Study Guide

PREVIEW

What's the chapter about?

Chapter 6 is about **solving and graphing linear inequalities**, many of which model real-life applications. In Chapter 6 you'll learn

- how to solve and graph inequalities.
- how to solve and graph absolute-value equations and inequalities.
- how to use measures of central tendency and statistical plots.

KEY VOCABULARY

▶ **Review**
- equation, p. 24
- inequality, p. 26
- absolute value, p. 65
- graph of an equation, p. 210

▶ **New**
- graph of a linear inequality, p. 334
- compound inequality, p. 346
- solution of a linear inequality, p. 360

- stem-and-leaf plot, p. 368
- mean, median, mode, p. 369
- box-and-whisker plot, p. 375

PREPARE

Are you ready for the chapter?

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

Decide whether 5 is a solution of the inequality. (Review Example 4, p. 26)

1. $3x + 2 < 18$ **2.** $x - 3 > 2$ **3.** $4 + 4x \geq 24$

4. $1 + 2x \leq 5$ **5.** $8 + x < 12$ **6.** $2x^2 > 45$

Solve the equation. (Review Examples 1–3, pp. 145–146)

7. $\frac{1}{2}x + 10 = 15$ **8.** $\frac{2}{3}x - 4 = 12$ **9.** $20 = 2(x + 1)$

10. $4x + 5x - 1 = 53$ **11.** $6x - 2x + 8 = 36$ **12.** $4(5 - x) = 12$

Graph the equation. (Review Examples, pp. 211, 219, and 242)

13. $y = -4x$ **14.** $y = -2x + 5$ **15.** $2y - x = 4$ **16.** $-2x + y = 3$

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!

Showing Your Work

Show all the steps when you do your homework. Showing your work makes it easier to find the place where you made a mistake. Write corrections next to the errors.