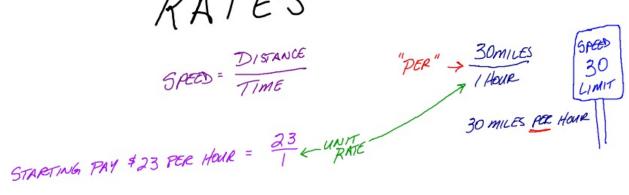


11/12



FACT
ALITA'S CAR DROVE 78 MILES ON 3 GALLONS OF GAS

"ON" > 78 MILES = 76 ALLON
P

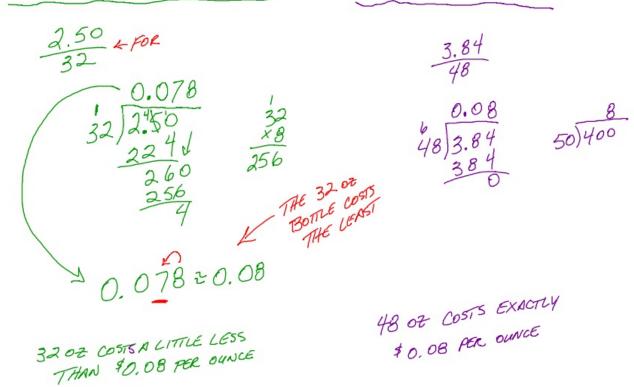
-3 GALLON
-3 GALLON
-3 QUESTION DANY MILE ON / GALLON OF GAS?

 $\frac{18}{3} = 6$   $\frac{60}{3} = 20$ 

[FACTS]
CEREAL 1202 FOR \$2.54 OR 1802 FOR \$3.50 QUESTION

1 WHICH BEX OF CEREAL COSTS LESS PER OWNCE?

# A 32-ounce bottle of apple juice for \$2.50 or a 48-ounce bottle for \$3.84.



NAME DATE PERIOD

### Lesson 1-1 Rates

A ratio that compares two quantities with different kinds of units is called a **rate**. When a rate is simplified so that it has a denominator of 1 unit, it is called a **unit rate**.

#### Example 1

DRIVING Alita drove her car 78 miles and used 3 gallons of gas. What is the car's gas mileage in miles per gallon?

Write the rate as a fraction. Then find an equivalent rate with a denominator of 1.

$$78 \text{ miles using 3 gallons} = \frac{78 \text{ mi}}{3 \text{ gal}} \qquad \qquad \text{Write the rate as a fraction.}$$
 
$$= \frac{78 \text{ mi} \div 3}{3 \text{ gal} \div 3} \qquad \qquad \text{Divide the numerator and the denominator by 3.}$$
 
$$= \frac{26 \text{ mi}}{1 \text{ gal}} \qquad \qquad \text{Simplify.}$$

The car's gas mileage, or unit rate, is 26 miles per gallon.

#### **Example 2**

SHOPPING Joe has two different sizes of boxes of cereal from which to choose. The 12-ounce box costs \$2.54, and the 18-ounce box costs \$3.50. Which box costs less per ounce?

Find the unit price, or the cost per ounce, of each box. Divide the price by the number of ounces.

12-ounce box \$2.54 
$$\div$$
 12 ounces  $\approx$  \$0.21 per ounce 18-ounce box \$3.50  $\div$  18 ounces  $\approx$  \$0.19 per ounce

The 18-ounce box costs less per ounce.

#### **Exercises**

Find each unit rate. Round to the nearest hundredth if necessary.

1. 18 people in 3 vans

2. \$156 for 3 books

3. 115 miles in 2 hours

4. 8 hits in 22 games

5. 65 miles in 2.7 gallons

**6.** 2,500 Calories in 24 hours

Choose the lower unit price.

- 7. \$12.95 for 3 pounds of nuts or \$21.45 for 5 pounds of nuts
- 8. A 32-ounce bottle of apple juice for \$2.50 or a 48-ounce bottle for \$3.84.

## Lesson 1-1 Rates Skills Practice

## **SHOW YOUR WORK!**

Find each unit rate. Round to the nearest hundredth if necessary.

1. \$112 in 8 hours



 $\frac{1/2}{8} = \frac{1}{4} = \frac{16}{4} = \frac{16}{4}$ 



- 3. 49 points in 7 games
- 5. 120 problems in 5 hours
- 7. 6 eggs in 7 days

- 9. 122 patients in 4 weeks
- 11. \$8.43 for 3 pounds
- 13. 25 letters in 4 days
- 15. 5 breaks in 8 hours
- 17. 2 pay raises in 3 years
- 19. 15 pounds in 6 weeks
- 21. 8 glasses every 24 hours

Choose the lower unit price.

- 23. \$4.99 for 6 cans or \$7.99 for 10 cans
- 24. \$21.50 for 4 pounds of lunch meat or \$15.10 for 3 pounds of lunch meat