

1.12A Translations of Functions

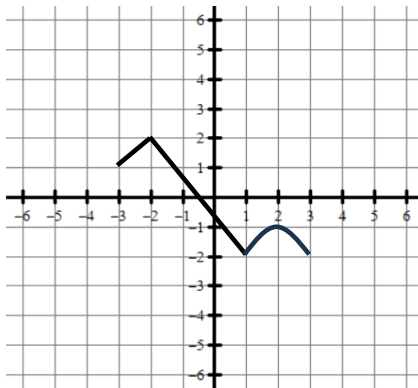
AP Precalculus

Name: _____

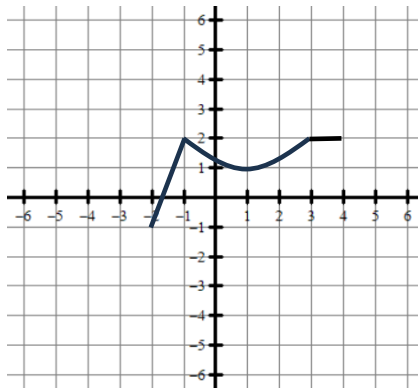
CA #2

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

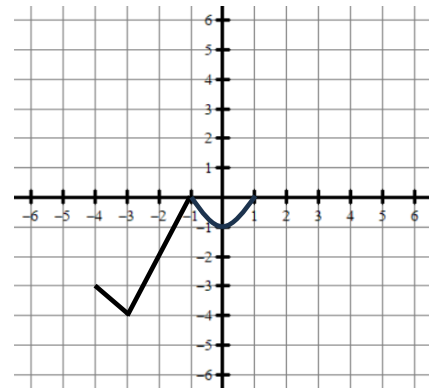
1. $g(x) = f(x - 3) + 4$



2. $g(x) = -f(x) + 5$



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



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

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

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

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

$g(x) = f(x) - 5$, find $g(x)$.

6. $f(x) = 3x + 1$

$g(x) = -f(x + 3) + 4$, 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 $g(x) = f(x - 1) + 2$,
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 $g(x) = f(x - 1) - 3$,
find $g(1)$.

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 $g(-2)$.

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

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

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

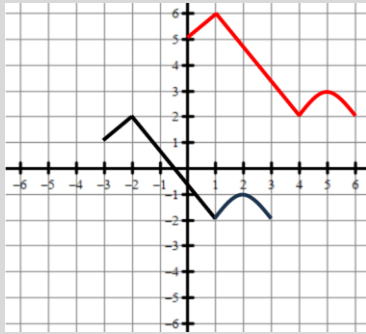
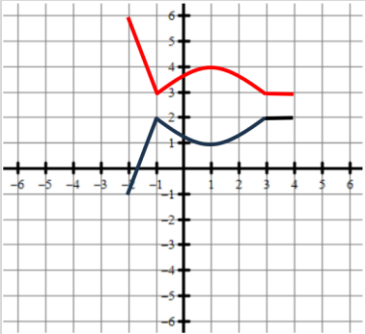
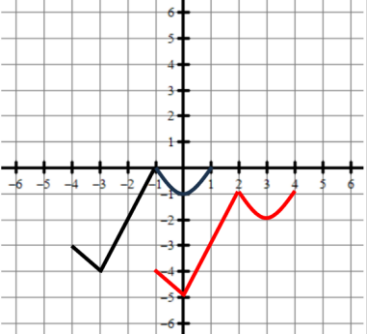
12.

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

Let $g(x) = -f(x + 2) - 5$.

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

Answers to 1.12A CA #2

<p>1.</p> 	<p>2.</p> 	<p>3.</p> 
<p>4. $g(x) = x^2 + 7x + 5$</p>	<p>5. $g(x) = 2x^2 - 4x - 8$</p>	<p>6. $g(x) = -3x - 6$</p>
<p>7. 7</p>	<p>8. 9</p>	<p>9. 13</p>
<p>10. Domain: $(-2,2)$ Range: $[-5,10]$</p>	<p>11. Domain: $(-8,6]$ Range: $[1,10]$</p>	<p>12. Domain: $[-4,3]$ Range: $(-13, -3)$</p>