

**SECTION**  
**5A**

**Ready to Go On? Skills Intervention**

**5-2 Rates**

A **rate** is a ratio that compares two quantities measured in different units. A **unit rate** is a rate with a denominator of 1.

**Vocabulary**

rate  
unit rate

**Finding Unit Rates**

- A.** The kiddie train makes 56 trips around the amusement park in 7 hours. How many trips does it make per hour?

$$\frac{\underline{\quad} \text{trips}}{7 \underline{\quad}}$$

Write a rate that compares trips and hours.

$$\frac{\underline{\quad} \text{trips} \div \underline{\quad}}{\underline{\quad} \div \underline{\quad}}$$

Divide the numerator by a number that will leave 1 hour in the denominator.

$$\frac{\underline{\quad} \text{trips}}{1 \text{ hour}}$$

Simplify.

The kiddie train makes \_\_\_\_\_.

- B.** Kerry needs 10 cups of shredded cheese to prepare 4 trays of lasagna. How much shredded cheese does she need for 1 tray of lasagna?

$$\frac{\underline{\quad} \text{cups}}{\underline{\quad}}$$

Write a rate that compares cups to trays.

$$\frac{\underline{\quad} \text{cups} \div 4}{\underline{\quad} \div 4} = \frac{\underline{\quad}}{1 \text{ tray}}$$

Divide the numerator and denominator by the same number, then simplify to get a unit rate.

Kerry needs \_\_\_\_\_ of cheese for \_\_\_ tray of lasagna.

**Finding Average Speed**

An Ace Markets truck drove 171 miles in 3 hours to bring groceries to a supermarket from the distribution center. What was the average speed of the truck?

$$\frac{\underline{\quad}}{\underline{\quad}}$$

Write the rate of speed as a fraction. Remember to include the units.

$$\frac{\underline{\quad} \div \underline{\quad}}{\underline{\quad} \div \underline{\quad}}$$

The unit rate used to express the average speed of the truck is miles per hour. Divide the numerator and denominator by a number that will leave 1 hour in the denominator.

$$\frac{\underline{\quad}}{1 \text{ hour}}$$

Simplify.

The average speed of the truck was \_\_\_\_\_ per hour.

**SECTION**

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**Ready to Go On? Problem Solving Intervention**

**5-2 Rates**

Miles per hour means miles per 1 hour. It is a unit rate of speed.

A jet plane left at noon, flew 1,855 miles, and landed at 3:30 p.m.

What was its average rate of speed?

**Understand the Problem**

1. What are the two types of quantities you are given in the problem? How are they measured?

\_\_\_\_\_

2. How many hours did the flight last? How can you tell?

\_\_\_\_\_

**Make a Plan**

3. What rate in fraction form compares of the miles the jet flew to the time it took for the flight?  $\frac{\text{_____ miles}}{\text{_____}}$

4. For that rate to become a unit rate, what numerical value must there be in the denominator? \_\_\_\_\_

5. What do you have to do in the numerator and denominator to form the unit rate?

\_\_\_\_\_

**Solve**

6. Find the average speed of the flight.  $\frac{1855 \text{ miles} \div \underline{\hspace{1cm}}}{3.5 \text{ hours} \div \underline{\hspace{1cm}}} = \frac{\underline{\hspace{1cm}} \text{ miles}}{\underline{\hspace{1cm}} \text{ hour}}$

The average speed of the flight was \_\_\_\_\_.

**Check**

7. You can add the distance traveled for each hour and for the half hour at the average rate of speed to see if the total distance traveled is the same as in the problem.

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_.