

Lesson 18: Finding a Rate by Dividing Two Quantities

Classwork

Mathematical Modeling Exercises

1. At Fun Burger, the Burger Master can make hamburgers at a rate of 4 burgers/minute. In order to address the heavy volume of customers, he needs to continue at this rate for 30 minutes. If he continues to make hamburgers at this pace, how many hamburgers will the Burger Master make in 30 minutes?

$$\frac{4 \text{ burgers}}{1 \text{ minute}} \times 30 \text{ minutes} =$$

$$4 \times 30 = 120 \text{ burgers}$$

If the Burger Master can make four burgers in one minute, he can make 120 burgers in 30 minutes.

2. Chandra is an editor at the New York Gazette. Her job is to read each article before it is printed in the newspaper. If Chandra can read 10 words/second, how many words can she read in 60 seconds?

$$\frac{10 \text{ words}}{1 \text{ second}} \times 60 \text{ seconds}$$

$$10 \times 60 = 600 \text{ words}$$

If Chandra can read 10 words in 1 second, then she can read 600 words in 60 seconds.

Exercises

Use the table below to write down your work and answers for the stations.

1. $\frac{52 \text{ words}}{1 \text{ minute}} \times 4 \text{ minutes} \quad 52 \cdot 4 = 208 \text{ words}$

If Helena types at a constant rate of 52 words/minute

2. $\frac{48 \text{ miles}}{1 \text{ hour}} \times 2 \text{ hours} \quad 48 \cdot 2 = 96 \text{ miles}$

If Jaxon drives at a constant rate of 48 miles/hour, he can drive 96 miles in 2 hours.

3. $\frac{9 \text{ miles}}{1 \text{ Day}} \times 30 \text{ days} \quad 9 \cdot 30 = 270 \text{ miles}$

If Alvin runs 9 miles a day, he would run a total of 270 miles.

4. $\frac{3 \text{ books}}{1 \text{ week}} \times 12 \text{ weeks} \quad 3 \times 12 = 36 \text{ books}$

If Brittany is required to read 3 books/week, she would read 36 books in 12 weeks.

5. $\frac{4 \text{ notebooks}}{1 \text{ dollar}} \times \$12 \quad 4 \times 12 = 48 \text{ notebooks}$

If notebooks are on sale for 4/dollar, then Mrs. Day can buy 48 notebooks for \$12.

6. $\frac{50 \text{ baskets}}{1 \text{ Day}} \times 60 \text{ Days} \quad 50 \cdot 60 = 3000$

If Kevin continues to shoot 50 baskets/day for 60 days, he would shoot a total of 3000 baskets.