

Lesson 2-4: Describe Proportional Relationships - Constant of Proportionality

1. You can write an equation representing a proportional relationship in the form $y = kx$, where k is the constant of proportionality.
2. Use the constant of proportionality to write an equation. Then substitute a known value in the equation to find the unknown value.
3. Sample answer: The equation is not in the form $y = kx$, so y is not a constant multiple of x . The values of x and y that make the equation true do not form equivalent ratios.
4. a. No
b. Yes; 1,000
c. No
5. 720 hot dogs
6. 2.50; $y = 2.50x$
7. 5
8. 0.41
9. Yes; The equation $P = 3s$ is in the form $y = kx$, so the relationship is proportional.
10. $y = 0.1875x$; 60 grams
11. 40
12. a. $y = 19x$
b. 247 mm
13. a. $y = 38x$
b. 266 miles

14. a. \$9.98; \$12.50; \$15.02
b. The increase in value for years after 1996 and card value are not equivalent, so the quantities are not in a proportional relationship.

15. a. $d = \frac{2}{3}m$
b. $d = 40h$

16. 2.05

	5	13	
\$6.15			\$38.95

17. B