

## Unit 2: Introducing Proportional Relationships

### CONCEPT

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Show your work. Each problem has one exact answer — write it in the blank.

1. A table shows that 3 apples cost \$6. If the cost is proportional to the number of apples, what is the constant of proportionality (cost per apple) in dollars?

Answer: \_\_\_\_\_

3. In a proportional relationship,  $y = 5x$ . What is the value of  $y$  when  $x = 3$ ?

Answer: \_\_\_\_\_

5. A car travels a distance proportional to time, going 60 miles in 2 hours. Write the constant of proportionality (miles per hour).

Answer: \_\_\_\_\_

7. For the proportional relationship  $y = kx$ , the point (5, 20) is on the graph. What is the value of  $k$ ?

Answer: \_\_\_\_\_

9. A proportional relationship has the equation  $y = 2.5x$ . What is the value of  $y$  when  $x = 4$ ?

Answer: \_\_\_\_\_

11. Every point in a proportional relationship graph passes through a special point. What are the coordinates of that point? Write it as (a, b).

Answer: \_\_\_\_\_

2. A recipe uses 4 cups of flour to make 2 loaves of bread, and the amount of flour is proportional to the number of loaves. How many cups of flour per loaf is the constant of proportionality?

Answer: \_\_\_\_\_

4. In a proportional relationship,  $y = 3x$ . What is the value of  $y$  when  $x = 7$ ?

Answer: \_\_\_\_\_

6. For the proportional relationship  $y = kx$ , the point (4, 12) is on the graph. What is the value of  $k$ ?

Answer: \_\_\_\_\_

8. In a proportional relationship,  $y = 8x$ . What is the value of  $x$  when  $y = 24$ ?

Answer: \_\_\_\_\_

10. In a table for a proportional relationship, when  $x = 6$ ,  $y = 18$ . Using  $y = kx$ , what is the value of  $y$  when  $x = 1$ ?

Answer: \_\_\_\_\_

12. A store sells 7 pencils for \$14, and cost is proportional to the number of pencils. Write the equation in the form  $y = kx$  that relates cost  $y$  to number of pencils  $x$ .

Answer: \_\_\_\_\_