## EXAMPLE 4

## Write a function rule

Write a rule for the function.

Input	0	1	4	6	10
Output	2	3	6	8	12

## Solution

Let x be the input, or independent variable, and let y be the output, or dependent variable. Notice that each output is 2 more than the corresponding input. So, a rule for the function is y = x + 2.

# EXAMPLE 5

## Write a function rule for a real-world situation

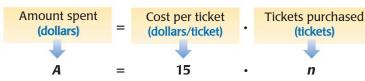
**CONCERT TICKETS** You are buying concert tickets that cost \$15 each. You can buy up to 6 tickets. Write the amount (in dollars) you spend as a function of the number of tickets you buy. Identify the independent and dependent variables. Then identify the domain and the range of the function.

# **CHOOSE A VARIABLE**

To write a function rule for a real-world situation, choose letters for the variables that remind you of the quantities represented.

Solution

Write a verbal model. Then write a function rule. Let *n* represent the number of tickets purchased and A represent the amount spent (in dollars).



So, the function rule is A = 15n. The amount spent depends on the number of tickets bought, so *n* is the independent variable and *A* is the dependent variable.

Because you can buy up to 6 tickets, the domain of the function is 0, 1, 2, 3, 4, 5, and 6. Make a table to identify the range.

Number of tickets, n	0	1	2	3	4	5	6
Amount (dollars), A	0	15	30	45	60	75	90

The range of the function is 0, 15, 30, 45, 60, 75, and 90.



## **GUIDED PRACTICE**

### for Examples 3, 4, and 5

- **4.** Make a table for the function y = x 5 with domain 10, 12, 15, 18, and 29. Then identify the range of the function.
- **5.** Write a rule for the function. Identify the domain and the range.

Time (hours)	1	2	3	4
Pay (dollars)	8	16	24	32