

PREVIEW

What's the chapter about?

Chapter 7 is about **systems of equations**. In Chapter 7, you'll learn

- three methods for solving a system of linear equations.
- to determine the number of solutions of a linear system.
- to graph and solve a system of linear inequalities.

KEY VOCABULARY

► Review

- coefficient, p. 102
- linear equation, p. 210
- ordered pair, p. 203
- parallel lines, p. 242

► New

- linear system, p. 398
- solution of a linear system, p. 398
- linear combination, p. 411

- system of linear inequalities, p. 432
- solution of a system of inequalities, p. 432
- graph of a system of inequalities, p. 432

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.

Simplify the expression. (Review Example 5, p. 102)

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|----------------------------------|---|------------------------------------|
| 1. $13x + 8x$ | 2. $9r + (-45r)$ | 3. $0.1d - 1.1d$ |
| 4. $\frac{1}{2}w + \frac{3}{4}w$ | 5. $-\frac{3}{7}g + \left(-\frac{1}{3}\right)g$ | 6. $-\frac{3}{10}y + \frac{7}{8}y$ |

Solve the equation if possible. (Review Example 3 and Example 4, p. 155)

- | | |
|-------------------------|--------------------------|
| 7. $2x + 6(x + 1) = -2$ | 8. $5y + 8 = 5y$ |
| 9. $1 + 4x = 4x + 1$ | 10. $2(4y - 1) + 2y = 3$ |

Decide whether the given ordered pair is a solution of the equation or inequality. (Review Example 1, p. 210 and Example 1, p. 360)

- | | |
|------------------------------|------------------------------|
| 11. $2x + y = 1, (1, -1)$ | 12. $5x + 5y = 10, (2, 1)$ |
| 13. $3y - x \geq 9, (3, -2)$ | 14. $7y - 8x > 56, (112, 7)$ |

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!

Solving Problems

It's important to sort out the useful information in a problem. Then you can organize the information and plan how to answer the question.

In your notebook, keep a list of different types of problems you find and how to solve them. Once you have a plan for finding a solution, you can calculate the answer.