

Exercise 71

For the following exercises, use the function values for f and g shown in Table 4 to evaluate the expressions.

x	$f(x)$	$g(x)$
-3	11	-8
-2	9	-3
-1	7	0
0	5	1
1	3	0
2	1	-3
3	-1	-8

Table 4

$$(f \circ f)(3)$$

Solution

Note that

$$(f \circ f)(3) = f(f(3)).$$

Notice from the table that $f(3) = -1$ and $f(-1) = 7$, so $f(f(3)) = f(-1) = 7$. Therefore,

$$(f \circ f)(3) = 7.$$