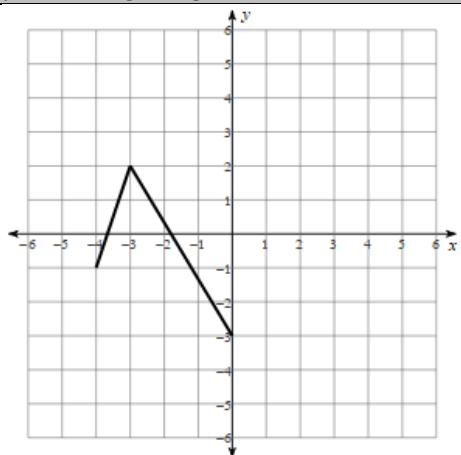


Directions: a) Perform the translation on the given function (right on graph). B) Then, write  $g(x)$  in terms of  $f(x)$  after performing the given transformations.



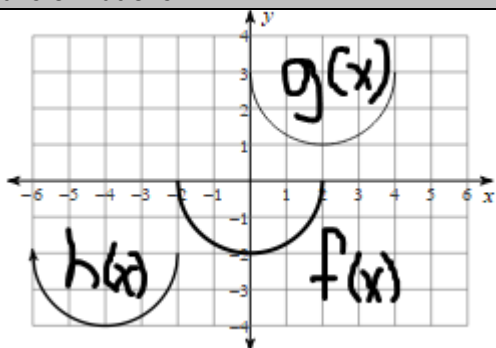
1a) Translate the graph 2 units to the left and 3 units down.

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

2a) Translate the graph 4 units up.

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

Directions: a) Describe the shift from  $f(x)$  to the given function. b) Write  $g(x)$  in terms of  $f(x)$  after performing the given transformations.



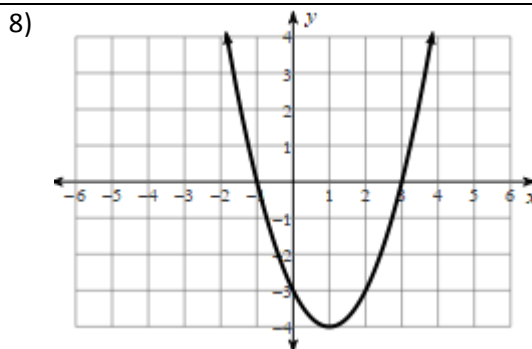
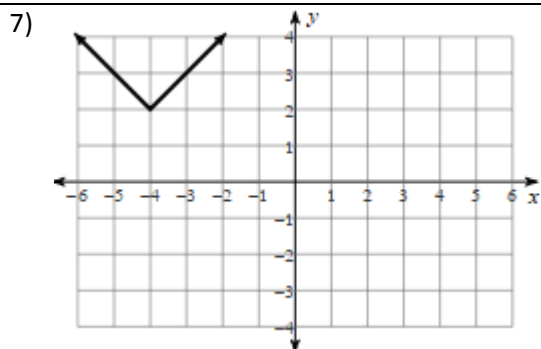
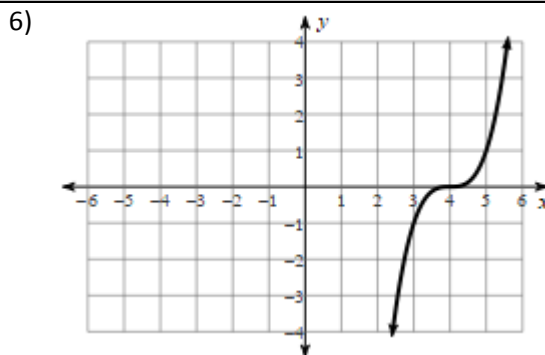
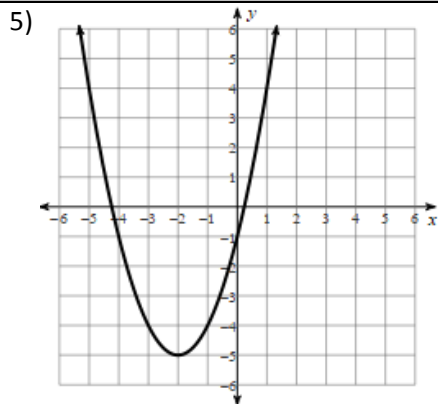
3a) Describe the shift from  $f(x)$  to  $g(x)$

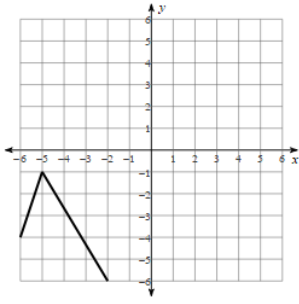
b) Write  $g(x)$  in terms of  $f(x)$ .

4a) Describe the shift from  $f(x)$  to  $h(x)$

b) Write  $h(x)$  in terms of  $f(x)$ .

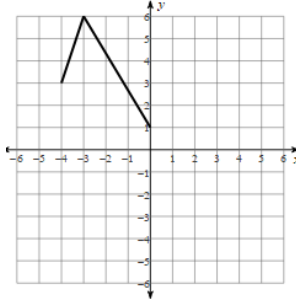
Directions: Write the equation of each graph.





1a)

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



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

3a) It shifts right two units and up three units. 3b)  $g(x) = f(x - 2) + 3$ 4a) It shifts left 4, and down 2. 4b)  $g(x) = f(x+4) - 2$ 

5)  $f(x) = (x + 2)^2 - 5$

6)  $f(x) = (x - 4)^3$

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

8)  $f(x) = (x - 1)^2 - 4$