

Study Guide

PREVIEW

What's the chapter about?

Chapter 8 is about **exponents**. In Chapter 8 you'll learn

- how to multiply and divide expressions with exponents
- how to use scientific notation in problem solving
- how to use exponential growth and decay models to solve real-life problems

KEY VOCABULARY

► **Review**

- power, p. 9
- base, p. 9
- function, p. 46

► **New**

- exponential function, p. 458
- scientific notation, p. 470
- exponential growth, p. 477

- growth factor, p. 477

- initial amount, p. 477, 484

- exponential decay, p. 484

- decay factor, p. 484

PREPARE

Are you ready for the chapter?

SKILL REVIEW Do these exercises to review key skills that you'll apply in this chapter. See the given **reference page** if there is something you don't understand.

Write the expression in exponential form. (Review Example 1, p. 9)

1. six squared
2. four cubed
3. $2y \cdot 2y \cdot 2y \cdot 2y \cdot 2y$

Find the probability of choosing a blue marble from the given bag of red and blue marbles. (Review Example 1, p. 114)

4. Number of blue marbles: 20
Total number of marbles: 80
5. Number of blue marbles: 6
Total number of marbles: 54
6. Number of red marbles: 12
Total number of marbles: 48
7. Number of red marbles: 25
Total number of marbles: 50

Find the unit rate. (Review pp. 180–182)

8. \$123.75 for working 15 hours
9. \$3.16 for 4 cantaloupes
10. \$6 for 12 cans of cat food
11. 270 miles for 6 gallons of gasoline

Here's a study strategy!

Planning Your Time:

A schedule or weekly planner can be a useful tool that allows you to coordinate your study time with time for other activities and responsibilities.

- Make a plan for each day of the week.
- Study every day, not just the day before a test.

STUDENT HELP

► **Study Tip**

"Student Help" boxes throughout the chapter give you study tips and tell you where to look for extra help in this book and on the Internet.

STUDY STRATEGY