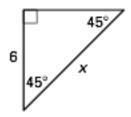
## Honors Geometry

## Worksheet 74

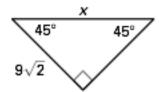
Name \_\_\_\_\_

Find the value of x. Write your answer in simplest radical form.

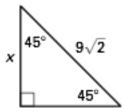
1.



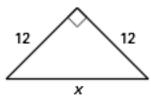
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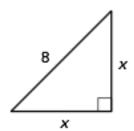
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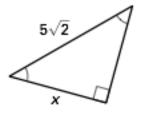
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5

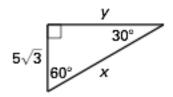


6.

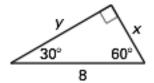


Find the value of each variable. Write your answers in simplest radical form.

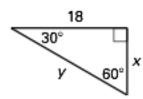
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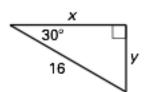
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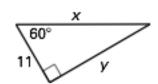
9



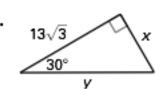
10.



11.

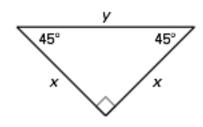


12.



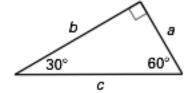
## Complete the table.

13.



x	5		$\sqrt{2}$	9	
y		4√2			24

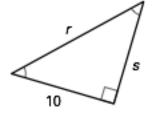
14.



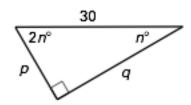
a	9			11	
b		9	5√3		
c					16

Find the value of each variable. Write your answers in simplest radical form.

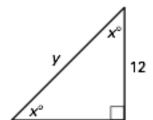
15.



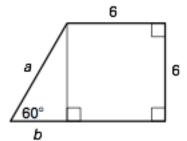
16.



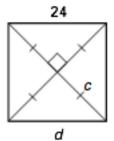
17.



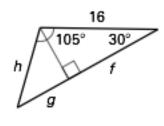
18.



19.



20.



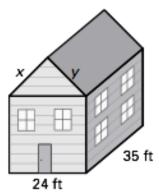
The side lengths of a triangle are given. Determine whether it is a 45°-45°-90° triangle, a 30°-60°-90° triangle, or neither.

**21.** 5, 10, 
$$5\sqrt{3}$$

**22.** 
$$7, 7, 7\sqrt{3}$$

**23.** 6, 6, 
$$6\sqrt{2}$$

- 24. Roofing You are replacing the roof on the house shown, and you want to know the total area of the roof. The roof has a 1-1 pitch on both sides, which means that it slopes upward at a rate of 1 vertical unit for each 1 horizontal unit.
  - a. Find the values of x and y in the diagram.
  - b. Find the total area of the roof to the nearest square foot.



- 25. Skateboard Ramp You are using wood to build a pyramid-shaped skateboard ramp. You want each ramp surface to incline at an angle of 30° and the maximum height to be 56 centimeters as shown.
  - a. Use the relationships shown in the diagram to determine the lengths a, b, c, and d to the nearest centimeter.
  - b. Suppose you want to build a second pyramid ramp with a 45° angle of incline and a maximum height of 56 inches. You can use the diagram shown by simply changing the 30° angle to 45°. Determine the lengths a, b, c, and d to the nearest centimeter for this ramp.

