

# Practice

# 8.1

Name \_\_\_\_\_

In Exercises 1–3, determine whether the quotient is a rate or a ratio. Then simplify.

1.  $\frac{240 \text{ feet}}{30 \text{ seconds}}$

2.  $\frac{76 \text{ players}}{144 \text{ players}}$

3.  $\frac{210 \text{ hits}}{165 \text{ games}}$

In Exercises 4–7, write the verbal phrase as a rate or a ratio. Then simplify.

Explain why the phrase is a rate or a ratio.

4. Ran 3 miles in 24 minutes

5. 10 out of 60 students agree

6. Rained 2 inches in 40 minutes

7. Painted 2 out of 3 pictures

In Exercises 8–13, write each quotient as a ratio and simplify.

8.  $\frac{4 \text{ yards}}{16 \text{ inches}}$

9.  $\frac{32 \text{ km}}{4000 \text{ m}}$

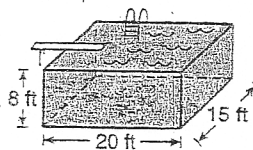
10.  $\frac{36 \text{ hours}}{7 \text{ days}}$

11.  $\frac{7 \text{ pints}}{2 \text{ gallons}}$

12.  $\frac{3 \text{ feet}}{28 \text{ inches}}$

13.  $\frac{2 \text{ pounds}}{24 \text{ ounces}}$

14. A swimming pool having dimensions as shown took 48 hours to fill. Find the volume. At what rate, in cubic feet per hour, did the water flow?



15. A family is traveling to the beach for their vacation. At 2 P.M. they stop at a gas station and fill the gas tank. You notice that the odometer reading was 36,525. At 8:30 P.M. they again stop to fill the tank. It takes about 16 gallons to fill. The odometer now reads 36,913.

a. Determine the number of miles the car travels per gallon of gas.

b. Determine the average rate, in miles per hour, at which you are traveling during that time period.

In Exercises 16 and 17, decide which is the better bargain. Explain your reasoning.

16. a. 2 quarts for \$2.15

17. a. 36 ounce box for \$3.72

b. one gallon for \$4.25

b. 3 pound box for \$5.36

In Exercises 18 and 19, find the ratio of the perimeter of the shaded figure to the perimeter of the unshaded figure. Then find the ratio of the area of the shaded figure to the area of the unshaded figure.

