



## 8-2 Solve It!




There are a lot of similar right triangles here. In the lesson, you'll learn a quicker way to find some of these distances.



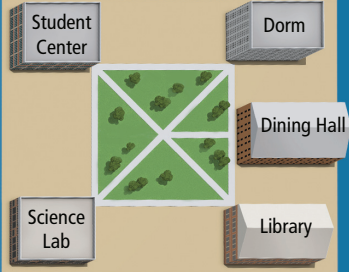
**Solve It!**

Getting Ready!



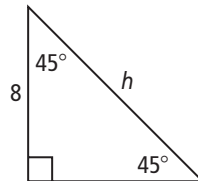
This map of part of a college campus shows a square "quad" area with walking paths. The distance from the dorm to the dining hall is 150 yd.

Suppose you go from your dorm to the dining hall, to the science lab, to your dorm, to the student center, to the library, and finally back to your dorm. To the nearest tenth, how far do you walk? Justify your answer. (Assume you always take the most direct routes and stay on the paths.)

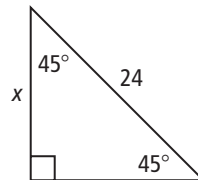


## 8-2 Lesson Quiz

1. What is the value of  $h$ ?

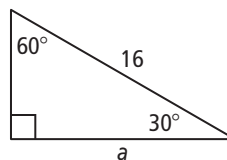


2. What is the value of  $x$ ?



3. Do you UNDERSTAND? A company logo is shaped like an equilateral triangle with 2-in.-long sides. What is the height of the logo? Round to the nearest tenth.

4. What is the value of  $a$ ?



### Answers

#### Solve It!

1960.7 yd;  
 $150 + 150 + 150\sqrt{2} +$   
 $300\sqrt{2} + 300 + 300\sqrt{2} + 300$   
 Total:  
 $900 + 750\sqrt{2} \approx 1960.7$  yd

#### Lesson Quiz

1.  $8\sqrt{2}$
2.  $12\sqrt{2}$
3. 1.7 in.
4.  $8\sqrt{3}$