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Study Guide and Intervention

Algebra: Functions

A **function rule** describes the relationship between the input and output of a **function**. The inputs and outputs can be organized in a **function table**.

Example 1 Complete the function table.

Input (x)	Output ($x - 3$)
9	■
8	■
6	■

The function rule is $n - 7$. Subtract 7 from each input.

Input	Output		Input (x)	Output ($x - 3$)
9	$- 3 \rightarrow$	6	9	6
8	$- 3 \rightarrow$	5	8	5
6	$- 3 \rightarrow$	3	6	3

Example 2 Find the rule for the function table.

Input (x)	Output (■)
0	0
1	4
2	8

Study the relationship between each input and output.

Input	Output
0	$\times 4 \rightarrow$ 0
1	$\times 4 \rightarrow$ 4
2	$\times 4 \rightarrow$ 8

The output is four times the input. So, the function rule is $4x$.

Exercises

Complete each function table.

1.

Input (x)	Output ($2x$)
0	
2	
4	

2.

Input (x)	Output ($4 + x$)
0	
1	
4	

Find the rule for each function table.

3.

Input (x)	Output (■)
1	3
2	4
5	7

4.

Input (x)	Output (■)
2	1
6	3
10	5