

Exercise 56

For the following exercises, use graphs of $f(x)$, shown in Figure 6, $g(x)$, shown in Figure 7, and $h(x)$, shown in Figure 8, to evaluate the expressions.

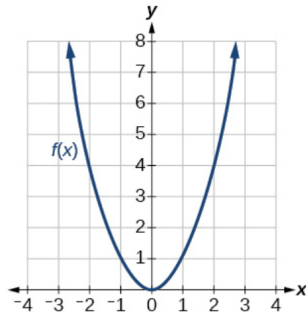


Figure 6

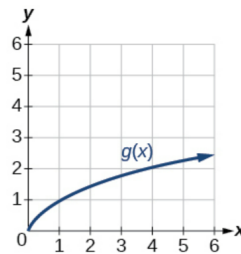


Figure 7

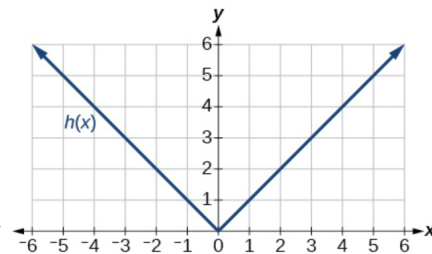
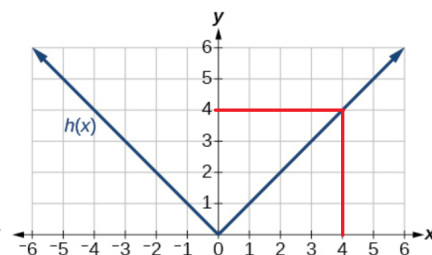
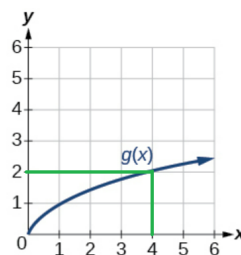
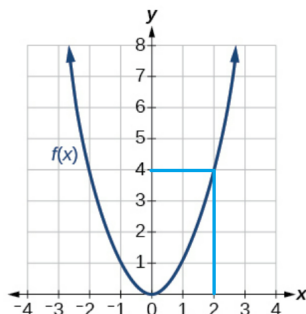


Figure 8

$$f(g(h(4)))$$

Solution

Notice from the graphs that $h(4) = 4$ and $g(4) = 2$ and $f(2) = 4$.



Therefore,

$$f(g(h(4))) = f(g(4)) = f(2) = 4.$$