Study Guide

PREVIEW

What's the chapter about?

Chapter 4 is about **congruent triangles**. Congruent triangles are triangles that are the same size and shape. In Chapter 4 you'll learn

- to prove triangles are congruent given information about their sides and angles.
- how to use congruent triangles to solve real-life problems.

KEY VOCABULARY

▶ **Review**
- congruent segments, p. 19
- acute angle, p. 28
- right angle, p. 28
- midpoint, p. 34
- vertical angles, p. 44

- alternate interior angles, p. 131

▶ **New**
- isosceles triangle, p. 194
- right triangle, p. 194
- legs and hypotenuse of a right triangle, p. 195

- interior angle, p. 196
- exterior angle, p. 196
- corollary, p. 197
- congruent figures, p. 202
- corresponding sides and angles, p. 202
- coordinate proof, p. 243

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.

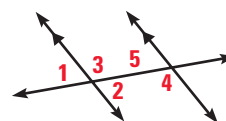*xy* **USING ALGEBRA** Solve the equation. (Skills Review, pp. 789 and 790)

1. $180 = 90 + x + 60$ **2.** $6 = 2x + 2$ **3.** $2x = 4x - 6$

4. $180 = 30 + 2x$ **5.** $90 = 3x - 90$ **6.** $3x = 27 - 6x$

Use a protractor to draw an angle that has the given measure. Check your results by measuring the angle. (Review p. 27)

7. $30°$ **8.** $135°$ **9.** $72°$

Use the diagram at the right. Write the theorem that supports each statement. (Review pp. 112 and 143)

10. $\angle 1 \cong \angle 2$ **11.** $\angle 3 \cong \angle 4$ **12.** $\angle 1 \cong \angle 5$

STUDY STRATEGY

Here's a study strategy!

Remembering Theorems

In this chapter you will learn many theorems that you will use throughout the rest of the book.

- Keep a list of theorems in your math notebook.
- Make up a helpful name for each theorem, or draw a sketch to help you recognize it.