1.12A Translations of Functions

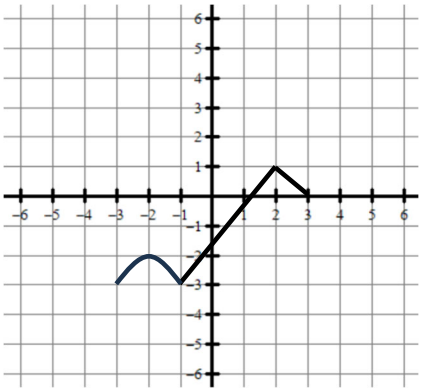
AP Precalculus

Name: _____

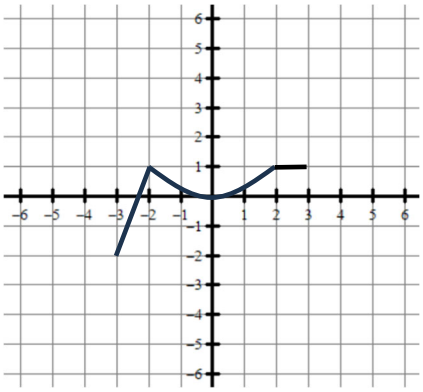
CA #1

GRAPHICAL TRANSFORMATION. Use the graph of f to graph $g(x)$.

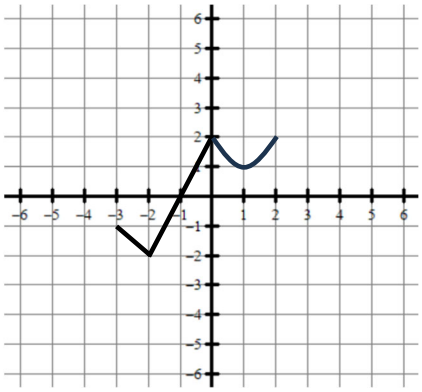
1. $g(x) = f(x-2)+4$



2. $g(x) = -f(x+3)$



3. $g(x) = f(x-3)-1$



ALGEBRAIC TRANSFORMATION. Express the $g(x)$ in terms of x.

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

$g(x) = f(x)+2$, find $g(x)$.

5. $f(x) = 2x^2+3$

$g(x) = f(x+2)$, find $g(x)$.

6. $f(x) = 2x-5$

$g(x) = -f(x+1)+4$, find $g(x)$.

NUMERIC TRANSFORMATION. Use the table of values to answer the following.

7. Given the table of values for f.

x	$f(x)$
-2	12
-1	18
0	5
1	-12
2	-3

Let $g(x) = f(x)+2$, find $g(-1)$.

8. Given the table of values for f.

x	$f(x)$
0	12
1	9
2	6
3	3
4	0

Let $g(x) = f(x+2)-3$, find $g(2)$.

9. Given the table of values for f.

x	$f(x)$
-4	2
-2	-6
0	-12
2	2
4	14

Let $g(x) = -f(x-2)+1$, find $g(0)$.

DOMAIN AND RANGE TRANSFORMATION. Find the domain and range of the transformed function.

10. Given the graph for f has a domain of $(-1,3)$ and range of $[5,10]$.

Let $g(x) = f(x+3)$.

Find the domain and range of $g(x)$.

11. Given the graph for f has a domain of $(-10,4]$ and range of $[-3,6]$.

Let $g(x) = f(x+1)+4$.

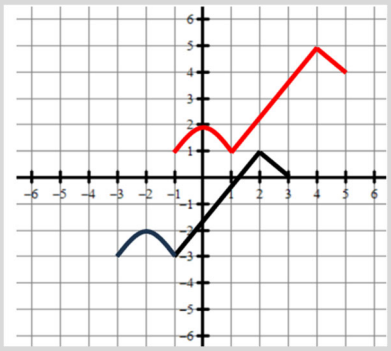
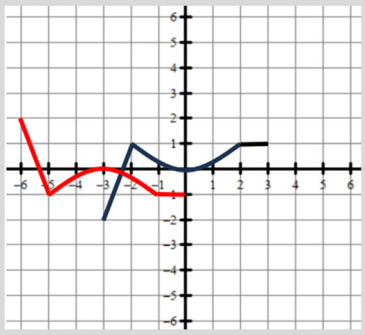
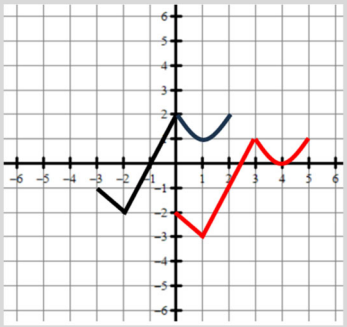
Find the domain and range of $g(x)$.

12. Given the graph for f has a domain of $[-2,5]$ and range of $(-2,8)$.

Let $g(x) = -f(x+3)-6$.

Find the domain and range of $g(x)$.

Answers to 1.12A CA #1

1. 	2. 	3. 
4. $g(x) = -x^2 + 5$	5. $g(x) = 2x^2 + 8x + 11$	6. $g(x) = -2x + 7$
7. 20	8. -3	9. 7
10. Domain: $(-4,0)$ Range: $[5,10]$	11. Domain: $(-11,3]$ Range: $[1,10]$	12. Domain: $[-5,2]$ Range: $(-14,-4)$