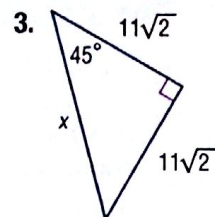
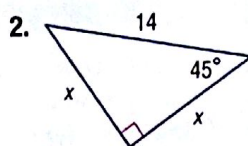
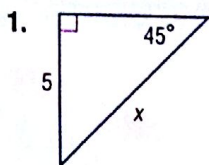
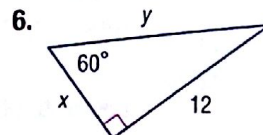
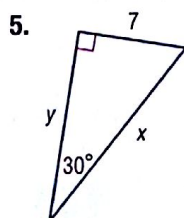
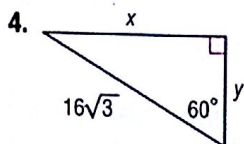




Examples 1-2 Find  $x$ .



Example 3 Find  $x$  and  $y$ .



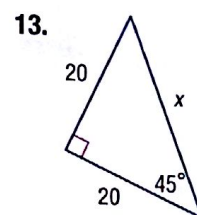
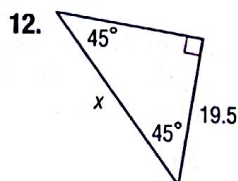
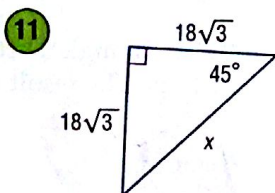
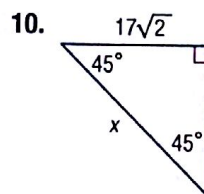
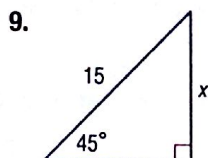
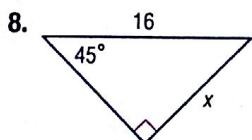
Example 4 7. ART Paulo is mailing a piece of art that he has rolled into a tube. The diameter of the roll is  $3\frac{1}{4}$  inches. He has a mailer that is a triangular prism with 4-inch equilateral triangle bases as shown in the diagram. Will the rolled art fit through the opening of the mailer? Explain.



Practice and Problem Solving

Extra Practice begins on page 969.

Examples 1-2 Find  $x$ .

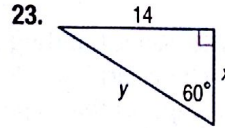
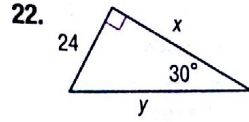
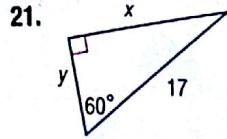
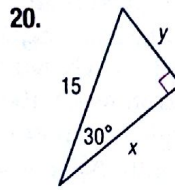
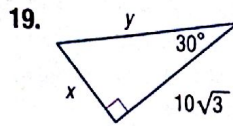
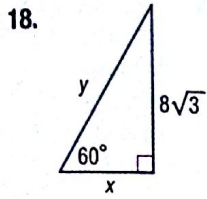


14. If a  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle has a hypotenuse length of 9, find the leg length.
15. Determine the length of the leg of a  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle with a hypotenuse length of 11.
16. What is the length of the hypotenuse of a  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle if the leg length is 6 centimeters?
17. Find the length of the hypotenuse of a  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle with a leg length of 8 centimeters.



**Example 3**

Find  $x$  and  $y$ .

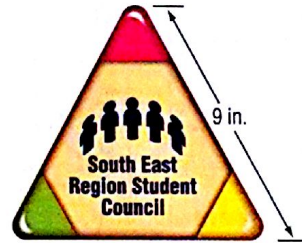


24. An equilateral triangle has an altitude length of 18 feet. Determine the length of a side of the triangle.

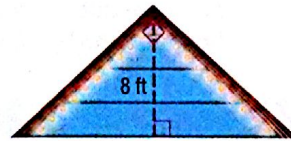
25. Find the length of the side of an equilateral triangle that has an altitude length of 24 feet.

**Example 4**

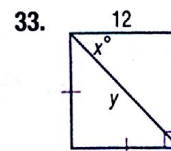
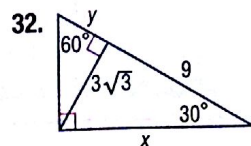
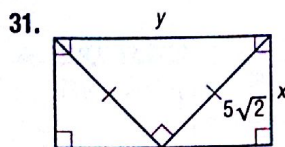
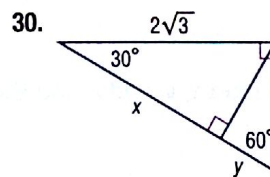
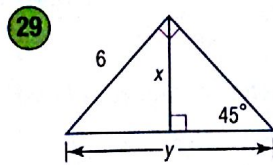
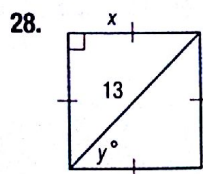
26. **PACKAGING** Refer to the beginning of the lesson. Each highlighter is an equilateral triangle with 9-inch sides. Will the highlighter fit in a 10-inch by 7-inch rectangular box? Explain.



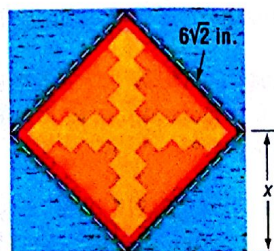
27. **EVENT PLANNING** Grace is having a party, and she wants to decorate the gable of the house as shown. The gable is an isosceles right triangle and she knows that the height of the gable is 8 feet. What length of lights will she need to cover the gable below the roof line?



Find  $x$  and  $y$ .



34. **QUILTS** The quilt block shown is made up of a square and four isosceles right triangles. What is the value of  $x$ ? What is the side length of the entire quilt block?



total