Algebra I
Function Notation Worksheet

Name: _Key_
Hour: _____ Date: _____

1. Evaluate the following expressions given the functions below:

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

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

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

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

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

     e. $h(a) = \dfrac{12}{a}$

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

      g) $-2 = \dfrac{12}{x}$
          $-2x = 12$
            $x = -6$

      h) $23 = x^2 + 7$
          $16 = x^2$
           $x = -4, 4$

     g. Find x if $h(x) = -2$

     h. Find x if $f(x) = 23$

     i. CHALLENGE! (in other words, optional) $g(b+c) = -3(b+c) + 1$
                                                                $= -3b - 3c + 1$

     j. CHALLENGE! (also optional) $f(h(x)) = \left(\dfrac{12}{x}\right)^2 + 7 = \dfrac{144}{x^2} + 7$

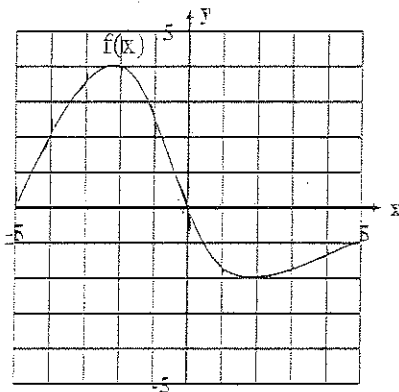2. Translate the following statements into coordinate points:

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

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

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

d. k(3) = 9   (3, 9)

3. Given this graph of the function f(x):

Find:

a. f(−4) =   2

b. f(0) =   0

c. f(3) = −1.7

d. f(-5) = 0

e. x when f(x) = 2   **f.** x when f(x) = 0

X = −4 and   X = −5, 0

X = −0.8