

Name _____

5-3B Lesson Master**Questions on SPUR Objectives**

See pages 320–323 for objectives.

SKILLS Objective BIn 1 and 2, use $\frac{6 + 2x}{3x}$.

1. For what value of x is the expression undefined? _____
2. For what value of x is the expression equal to zero? _____

In 3 and 4, use $\frac{a}{a - 4}$.

3. For what value of a is the expression undefined? _____
4. For what value of a is the expression equal to zero? _____

In 5 and 6, use $\frac{5c}{3c - 1}$.

5. For what value of c is the expression undefined? _____
6. For what value of c is the expression equal to zero? _____

In 7–14, find the unit cost.

7. 24 cans of soda for \$4.99 _____
 8. 4 batteries for \$5.99 _____
 9. 48 granola bars for \$7.50 _____
 10. 36 rolls of toilet paper for \$14.00 _____
 11. x paper plates for \$12 _____
 12. y fruit cups for \$6.49 _____
 13. 12 markers for \$ a _____
 14. 10 juice boxes for \$ b _____
- Jason delivers 300 newspapers in 90 minutes.**
15. How many newspapers does he deliver per minute? _____
 16. How many newspapers does he deliver per hour? _____

Name

USES

Objective E

In 17–21, calculate the rate for the given situation.

17. Hurricane Helene traveled 480 miles in 48 hours.

a. miles per hour

b. miles per minute
18. Anastasia spent \$42.50 on 5 movie tickets.
19. Zanobia is paying \$22,860 for her car over a period of 60 months.
20. Ten inches of snow fell in 12 hours.
21. The word “the” is the most used word in the English language. At what rate is it used in the following famous quote from Carl Friedrich Gauss?

Mathematics is the queen of the sciences.

In 22–26, solve the problem.

22. In 2005, California’s total population of 36,132,147 ranked number one in the United States. California has 155,959 square miles of land. If its population were distributed evenly throughout the state, how many people would live in each square mile of land?
23. Printer A prints 450 pages in 15 minutes. Printer B prints 875 pages in 25 minutes. Which printer prints at a faster rate?
24. In 2003, researchers believed that by 2008 over 90 million additional laptops and PDAs will have wireless capabilities to access the Internet. What is the yearly rate of increase for these technology tools to have wireless capabilities?
25. A 42-ounce carton of oatmeal costs \$3.20. An 18-ounce carton costs \$1.25 on sale. Which size of oatmeal is the better buy?
26. A 1-ounce serving of toasted chips has 130 calories of which 40 calories are from fat. A 1-ounce serving of potato chips has 150 calories of which 90 calories are from fat. Which chips have a lower rate of fat in relationship to total number of calories?