Unit 2: Introducing Proportional Relationships

PRACTICE

Name: _____ Date: _____

Show your work and give the exact answer for each problem. Use y = kx for equations.

1. A recipe uses 3 cups of flour for every 2 cups of sugar. This is a proportional relationship. What is the constant of proportionality k (cups of flour per cup of sugar), written as a fraction?

Answer: _____

2. A car travels 150 miles on 5 gallons of gas at a constant rate. What is the constant of proportionality (miles per gallon)?

Answer: _____

3. In a proportional relationship, y = kx. When x = 8, y = 20. Find the constant of proportionality k as a fraction in lowest terms.

Answer: _____

4. A proportional relationship has the equation y = 4x. Find the value of y when x = 7.

Answer: _____

5. A proportional relationship has the equation y = 6x. Find the value of x when y = 54.

Answer: _____

6. The cost of apples is proportional to weight. 4 pounds cost $6. Write the constant of proportionality (dollars per pound) as a decimal.

Answer: _____

7. A proportional relationship passes through the point (5, 35). Write the equation in the form y = kx.

Answer: _____

8. A table shows a proportional relationship: when x = 3, y = 12; when x = 5, y = 20. Find the constant of proportionality k.

Answer: _____

9. A worker earns $90 for 8 hours of work at a constant rate. How much does the worker earn for 12 hours? Give the amount in dollars.

Answer: _____

10. For the proportional relationship y = 2.5x, find y when x = 6.

Answer: _____

11. A proportional relationship has constant of proportionality k = 3/4. Find y when x = 12.

Answer: _____

12. In a proportional relationship, 7 notebooks cost $21. At the same rate, how much do 10 notebooks cost? Give the amount in dollars.

Answer: _____