Algebra RH

HW # _____

1. Evaluate the following expressions given the functions below:

$g(x) = -3x + 1$ $\quad f(x) = x^2 + 7$ $\quad h(x) = \frac{12}{x}$ $\quad j(x) = 2x + 9$

a. $g(10) = -3(10) + 1$
$= -30 + 1$
$g(10) = -29$

b. $f(3) = 3^2 + 7$
$= 9 + 7$
$f(3) = 16$

c. $h(-2) = \frac{12}{-2}$
$h(-2) = -6$

d. $j(7) = 2(7) + 9$
$= 14 + 9$
$j(7) = 23$

e. Find x if $g(x) = 16$
$16 = -3x + 1$
$15 = -3x$
$-5 = x$

f. Find x if $h(x) = -2$
$-2 = \frac{12}{x}$
$-2x = 12$
$x = -6$

2. If the function $f(x)$ is defined by $f(x) = \frac{x}{2} - 6$ then which of the following is the value of x when $f(x)$ is 6?

(1) -3 $\quad$ $\boxed{\text{(2) 24}}$ $\quad$ (3) 12 $\quad$ (4) 3

$f(x) = \frac{x}{2} - 6$
$6 = \frac{x}{2} - 6$
$12 = \frac{x}{2}$
$24 = x$

3. If the function $f(x) = 2x - 3$ and $g(x) = \frac{3}{2}x + 1$ then which of the following is a true statement?

(1) $f(0) > g(0)$
$-3 > 1$

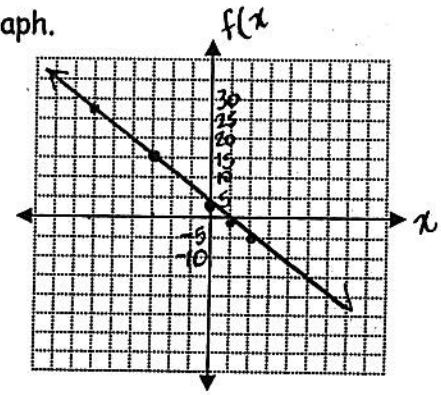
(2) $f(2) = g(2)$
$1 = 4$

$\boxed{\text{(3) } f(8) = g(8)}$
$13 = 13$

(4) $g(4) < f(4)$
$7 < 5$

4. Given $f(x) = 3 - 4x$. Fill in the table and then sketch a graph.

x	$f(x)$
-6	27
-3	15
0	3
1	-1
2	-5



5. Translate the following statements into coordinate points, then plot them!

a. $f(-1) = 1$ $(-1, 1)$

b. $f(2) = 7$ $(2, 7)$

c. $f(1) = -1$ $(1, -1)$

d. $f(3) = 0$ $(3, 0)$