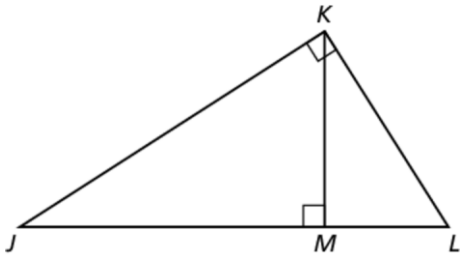
Name_____ Date _____

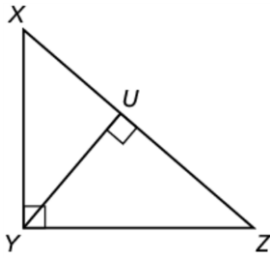
9.3 Practice A

In Exercises 1 and 2, identify the similar triangles.

1.

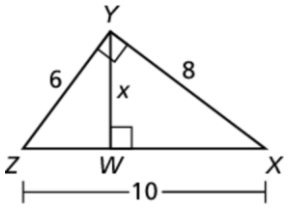


2.

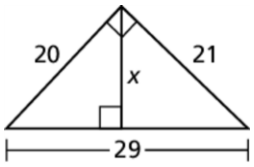


In Exercises 3–5, find the value of *x*.

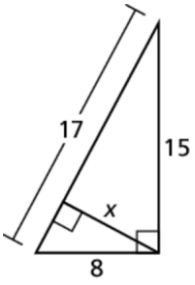
3.



4.



5.



In Exercises 6–8, find the geometric mean of the two numbers.

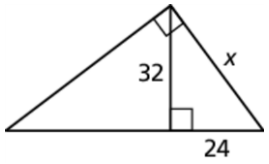
6. 3 and 12

7. 4 and 14

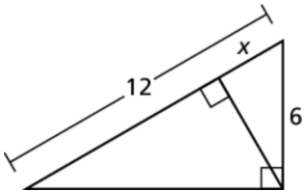
8. 10 and 24

In Exercises 9–11, find the value of *x*.

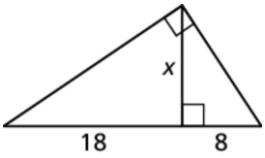
9.



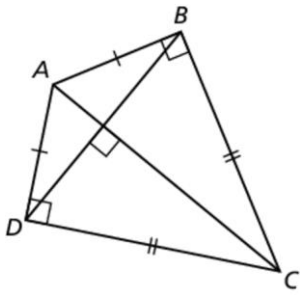
10.



11.



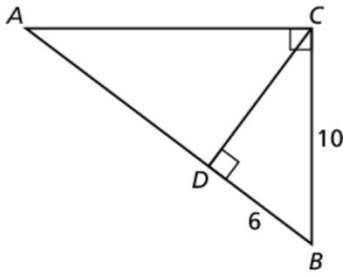
12. You are designing a diamond-shaped kite. You know that $AB = 38.4$ centimeters, $BC = 72$ centimeters, and $AC = 81.6$ centimeters. You want to use a straight crossbar $\overline{BD}$. About how long should it be?



Name _____ Date _____

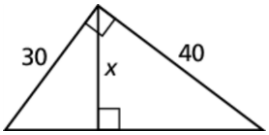
9.3 Practice B

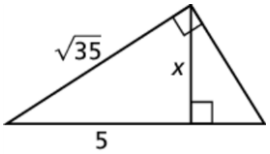
In Exercises 1–3, use the diagram.

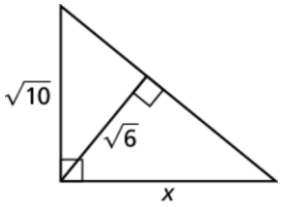


1. Identify the similar triangles.
2. Which segment's length is the geometric mean of AB and DB?
3. Find CD, AD, and AC.

In Exercises 4–6, find the value of x.

4. 

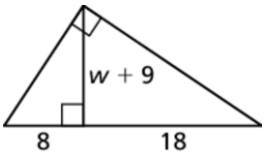
5. 

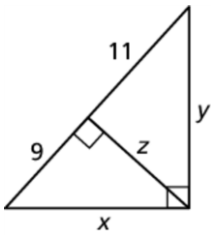
6. 

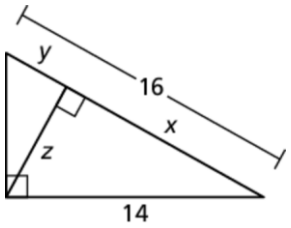
In Exercises 7–9, find the geometric mean of the two numbers.

7. 12 and 24
8. 16 and 25
9. $\frac{1}{2}$ and 40

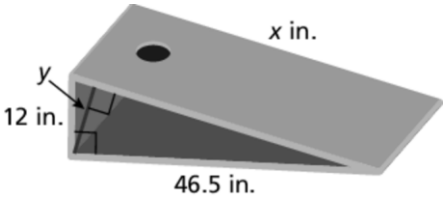
In Exercises 10–12, find the value(s) of the variable(s).

10. 

11. 

12. 

13. You build a cornhole game. The game is constructed from a sheet of plywood supported by two boards. The two boards form a right angle and their lengths are 12 inches and 46.5 inches.



   a. Find the length x of the plywood to the nearest inch.

   b. You put in a support that is altitude y to the hypotenuse of the right triangle. What is the length of the support? Round your answer to the nearest tenth.

   c. Where does the support attach to the plywood? Explain.