 Name: _____

3.2 – Vertical & Horizontal Reflections

Past due on: _____ Period: _____

1. The graph of $y = f(x)$ contains the point $(-1, 8)$. What point must lie on the reflected graph if the graph is reflected…
   a. About the y-axis?
   b. About the x-axis?

2. Suppose that the x-intercepts of the graph of $y = f(x)$ are -5 and 3. What are the x-intercepts on the graph of $y = f(-x)$.

3. The graph of $f(x)$ contains the point $(-1, 8)$. What point must be on the graph of…
   a. $f(x-3)-2$? b. $f(-x)+5$? c. $-f(x+4)$? d. $-f(-x)$?

4. The function $h(x)$ has domain $[-3, 6]$ and range $[-5, 4]$. What is the domain & range of $y = -h(x+4)$?

Use the graph of $y = f(x)$ to match the function with its graph.

5. $y = f(x+5)$

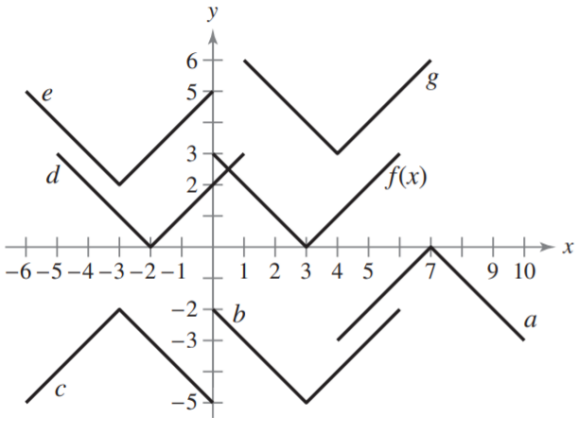
6. $y = f(x) - 5$

7. $y = -f(-x) - 2$

8. $y = -f(x-4)$

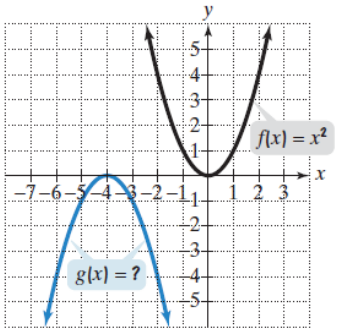
9. $y = f(x+6) + 2$

10. $y = f(x-1) + 3$

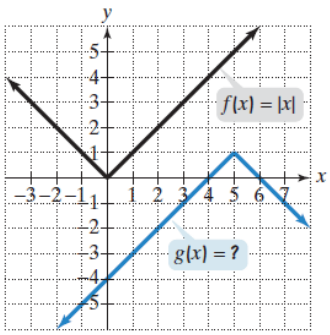


Functions f and g are graphed in the same rectangular coordinate system. Describe the sequence of graphing transformations made to the given graph of $f(x)$ to obtain the graph of $g(x)$. Give a formula, in terms of f, for the graph of the function $g(x)$.

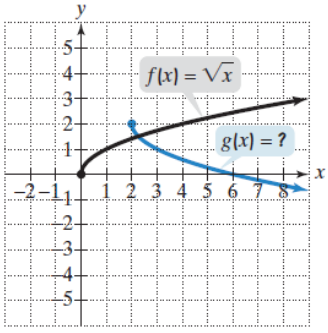
11.



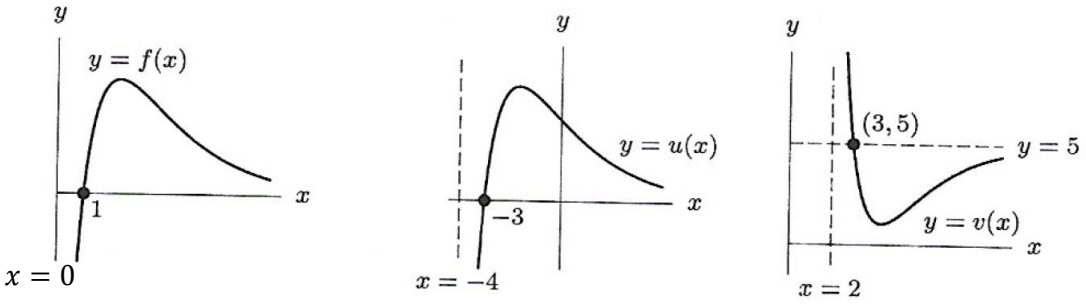
12.



13.



14. The graphs of $f(x), u(x), \& v(x)$ are given (below). The functions $u(x)$ & $v(x)$ are transformations of $f(x)$. Find formulas for $u(x)$ & $v(x)$ in terms of $f(x)$.



15. The functions in (a) and (b) are transformations of $f(x)$. Describe the sequence of transformations and find formulas the functions in (a) and (b) for in terms of $f(x)$.