Name _____ Class _____ Date _____

Practice 4-3

Relating Tables and Graphs to Equations

1. Use the table to relate the independent variable x to the dependent variable y.

x	0	2	5	6
y	0	4	10	12

a) Describe the relationship in words.

b) Write an equation that represents the relationship between x and y.

2. Suppose each side of a triangle has length x. Let y be the perimeter of the triangle. Use the table to relate the independent variable x to the dependent variable y.

x	0	3	4	5
y	0	9	12	15

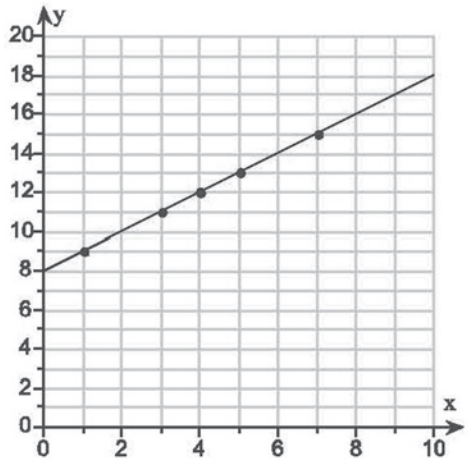
a) Describe the relationship in words.

b) Write an equation that represents the relationship between x and y.

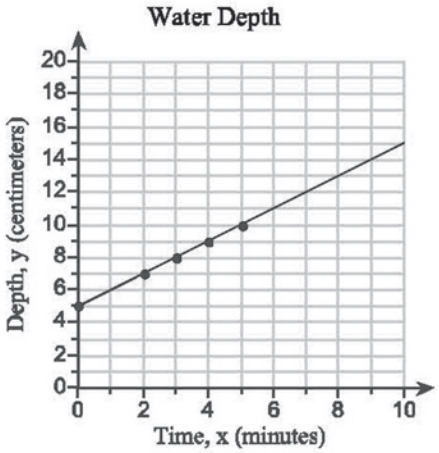
3. a) Use the graph to complete the table of values for x and y.

x	1	3	4	5	7
y	____	____	____	____	____

b) Write an equation that represents the relationship between x and y.



4. During a thunderstorm, rain fell into a barrel. The graph shows the depth y (in centimeters) of the water in the barrel x minutes after the storm started.



a) Use the graph to complete the table of values for x and y.

x	0	2	3	4	5
y	____	____	____	____	____

b) Write an equation that represents the relationship between x and y.

5. It costs $8 to go to a pottery painting studio. It costs an additional $4 for each piece you paint.

a) Complete the table.

Pottery Painting Studio Costs		
Painted pieces	**Cost of studio fee and painted pieces**	**Total cost ($)**
1	8 + 4(1)	_____
2	8 + 4(_____)	16
_____	8 + 4(3)	_____
_____	_____ + 4(4)	24
5	8 + 4(5)	_____

b) Write an equation that shows the relationship between the number of pieces you paint, p, and the total cost, T.

6. For a Friday show, a band receives $160 plus $6 for each ticket sold. Write an equation that shows the relationship between the number of tickets sold, t, and the total amount the band receives, P. (Hint: You may find it helpful to make a table that shows values of t and related values of P.)

7. **Writing** Erin is putting items into a crate. The crate weighs 2 kilograms when empty. Let x be the number of items in the crate. Let y be the total weight of the crate. Use the table to relate the independent variable x to the dependent variable y.

x	0	1	4	7
y	2	3	6	9

a) Describe the relationship in words.

b) Write an equation that represents the relationship between x and y.

c) Explain why Erin might need this information.

Practice 4-3: ***Relating Tables and Graphs to Equations***

1. a) The value of x times 2 equals the value of y.
b) x • 2 = y

2. a) The value of x times 3 equals the value of y.
b) x • 3 = y

3. a) 9
11
12
13
15
b) x + 8 = y

4. a) 5
7
8
9
10
b) x + 5 = y

5. a) 12
2
3
20
4
8
28
b) T = 8 + 4p

6. P = 6t + 160

7. a) The value of x plus 2 equals the value of y.
b) y = x + 2
c) Answers will vary

8. a) 15
14
13
11
10
b) Answers will vary
c) 15 – x

9. a) The value of x plus 1 equals the value of y.
b) x + 1 = y
c) A

10. a) The value of x plus 16 equals the value of y.
b) x + 16 = y
c) 25 cm

11. a) 16
14
12
10
8
b) A, B, F

12. a) The value of x times 4 equals the value of y.
b) x • 4 = y
c) Answers will vary

13. a) 105
2
3
115
4
100
125
b) T = 100 + 5s
c) $150

14. a) 6
8
10
11
12
b) The value of x plus 6 equals the value of y.
c) y = x + 6
d) Answers will vary

15. a) 16
2
3
34
4
7
52
b) The value of C equals 7 plus the value of r times 9.
c) C = 9r + 7
d) The value of C becomes 8 plus the value of r times 9.