

Lesson 9-3

Reinforce Understanding

Write Equations to Represent Relationships Between Two Variables

I can write an equation from a table or a graph to model the relationship between the dependent and independent variables.

Worked model

A table shows x : 1, 2, 3, 4 hours worked and y : 18, 36, 54, 72 dollars earned. Write an equation.

1. Define the variables: x = hours worked, y = total dollars earned.
2. Check each row for one rate: $18 \div 1$, $36 \div 2$, and $54 \div 3$ all give 18.
3. The constant rate is 18 dollars per hour, so y is 18 times x .
4. Write it: $y = 18x$. Test the last row: $18 \times 4 \rightarrow 72$, which matches.

Answer: $y = 18x$, where x is hours worked and y is total dollars earned.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. In the equation $c = 24.95m$ for the gym membership, what does m represent?

Circle the letter of the best answer. Show how you know.

- A. The number of months of membership
- B. The total cost in dollars
- C. The monthly fee of \$24.95
- D. The name of the gym

Show your work

2. Recreation World charges \$24.95 per month. What is the total cost of 2 months of membership?

Circle the letter of the best answer. Show how you know.

- A. \$24.95
- B. \$26.95
- C. \$49.90
- D. \$74.85

3. A canoe rents for \$15 per hour. Let h = hours and c = total cost. Which equation represents the relationship?

Circle the letter of the best answer. Show how you know.

- A. $c = 15h$
- B. $c = 15 + h$
- C. $h = 15c$
- D. $c = h - 15$

Show your work
