

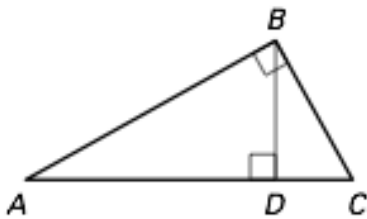
Geometry

Worksheet 7.3

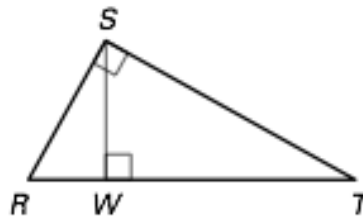
Name _____

Identify the three similar right triangles in the given diagram.

1.



2.

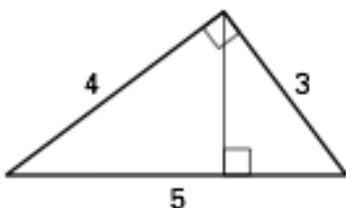


Use the above diagrams.

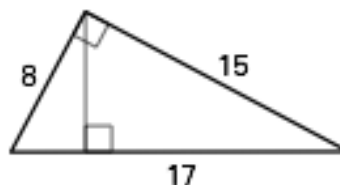
3. Draw and label the vertices of the three similar right triangles from Exercise 1 so that the corresponding sides and angles have the same orientation.
4. Draw and label the vertices of the three similar right triangles from Exercise 2 so that the corresponding sides and angles have the same orientation.

Find the length of the altitude to the hypotenuse. Round decimal answers to the nearest tenth.

5.

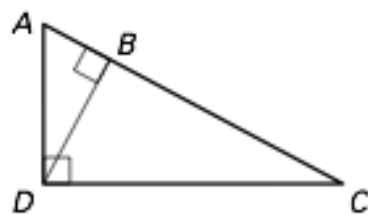


6.



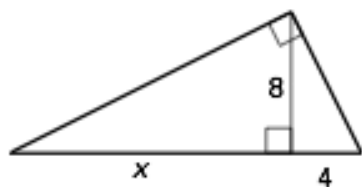
7. **Multiple Choice** Use the diagram at the right.
Which proportion is true?

A. $\frac{AB}{AD} = \frac{AD}{DC}$ B. $\frac{AC}{AB} = \frac{AB}{DB}$ C. $\frac{AB}{DB} = \frac{DB}{BC}$

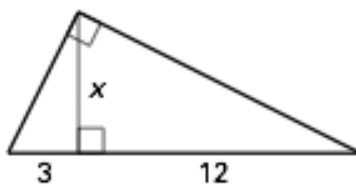


Complete and solve the proportion.

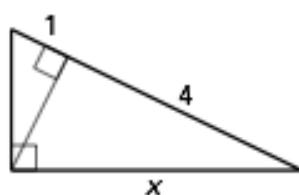
8. $\frac{x}{8} = \frac{?}{4}$



9. $\frac{12}{x} = \frac{x}{?}$

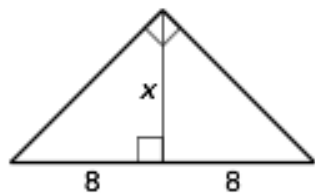


10. $\frac{5}{x} = \frac{x}{?}$

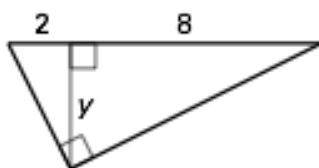


Find the value of the variable.

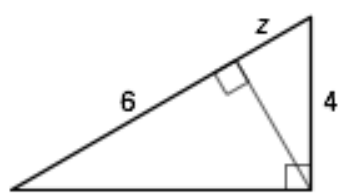
11.



12.

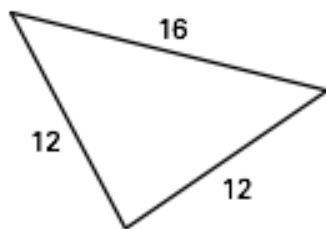


13.

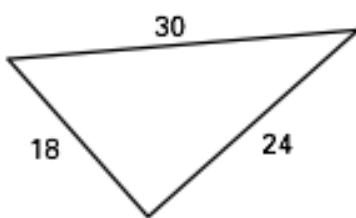


Tell whether the triangle is a right triangle. If so, find the length of the altitude to the hypotenuse. Round decimal answers to the nearest tenth.

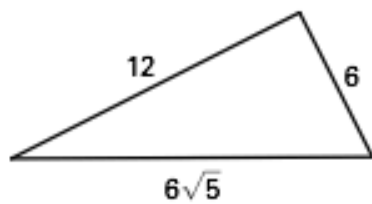
14.



15.



16.



- 17. Door Stop** You are designing a door stop that you want to be 2 inches tall. Other information is given in the diagram. How long is the base length b in inches?

