

Unit 5: Linear Relationships

CONCEPT

Name: _____ Date: _____

Solve each problem and write your short final answer (a number, fraction, or coordinate pair) on the line.

1. In a proportional relationship $y = kx$, $y = 20$ when $x = 4$. Find the constant of proportionality k .

Answer: _____

2. Find the slope of the line that passes through the points $(2, 1)$ and $(4, 7)$.

Answer: _____

3. What is the y-intercept of the line $y = 3x + 8$?

Answer: _____

4. What is the slope of the line $y = 6x - 2$?

Answer: _____

5. In a proportional relationship, $y = 18$ when $x = 6$. Find y when $x = 10$.

Answer: _____

6. A line has the equation $y = 5x$. Does this represent a proportional relationship? Answer yes or no.

Answer: _____

7. Solve the system: $y = x + 4$ and $y = 9$. Find the value of x .

Answer: _____

8. Solve the system: $x + y = 12$ and $x - y = 4$. Give the solution as a coordinate pair (x, y) .

Answer: _____

9. Find the slope of the line that passes through the points $(1, 5)$ and $(6, 5)$.

Answer: _____

10. For the line $y = -3x + 7$, find y when $x = 2$.

Answer: _____

11. 4 notebooks cost \$12 in a proportional relationship. What is the cost of 1 notebook (the constant of proportionality)?

Answer: _____

12. Solve the system: $y = 4x$ and $y = x + 9$. Find the value of x .

Answer: _____