Now

In Chapter 11, you will apply the big ideas listed below and reviewed in the Chapter Summary on page 753. You will also use the key vocabulary listed below.

Big Ideas

1. **Graphing square root functions**
2. **Using properties of radicals in expressions and equations**
3. **Working with radicals in geometry**

KEY VOCABULARY

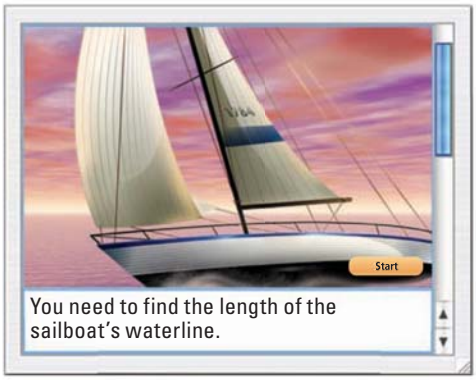
- radical expression, *p. 710*
- radical function, *p. 710*
- square root function, *p. 710*
- parent square root function, *p. 710*
- simplest form of a radical expression, *p. 719*
- rationalizing the denominator, *p. 721*
- radical equation, *p. 729*
- extraneous solution, *p. 730*
- hypotenuse, *p. 737*
- legs of a right triangle, *p. 737*
- Pythagorean theorem, *p. 737*
- distance formula, *p. 744*
- midpoint, *p. 745*
- midpoint formula, *p. 745*

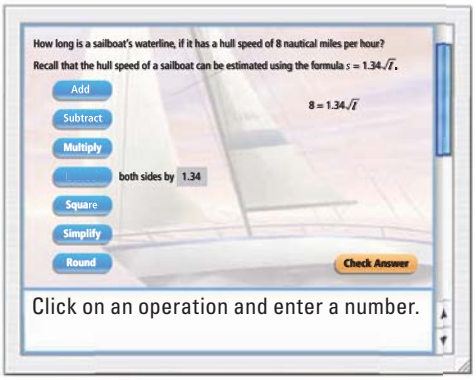
Why?

You can use radical equations to solve real-world problems. For example, you can find the length of a sailboat's waterline given the hull speed of the sailboat.

Animated Algebra

The animation illustrated below for Example 5 on page 731 helps you answer this question: What is the length of a sailboat's waterline if the sailboat has a hull speed of 8 nautical miles per hour?





Animated Algebra at classzone.com

Other animations for Chapter 11: pages 711, 719, 722, 737, 746, and 753