

Lesson 9-3 • Apply Day

Reinforce Understanding

Equations from Situations

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

Worked model

A van rents for \$16 an hour. Write an equation for the total cost, then find the cost of an 11-hour rental.

1. Define the variables: h = hours rented, c = total cost in dollars.
2. In words: the total cost equals the hourly rate times the number of hours.
3. Write the rule with the constant rate in front: $c = 16h$.
4. Substitute 11 for h : $16 \times 11 \rightarrow \176 . The graph runs through (11, 176).

Answer: $c = 16h$, so an 11-hour rental costs \$176.

Practice

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

1. (Lesson 9.1) Movie tickets cost \$2 each. The table pairs tickets bought (x) with total cost (y). Complete the table, then name the variable that DEPENDS on the other — type cost or tickets.

Complete each step, then write the final answer.

1. Cost of 2 tickets: $2 \times 2 = \underline{\hspace{1cm}}$.
2. Cost of 3 tickets: $3 \times 2 = \underline{\hspace{1cm}}$.
3. The total changes BECAUSE the tickets change, so the dependent variable is the $\underline{\hspace{1cm}}$ (type cost or tickets).

Answer: _____

2. (Lesson 9.1) Movie tickets cost \$9 each. The table pairs tickets bought (x) with total cost (y). Complete the table, then name the variable that DEPENDS on the other — type cost or tickets.

Complete each step, then write the final answer.

1. Cost of 2 tickets: $2 \times 9 = \underline{\hspace{1cm}}$.
2. Cost of 3 tickets: $3 \times 9 = \underline{\hspace{1cm}}$.
3. The total changes BECAUSE the tickets change, so the dependent variable is the $\underline{\hspace{1cm}}$ (type cost or tickets).

Answer: _____

3. (Lesson 9.1) Movie tickets cost \$4 each. The table pairs tickets bought (x) with total cost (y). Complete the table, then name the variable that DEPENDS on the other — type cost or tickets.

Complete each step, then write the final answer.

1. Cost of 2 tickets: $2 \times 4 = \underline{\hspace{1cm}}$.
2. Cost of 3 tickets: $3 \times 4 = \underline{\hspace{1cm}}$.
3. The total changes BECAUSE the tickets change, so the dependent variable is the $\underline{\hspace{1cm}}$ (type cost or tickets).

Answer: _____