

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

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

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.