

LESSON
3-2

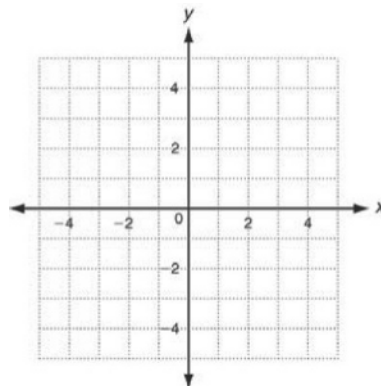
Understanding Relations and Functions

Practice and Problem Solving: A/B

Express each relation as a table, as a graph, and as a mapping diagram.

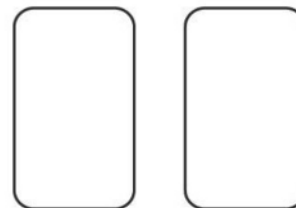
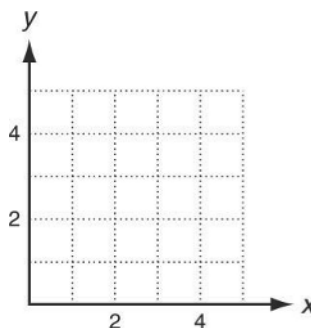
1. $\{(-2, 5), (-1, 1), (3, 1), (-1, -2)\}$

x	y

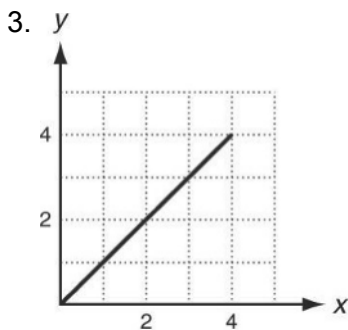


2. $\{(5, 3), (4, 3), (3, 3), (2, 3), (1, 3)\}$

x	y



Give the domain and range of each relation. Tell whether the relation is a function. Explain.

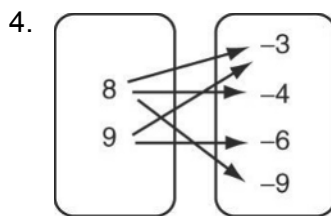


D: _____

R: _____

Function? _____

Explain: _____



D: _____

R: _____

Function? _____

Explain: _____

5.

x	y
1	4
2	5
0	6
1	7
2	8

D: _____

R: _____

Function? _____

Explain: _____

Practice and Problem Solving: Modified

- d
- g
- b
- a
- f
- input
- output
- D: {0, 1, 2, 3, 4, 5}; R: {0, 1, 2, 3, 4, 5}
- D: {1, 2, 3, 4, 5, 6, 7, 8}; R: {3, 6, 9}
- D: $\{0 \leq t \leq 5\}$; R: $\{0 \leq d \leq 10\}$

Reading Strategies

- Graph B
- Graph D
- Graph A
- Sample answer: Paolo blew up a balloon. Then the balloon popped.

Success for English Learners

Problem 2

discrete

Problem 3

- A. D: $\{0 \leq x \leq 8\}$; R: $\{0 \leq y \leq 6\}$
 B. D: $\{0 \leq x \leq 8\}$; R: $\{0 \leq y \leq 80\}$

LESSON 3-2

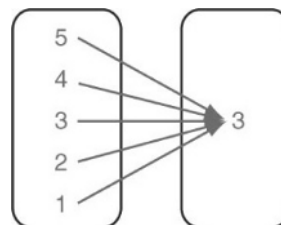
Practice and Problem Solving: A/B

1.

x	y
-2	5
-1	1
3	1
-1	-2

2.

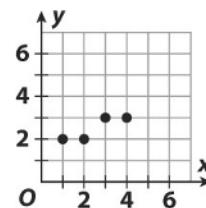
x	y
5	3
4	3
3	3
2	3
1	3



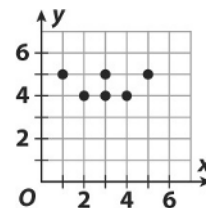
- $\{0 \leq x \leq 4\}$; $\{0 \leq y \leq 4\}$; yes; each domain value is paired with exactly one range value.
- $\{8, 9\}$; $\{-3, -4, -6, -9\}$; no; both domain values are paired with more than one range value.
- $\{0, 1, 2\}$; $\{4, 5, 6, 7, 8\}$; no; two domain values are paired with two range values.

Practice and Problem Solving: C

- It is a function because each input has exactly one output.



- It is not a function because 3 is paired with two different outputs.



- Sample answer:

