



## Lesson Check

### Do you know HOW?

- Which is the better buy, 6 bagels for \$3.29 or 8 bagels for \$4.15?
- What is 7 lb 4 oz converted to ounces?
- Which is longer, 12 m or 13 yd?
- A car is traveling at 55 mi/h. What is the car's speed in feet per second?

### Do you UNDERSTAND?

**Vocabulary** Tell whether each rate is a unit rate.

- 20 mi every 3 h
- 2 dollars per day
- Reasoning** Does multiplying by a conversion factor change the amount of what is being measured? How do you know?
- Reasoning** If you convert pounds to ounces, will the number of ounces be greater or less than the number of pounds? Explain.



## Practice and Problem-Solving Exercises

### A Practice

- Running** Trisha ran 10 km in 2.5 h. Jason ran 7.5 km in 2 h. Olga ran 9.5 km in 2.25 h. Who had the fastest average speed?
- Population** Bellingham, Washington, had an area of  $25.4 \text{ mi}^2$  and a population of 74,547 during one year. Bakersfield, California, had an area of  $113.1 \text{ mi}^2$  and a population of 295,536 during the same year. Which city had a greater number of people per square mile?

◀ See Problem 1.

Convert the given amount to the given unit.

◀ See Problems 2 and 3.

- |                    |                    |                       |
|--------------------|--------------------|-----------------------|
| 11. 63 yd; feet    | 12. 168 h; days    | 13. 2.5 lb; ounces    |
| 14. 200 cm; meters | 15. 4 min; seconds | 16. 1500 mL; liters   |
| 17. 9 yd; meters   | 18. 5 kg; pounds   | 19. 79 dollars; cents |
| 20. 3 qt; liters   | 21. 89 cm; inches  | 22. 2 ft; centimeters |

- Maintenance** The janitor at a school discovered a slow leak in a pipe. The janitor found that it was leaking at a rate of 4 fl oz per minute. How fast was the pipe leaking in gallons per hour? ◀ See Problem 4.

- Shopping** Mr. Swanson bought a package of 10 disposable razors for \$6.30. He found that each razor lasted for 1 week. What was the cost per day?

### B Apply

Copy and complete each statement.

- |                                |                        |
|--------------------------------|------------------------|
| 25. 7 ft 3 in. = ■ in.         | 26. 2.2 kg = ■ lb      |
| 27. 2.5 h = ■ min              | 28. 2 qt/min = ■ gal/s |
| 29. 75 cents/h = ■ dollars/day | 30. 60 ft/s = ■ km/h   |