Exercise 70

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

$$(g \circ g)(1)$$

Solution

Note that

$$(g \circ g)(1) = g(g(1)).$$

Notice from the table that $g(1) = 0$ and $g(0) = 1$, so $g(g(1)) = g(0) = 1$. Therefore,

$$(g \circ g)(1) = 1.$$