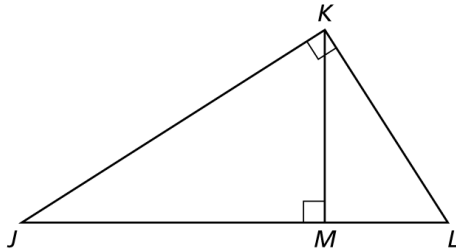


# 9.3

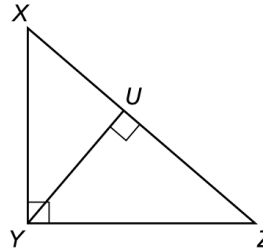
## Practice A

In Exercises 1 and 2, identify the similar triangles.

1.

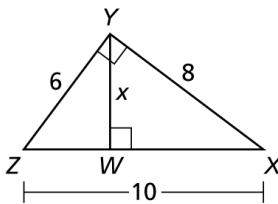


2.

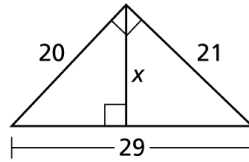


In Exercises 3–5, find the value of  $x$ .

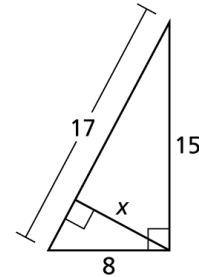
3.



4.



5.



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

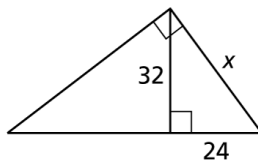
6. 3 and 12

7. 4 and 14

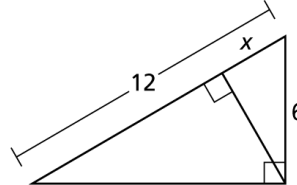
8. 10 and 24

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

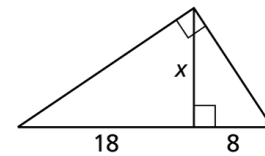
9.



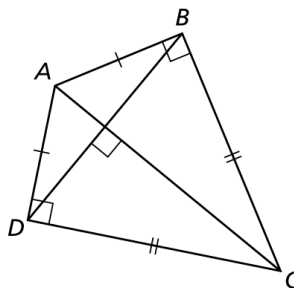
10.



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?

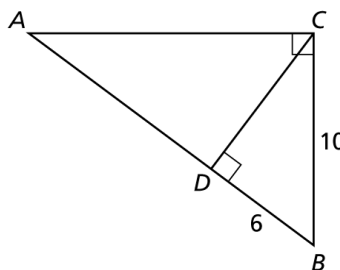


# 9.3

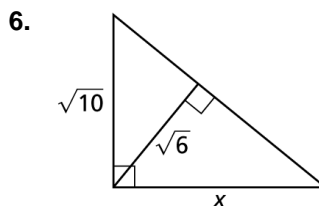
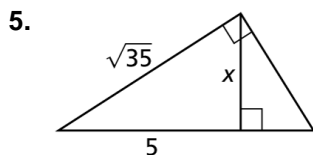
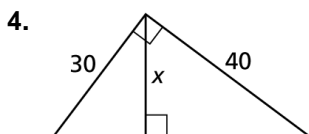
## Practice B

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  $AC$ .



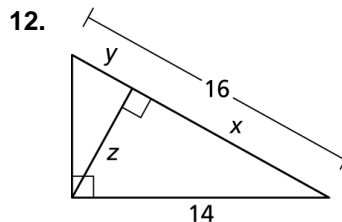
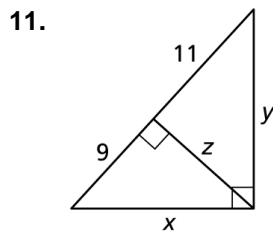
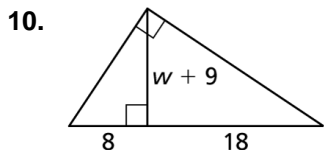
In Exercises 4–6, find the value of  $x$ .



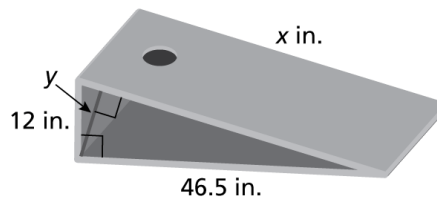
In Exercises 7–9, find the geometric mean of the two numbers.

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).



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.