LESSON 6-1  Identifying and Representing Functions

Practice and Problem Solving: A/B

Tell whether each relationship is a function.

1.  
2.  
3.  

4.  
5.  
6.  

7.  

8.  

9.  

10.  

The graph shows the relationship between the hours Rachel studied and the exam grades she earned.

11. Is the relationship a function? Justify your answer. Use the words “input” and “output” in your explanation, and connect them to the context represented by the graph.

12. Rachel plans to study 2 hours for her next exam. How might plotting her grade on the same graph change your answer to Exercise 11? Explain your reasoning.
Lesson 6-1 Identifying and Representing Functions

Reteach

A relation is a set of ordered pairs. {(1, 2), (3, 4), (5, 6)}
The input values are the first numbers in each pair. {(1, 2), (3, 4), (5, 6)}
The output values are the second numbers in each pair. {(1, 2), (3, 4), (5, 6)}

Circle each input value. Underline each output value.
1. {(1, 1), (2, 3), (3, 5)}
2. {(6, 2), (5, 3), (4, 8)}

A relation is a function when each input value is paired with only one output value.

The relation below is a function.

Input | Output
--- | ---
2 | 5
1 | 1
3 |

Input value 2 is paired with only one output, 5.
Input value 1 is paired with only one output, 1.
Input value 3 is paired with only one output, 1.

The relation below is not a function.

Input | Output
--- | ---
3 | 5
2 | 4
1 |
1 |
3 |

Input value 1 is paired with two outputs, 1 and 3.

Tell whether each relation is a function. Explain how you know.
3. {(1, 5), (3, 7), (6, 5), (9, 8)}
4. {(1, 2), (1, 8), (3, 6), (4, 8)}

5. Input | Output
--- | ---
5 | 3
4 | 3
3 | 3
2 | 3
1 |

6. Input | Output
--- | ---
2 | 5
1 | 5
3 | 1
2 | 1