

Lesson 9-4 • Group 1

Reinforce Understanding

9.4 Small Group • Group 1

With my small group, I can write an equation to represent the relationship between two variable quantities and use it to solve a real problem — one step at a time, with support.

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. Sort each statement about $c = 2.5h$.

Write the name of the correct group on each line.

Groups: True False

- _____ In 4 hours the line produces 10 cars
- _____ h is the independent variable
- _____ The unit rate is 2.5 cars per hour
- _____ In 2 hours the line produces 4 cars
- _____ c is the input of the equation
- _____ In 5 hours the line produces 25 cars

2. 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

3. The assembly line produces 2.5 cars per hour. How many cars does it produce in one 8-hour shift?

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

- A. 10.5 cars
- B. 16 cars
- C. 20 cars
- D. 25 cars