

Lesson 9-4 • Group 2

Reinforce Understanding

9.4 Small Group • Group 2

I can write an equation to represent the relationship between two variable quantities and use it to solve a real problem, explain what each part stands for, and build one for a situation I have not seen before.

Worked model

A press makes 22 posters each hour. Write an equation, then find the posters made in 15 hours.

1. Define: h = hours running, p = posters made. Posters depend on hours.
2. The rate is 22 posters for each hour, so the rule is $p = 22h$.
3. Substitute 15 for h : $22 \times 15 \rightarrow 330$ posters.
4. Check the context: many more hours gave a much larger count, so this fits.

Answer: $p = 22h$, so a 15-hour run makes 330 posters.

Practice

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

1. The assembly line produces 2.5 cars per hour. Complete the production table.

Complete the table. Show how you found each value.

Hours (h)	Substitute $c = 2.5h$	Cars produced (c)
4		
8 (one shift)		
100		

Show your work

2. Connect the four representations of the assembly line: scenario, equation, table, and graph.

Write the letter of the matching item on each line.

1. _____ Scenario: 2.5 cars every hour
 2. _____ Table row: $h = 8$, $c = 20$
 3. _____ Graph point (400, 1000)
 4. _____ Equation $c = 20s$
- AEquation: $c = 2.5h$
 - BGraph point (8, 20)
 - CThe 1,000-car order takes 400 hours
 - DCars counted by 8-hour shifts