

PREVIEW

What's the chapter about?

Chapter 3 is about **lines** and **angles**. In Chapter 3, you'll learn

- properties of parallel and perpendicular lines.
- six ways to prove that lines are parallel.
- how to write an equation of a line with given characteristics.

KEY VOCABULARY

► Review

- linear pair, p. 44
- vertical angles, p. 44
- perpendicular lines, p. 79

► New

- parallel lines, p. 129
- skew lines, p. 129
- parallel planes, p. 129

- transversal, p. 131
- alternate interior angles, p. 131
- alternate exterior angles, p. 131

- consecutive interior angles, p. 131
- flow proof, p. 136

PREPARE

Are you ready for the chapter?

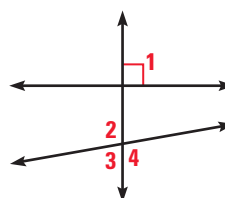
SKILL REVIEW Do these exercises to review key skills that you'll apply in this chapter. See the given **reference page** if there is something you don't understand.

USING ALGEBRA Solve each equation. (Skills Review, p. 789 and 790)

- $47 + x = 180$
- $135 = 3x - 6$
- $m = \frac{5 - 7}{2 - (-6)}$
- $\frac{1}{2} = -5\left(\frac{7}{2}\right) + b$
- $5x + 9 = 6x - 11$
- $2(x - 1) + 15 = 90$

Use the diagram. Write the reason that supports the statement. (Review pp. 44–46)

- $m\angle 1 = 90^\circ$
- $\angle 2 \cong \angle 4$
- $\angle 2$ and $\angle 3$ are supplementary.



Write the reason that supports the statement. (Review pp. 96–98)

- If $m\angle A = 30^\circ$ and $m\angle B = 30^\circ$, then $\angle A \cong \angle B$.
- If $x + 4 = 9$, then $x = 5$.
- $3(x + 5) = 3x + 15$

STUDY STRATEGY

Here's a study strategy!

Write Sample Questions

Write at least six questions about topics in the chapter. Focus on the concepts that you found difficult. Include both short-answer questions and more involved ones. Then answer your questions.