

Lesson 9-4 • Apply Day

Reinforce Understanding

Working Backward to a Goal

I can write an equation to represent the relationship between two variable quantities and use it to solve a real problem.

Worked model

A band earns \$26 for each poster it sells. How many posters must it sell to reach a goal of \$1,300?

1. Define: n = posters sold, e = dollars earned. The rule is $e = 26n$.
2. The goal takes the place of the output: $26n = 1,300$.
3. Undo the multiplication — divide both sides by the rate: $1,300 \div 26 \rightarrow 50$.
4. Check in context: $26 \times 50 \rightarrow \$1,300$, so 50 posters reach the goal.

Answer: The band must sell 50 posters to reach \$1,300.

Practice

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

1. (Lesson 9.4) A gym membership costs \$4.5 per month, so the equation is $c = 4.5m$. Use it to find the cost c of 3 months.

Complete each step, then write the final answer.

1. Substitute the months: $c = 4.5 \times \underline{\hspace{1cm}}$.
2. Multiply: $4.5 \times 3 = \underline{\hspace{1cm}}$.

Answer: _____

2. (Lesson 9.4) A gym membership costs \$6 per month, so the equation is $c = 6m$. Use it to find the cost c of 4 months.

Complete each step, then write the final answer.

1. Substitute the months: $c = 6 \times \underline{\hspace{1cm}}$.
2. Multiply: $6 \times 4 = \underline{\hspace{1cm}}$.

Answer: _____

3. (Lesson 9.4) A gym membership costs \$7.5 per month, so the equation is $c = 7.5m$. Use it to find the cost c of 5 months.

Complete each step, then write the final answer.

1. Substitute the months: $c = 7.5 \times \underline{\hspace{1cm}}$.
2. Multiply: $7.5 \times 5 = \underline{\hspace{1cm}}$.

Answer: _____