Test #2 - Practice

MAT150
Worksheet - ch 1

NAME_____

==========

=

6. Describe how the complete graph of $f(x) = -3(x-1)^2 + 4$ can be obtained from:

Step 1: $y = x^2$ (4 points)

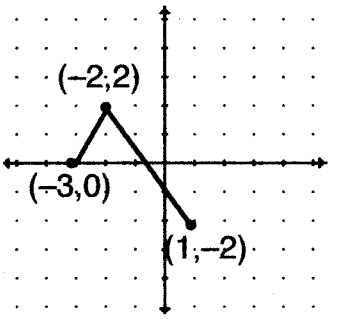
Verbal description: Step 2:
Step 3:
Step 4:
Step 5:

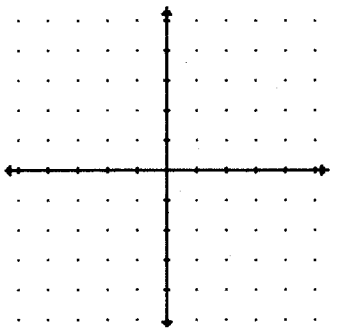
7. Given the following verbal description of a transformation, find an equation f(x) that represents it.

1: $y = x^2$
2: horizontal shift left 3 units
3: vertical shrink factor of 1/2
4: down 3

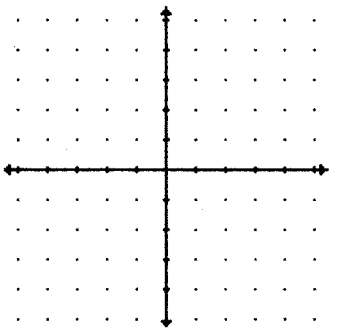
f(x) = _____ (4)

9. Given the following graph of a function. Sketch the graph of the following: (3 points each)

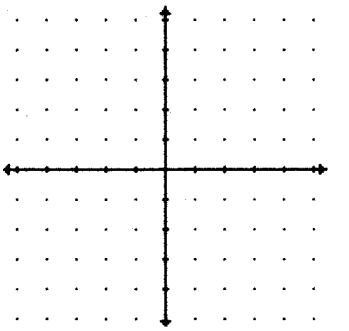




f(x – 2)



– f(x) + 1



(–1/2)f (x+1) – 2

MAT150 NAME___---KEY---_____

Worksheet - ch 1

==========

6. Describe how the complete graph of $f(x) = -3(x-1)^2 + 4$ can be obtained from:
   Step 1: $y = x^2$

(4 points)

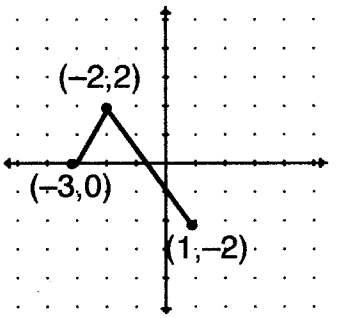
Verbal description:
Step 2: **right 1**
Step 3: **reflect x-axis**
Step 4: **vertical stretch**
Step 5: **up 4**

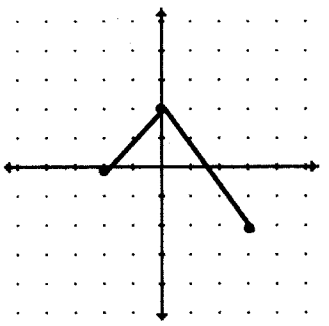
7. Given the following verbal description of a transformation, find an equation f(x) that represents it.

1: $y = x^2$
2: horizontal shift left 3 units
3: vertical shrink factor of 1/2
4: down 3

$f(x) = 1/2(x+3)^2 - 3$ (4)

9. Given the following graph of a function. Sketch the graph of the following: (3 points each)

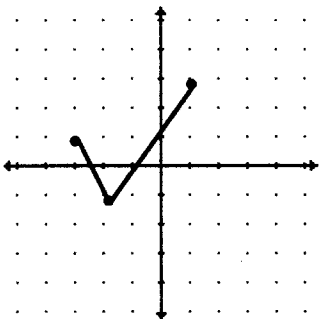




f(x – 2)

Right 2 units

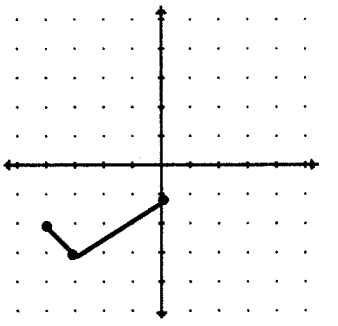
add 2	x	y
-1	-3	0
0	-2	2
3	1	-2



– f(x) + 1

Reflect x-axis
up 1 unit

x	y	*-1	add 1
-3	0	0	1
-2	2	-2	-1
1	-2	2	3



(–1/2)f (x+1) – 2

left 1
relfect x axis
vertical shrink
down 2

-1	x	y	*-1/2	-2
-4	-3	0	0	-2
-3	-2	2	-1	-3
0	1	-2	1	-1