

PREVIEW

What's the chapter about?

Chapter 12 is about **surface area and volume of solids**. Surface area and volume are the measurements used to describe three-dimensional geometric figures. In Chapter 12, you'll learn

- how to calculate the surface area and volume of various solids.
- how to use surface area and volume in real-life situations, such as finding the amount of wax needed to make a candle.

KEY VOCABULARY

► Review

- equilateral triangle, p. 194
- polygon, p. 322
- convex, p. 323
- nonconvex, p. 323
- ratio, p. 457

- scale factor, p. 474

- locus, p. 642

► New

- polyhedron, p. 719
- Platonic solids, p. 721
- prism, p. 728

- cylinder, p. 730

- pyramid, p. 735

- circular cone, p. 737

- sphere, p. 759

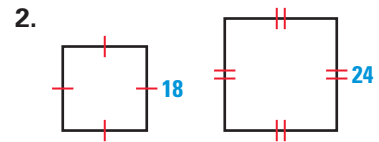
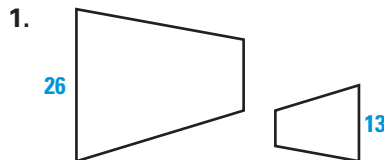
- similar solids, p. 766

PREPARE

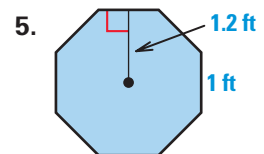
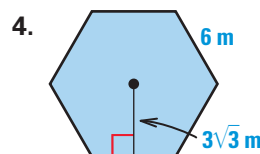
Are you ready for the chapter?

**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.

Find the scale factor of the similar polygons. (Review p. 474)



Calculate the area of the regular polygon. (Review pp. 669–671)



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!

Generalizing Formulas

When faced with having to remember many formulas, try to find an underlying concept that links some or all of the formulas together. Then, you only have to remember the concept instead of all the formulas.