

**LESSON**  
**4-2**

# Constant Rates of Change

## Practice and Problem Solving: A/B

Use the table to determine whether the relationship is proportional. If so, write an equation for the relationship. Tell what each variable you used represents.

1. 

<b>Number of tickets</b>	2	3	4	5
<b>Total Cost (\$)</b>	54	81	108	135

- a. Proportional? \_\_\_\_\_
- b. Equation: \_\_\_\_\_
- c. Number of tickets: \_\_\_\_\_
- d. Total Cost: \_\_\_\_\_

2. 

<b>Weight (lb)</b>	4	5	46
<b>Total Cost (\$)</b>	17.40	21.75	200.10

- a. Proportional? \_\_\_\_\_
- b. Equation: \_\_\_\_\_
- c. Weight: \_\_\_\_\_
- d. Total cost: \_\_\_\_\_

3. 

<b>Time (h)</b>	2	3	4	5	6
<b>Pages Read</b>	50	75	90	110	120

\_\_\_\_\_

\_\_\_\_\_

4. 

<b>Time (h)</b>	2	3	4
<b>Distance (mi)</b>	80	120	160

\_\_\_\_\_

\_\_\_\_\_

The tables show proportional relationships. Find the constant of proportionality,  $k$ . Write an equation to represent the relationship between the two quantities. Tell what each variable represents.

5. 

<b>Pens</b>	3	6	9	12
<b>Boxes</b>	1	2	3	4

\_\_\_\_\_

\_\_\_\_\_

6. 

<b>Pack</b>	1	2	4	5
<b>Muffins</b>	6	12	24	30

\_\_\_\_\_

\_\_\_\_\_

7. a. Create a table to show how the number of days is related to the number of hours. Show at least 5 days.
- b. Is the relationship proportional? \_\_\_\_\_
  - c. Write an equation for the relationship. \_\_\_\_\_

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# Constant Rates of Change

## Practice and Problem Solving: D

Use the table to determine whether the relationship is proportional. If so, write an equation to show the relationship between the two quantities. Tell what each of the variables you used represents. The first one has been done for you.

1. 

<b>Teams</b>	1	2	3	4
<b>Number of Players</b>	6	12	18	24

- a. Proportional? yes
- b. Equation:  $y = 6x$
- c. Number of teams:  $x$
- d. Number of players:  $y$

2. 

<b>Time (h)</b>	1	2	3	4
<b>Cars Washed</b>	3	6	9	12

- a. Proportional? \_\_\_\_\_
- b. Equation: \_\_\_\_\_
- c. Number of hours: \_\_\_\_\_
- d. Cars washed: \_\_\_\_\_

3. 

<b>Weight (lb)</b>	3	4	5
<b>Cost (\$)</b>	2.25	3.00	3.75

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. 

<b>Time (min)</b>	2	3	4
<b>Songs Played</b>	10	14	20

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

The following tables show proportional relationships. Find the constant of proportionality,  $k$ . Then write an equation to show the relationship between the two quantities. Tell what each of the variables you used represents. The first one has been done for you.

5. 

<b>Apples</b>	5	10	15	20
<b>Bags</b>	1	2	3	4

- $k = \frac{1}{5}$  \_\_\_\_\_
- $y = \frac{1}{5}x$ ;
- \_\_\_\_\_
- $x = \text{apples}; y = \text{bags}$
- \_\_\_\_\_

6. 

<b>Cartons</b>	1	2	4	5
<b>Eggs</b>	12	24	48	60

- $k =$  \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_