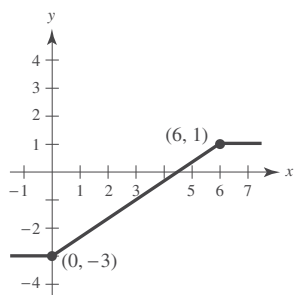


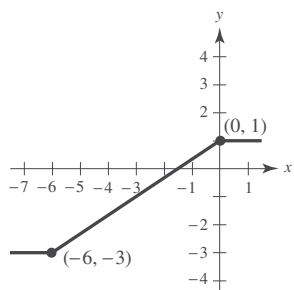
62. (a) $g(x) = f(x - 4)$
 $g(6) = f(2) = 1$
 $g(0) = f(-4) = -3$

The graph is shifted 4 units to the right.



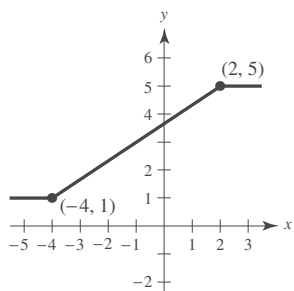
(b) $g(x) = f(x + 2)$
 $g(0) = f(2) = 1$
 $g(-6) = f(-4) = -3$

The graph is shifted 2 units to the left.



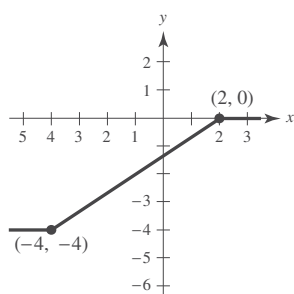
(c) $g(x) = f(x) + 4$
 $g(2) = f(2) + 4 = 5$
 $g(-4) = f(-4) + 4 = 1$

The graph is shifted 4 units upward.



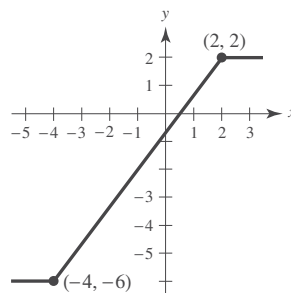
(d) $g(x) = f(x) - 1$
 $g(2) = f(2) - 1 = 0$
 $g(-4) = f(-4) - 1 = -4$

The graph is shifted 1 unit downward.



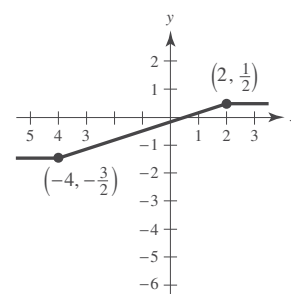
(e) $g(x) = 2f(x)$
 $g(2) = 2f(2) = 2$
 $g(-4) = 2f(-4) = -6$

The graph is stretched vertically by a factor of 2.



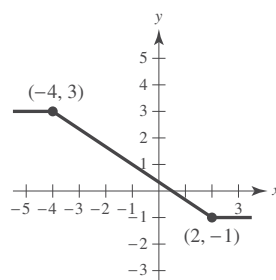
(f) $g(x) = \frac{1}{2}f(x)$
 $g(2) = \frac{1}{2}f(2) = \frac{1}{2}$
 $g(-4) = \frac{1}{2}f(-4) = -\frac{3}{2}$

The graph is stretched vertically by a factor of $\frac{1}{2}$.



(g) $g(x) = -f(x)$
 $g(2) = -f(2) = -1$
 $g(-4) = -f(-4) = 3$

The graph is a reflection in the x -axis.



(h) $g(x) = f(-x)$
 $g(-2) = f(2) = 1$
 $g(4) = f(-4) = -3$

The graph is a reflection in the y -axis.

