5.2 Transformations of Functions, Pt 2

CA #1

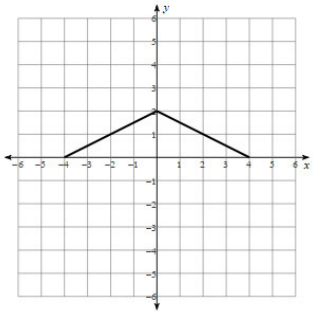
Name:_____

Directions: Describe all the transformations on the given function.

1) $f(x) = -\frac{1}{4}|x-5| + 5$

2) $g(x) = (2(x-1))^3 - 5$

Directions: Write g(x) in terms of f(x) after performing the given transformation of the graph f(x).

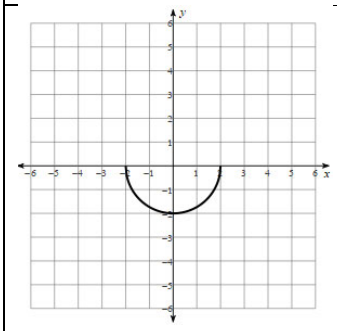


3a) Transform the graph with a vertical stretch of -2 and a horizontal shift of left 1.

3b) Write g(x) in terms of f(x).

4a) Transform the graph with a horizontal compression of $\frac{1}{2}$ and a vertical shift up 3.

4b) Write g(x) in terms of f(x).



5a) Transform the graph with a vertical stretch of -2 and a horizontal shift of left 1.

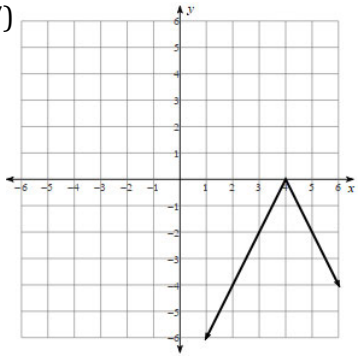
5b) Write g(x) in terms of f(x).

6a) Transform the graph with a horizontal stretch of 2 and a vertical shift up 3.

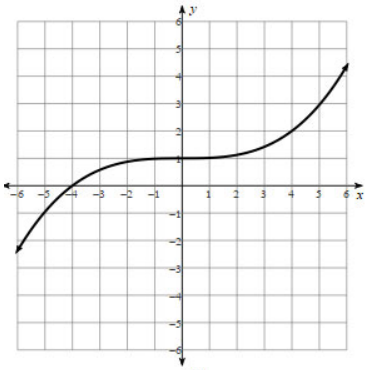
6b) Write g(x) in terms of f(x).

Directions: Write a function, g(x) that is a translation of the parent function.

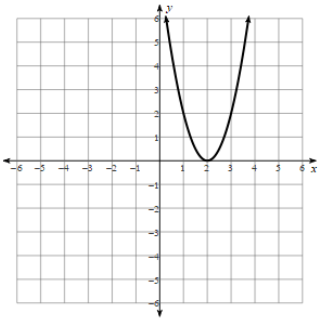
7)



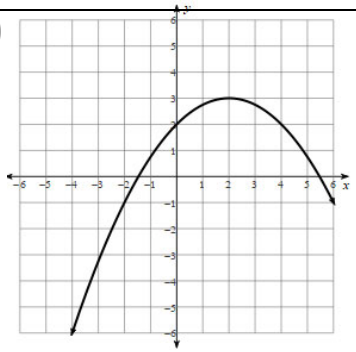
8)



9)



10)



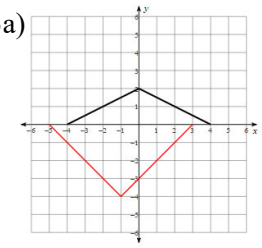
5.2 Transformations of Functions, Pt 2

Corrective Assignment Answers

1) Vertical shift up 5, Horizontal shift right 5, vertical compression of 4, vertical reflection

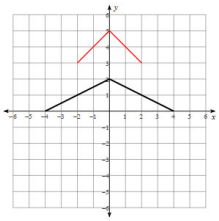
2) Vertical shift down 5, Horizontal shift right 1, horizontal compression of 2

3a)



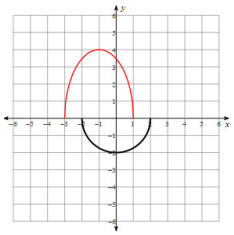
3b) $g(x) = -2 \cdot f(x+1)$

4a)



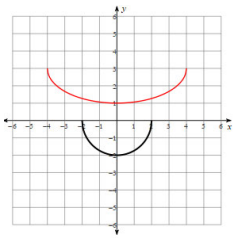
4b) $g(x) = f(2x) + 3$

5a)



5b) $g(x) = -2 \cdot f(x+1)$

6a)



6b) $g(x) = f\left(\frac{1}{2}x\right) + 3$

7) $f(x) = -2|x-4|$

8) $f(x) = \left(\frac{1}{4}x\right)^3 + 1$

9) $g(x) = 2(x-2)^2$

10) $g(x) = -\left(\frac{1}{2}(x-2)\right)^2 + 3$