

Lesson 1 Reteach

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.

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

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 ÷ 12 ounces ≈ \$0.21 per ounce
18-ounce box	\$3.50 ÷ 18 ounces ≈ \$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.

Copyright © The McGraw-Hill Companies, Inc. Permission is granted to reproduce for classroom use.

Lesson 1 Skills Practice

Rates

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

1. \$112 in 8 hours
2. 150 miles in 6 gallons
3. 49 points in 7 games
4. 105 students in 3 classes
5. 120 problems in 5 hours
6. 3 accidents in 12 months
7. 6 eggs in 7 days
8. 8 batteries in 3 months
9. 122 patients in 4 weeks
10. 51 gallons in 14 minutes
11. \$8.43 for 3 pounds
12. 357 miles in 6.3 hours
13. 25 letters in 4 days
14. \$99 for 12 CDs
15. 5 breaks in 8 hours
16. 3 trips in 14 months
17. 2 pay raises in 3 years
18. 7 errors in 60 minutes
19. 15 pounds in 6 weeks
20. 8 commercials in 15 minutes
21. 8 glasses every 24 hours
22. 13 feet in 5 steps

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