x + 18 - 3x + 9 + 1$

$2x^2 - 15x + 28$

ex: Evaluate.

$(x-3)^2 \neq x^2+9$

$f(x) = x^2 - 3$ $\qquad$ $g(x) = 2x^2 - 3x + 1$

d) $g(x-3) = 2(x-3)^2 - 3(x-3) + 1$

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

$= 2(x^2 - 3x - 3x + 9) - 3x + 9 + 1$

$= 2(x^2 - 6x + 9) - 3x + 9 + 1$

$= 2x^2 - 12x + 18 - 3x + 9 + 1$

$= 2x^2 - 15x + 28$

ex: Evaluate.

$f(x) = x^2 - 3$ $\qquad$ $g(x) = 2x^2 - 3x + 1$

e) $f(6x)$

ex: Evaluate.

$f(x) = x^2 - 3$ $\qquad$ $g(x) = 2x^2 - 3x + 1$

f) $g(-x)$