Name _____ Date _____

3.1 Practice A

In Exercises 1 and 2, determine whether the relation is a function. Explain.

1.

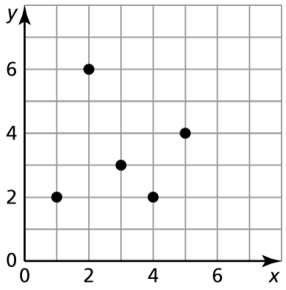
Input, *x*	8	4	2	4	8
Output, *y*	−4	−2	0	2	4

2.

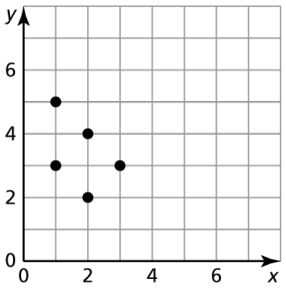
Input, *x*	0	2	4	6	8
Output, *y*	3	7	11	15	19

In Exercises 3 and 4, determine whether the graph represents a function. Explain.

3.

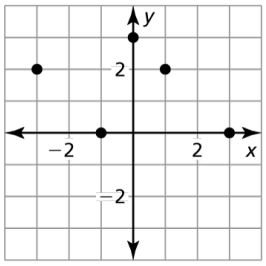


4.



In Exercises 5 and 6, find the domain and range of the function represented by the graph.

5.



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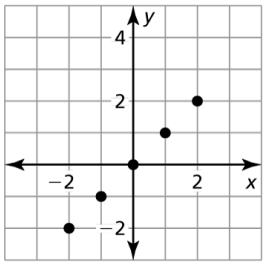


7. The function $y = 7x + 35$ represents the monthly cost y (in dollars) of a group of x members joining the fitness club.

a. Identify the independent and dependent variables.

b. Your group has enough money for up to six members to join the fitness club. Find the domain and range of the function.

In Exercises 8 and 9, determine whether the statement uses the word *function* in a way that is mathematically correct. Explain your reasoning.

8. A function pairs each teacher with 30 students.

9. The cost of mailing the package is a function of the weight of the package.

Name_____ Date _____

3.1 Practice B

In Exercises 1 and 2, determine whether the relation is a function. Explain.

1.

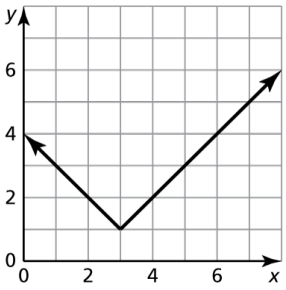
Input, *x*	0	1	3	2	1
Output, *y*	1	5	10	15	20

2.

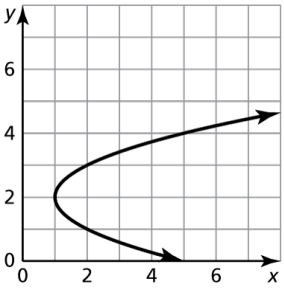
Input, *x*	0	1	2	3	4
Output, *y*	−14	−7	0	7	14

In Exercises 3 and 4, determine whether the graph represents a function. Explain.

3.

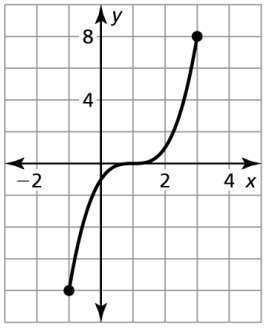


4.

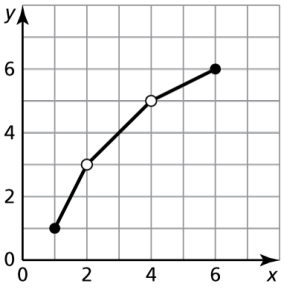


In Exercises 5 and 6, find the domain and range of the function represented by the graph.

5.



6.



7. The function $2x + 1.5y = 18$ represents the number of book raffle tickets x and food raffle tickets y you buy at a club event.

a. Solve the equation for y.

b. Make an input-output table to find ordered pairs for the function.

c. Plot the ordered pairs in a coordinate plane.

In Exercises 8–10, find the domain and range of the function.

8. $y = |x| + 2$ **9.** $y = -|x| + 1$ **10.** $y = -|x| - 3$