Name:_____ Date:_____

UNIT 6 **LESSON 5**

Do Now: Evaluate the following function, if $g(x) = x - 1$

a. Find g(1). $g(1) = 1 - 1$ $g(1) = 0$

b. Find g(-1). $g(-1) = -1 - 1$ $g(-1) = -2$

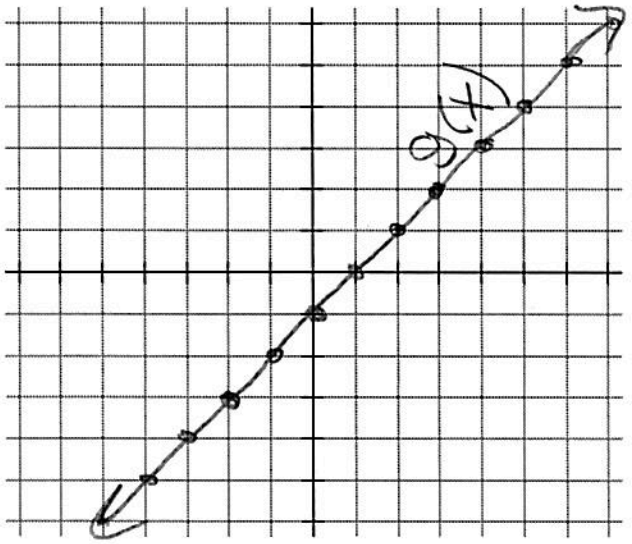
c. Find x if g(x) = 1 $1 = x - 1$, $+1 \quad +1$, $2 = x$

d. Find x if g(x) = -1 $-1 = x - 1$, $+1 \quad +1$, $0 = x$

AIM: How Do We Evaluate Functions Graphically?

1) Graph: $g(x) = x - 1$

x	y
-2	-3
-1	-2
0	-1
1	0
2	1



right 1 left -1 right 3 up 1 down -1

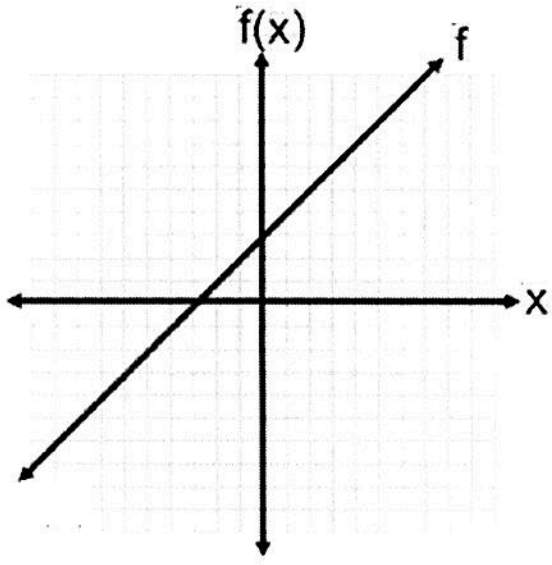
a) Find g(1).	b) Find g(-1).	c) Find g(3).	d) Find x if g(x) = 1.	e) Find x if g(x) = -1.
$x = 1$ $g(1) = 0$	$x = -1$ $g(-1) = -2$	$x = 3$ $g(3) = 2$	$g(x) = 1$ $x = 2$	$g(x) = -1$ $x = 0$

3) Using the graphs below, evaluate the following:

a. f(7) $x = 7$ right 7 [10]

b. f(0) $x = 0$ R/L zero [3]

c. f(x) = 3 up 3 [0]

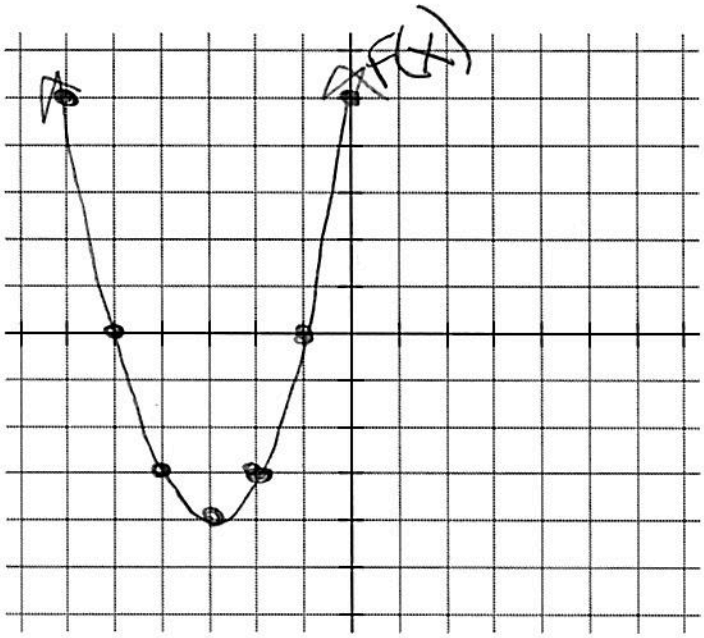


degree = 2

2) Graph $f(x) = x^2 + 6x + 5$ $\{-6 \le x \le 0\}$

Quadratic function

x	y
-6	5
-5	0
-4	-3
-3	-4
-2	-3
-1	0
0	5



left -6 | left -4 | down -4 | down -3

a) Find f(-6).	b) Find f(-4).	c) Find x if f(x) = -4	d) Find x if f(x) = -3.
x = -6 f(-6) = 5	x = -4 f(-4) = -3	f(x) = -4 x = -3	f(x) = -3 x = -2.

4) Using the graphs below, evaluate the following:

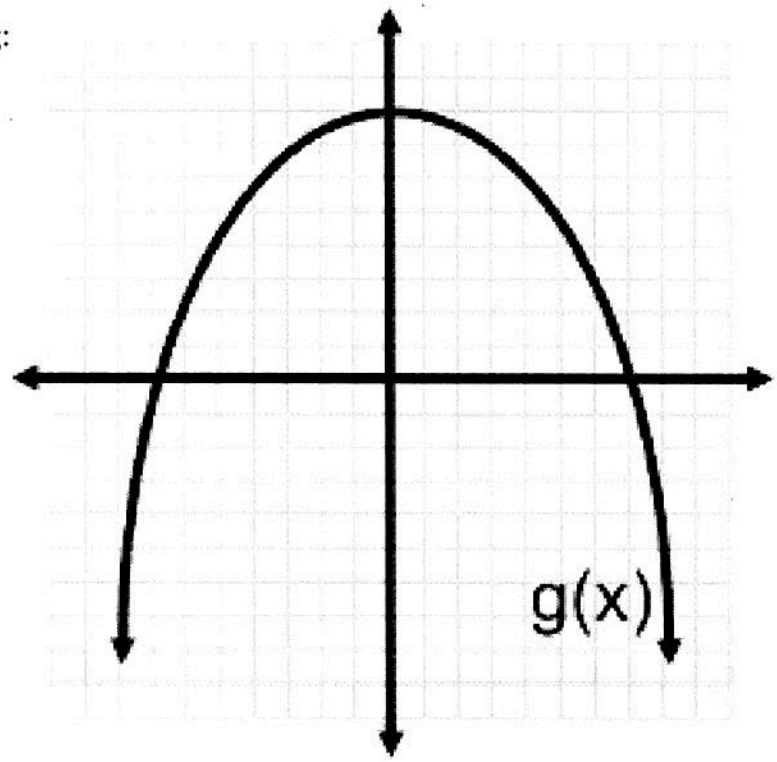
a. g(7) right 7 [0]

b. g(-7) left -7 [0]

c. g(-5) left -5 [-4]

d. g(0) L/R zero [8]

e. g(x) = 0 L/R zero [±7]



5) The table shown gives the values for the function h(x):

x	h(x)
1	5
2	4
3	3
4	2

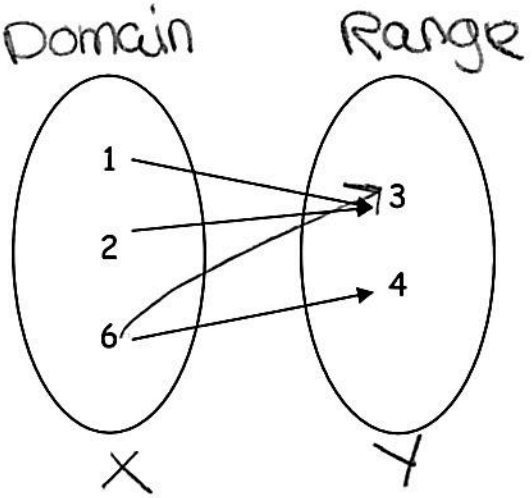
a. Find h(1). 5

b. Find h(4). 2

c. Find x if h(x) = 2. 4

d. Find x if h(x) = 4. 2

6) Using the diagram at the right:



a. Find f(1). 3

b. Find f(6). 4

c. Find x if f(x) = 4 6

d. State the domain. {1, 2, 6}

e. State the range. {3, 4}

f. Explain why the mapping is a function.

b/c x-values do not repeat

g. Add an arrow to the diagram that would make the mapping not a function.