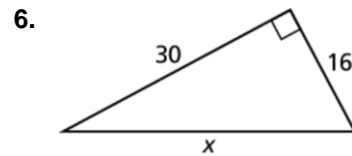
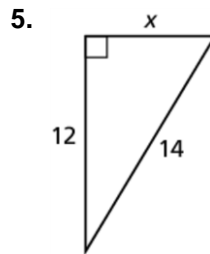
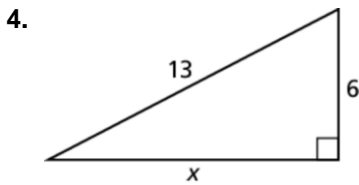
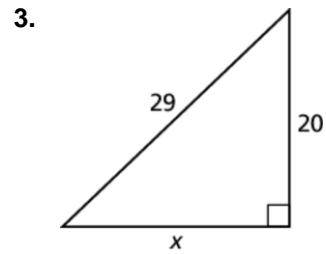
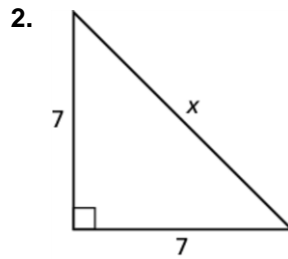
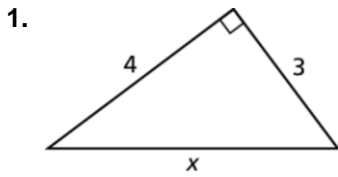


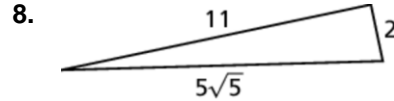
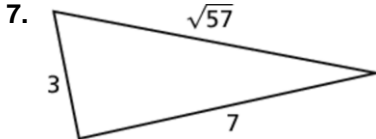
# 9.1

## Practice A

In Exercises 1–6, find the value of  $x$ . Then tell whether the side lengths form a Pythagorean triple.



In Exercises 7 and 8, tell whether the triangle is a right triangle.



In Exercises 9–12, verify that the segment lengths form a triangle. Is the triangle acute, right, or obtuse?

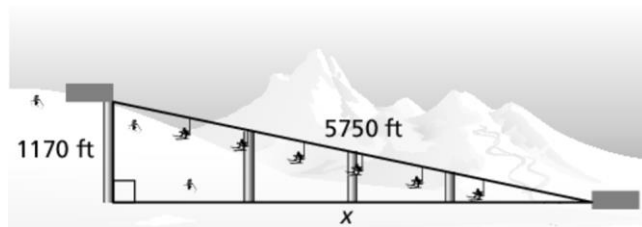
9. 5, 12, and 13

10. 5, 7, and 8

11. 2, 10, and 11

12.  $\sqrt{8}$ , 4, and 6

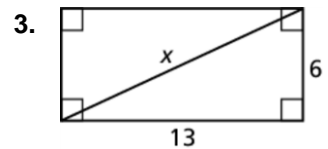
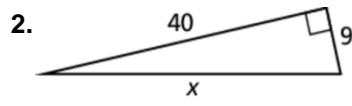
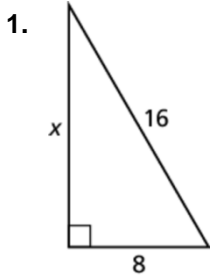
13. A ski lift forms a right triangle, as shown. Use the Pythagorean Theorem (Theorem 9.1) to approximate the horizontal distance traveled by a person riding the ski lift. Round your answer to the nearest whole foot.



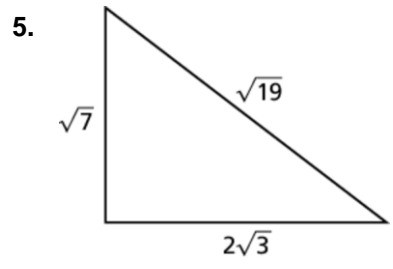
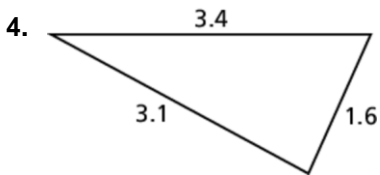
# 9.1

## Practice B

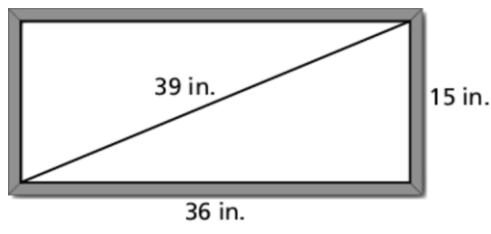
In Exercises 1–3, find the value of  $x$ . Then tell whether the side lengths form a Pythagorean triple.



In Exercises 4 and 5, tell whether the triangle is a right triangle.



6. You construct a picture frame with a diagonal piece attached to the back for support, as shown. Can you tell from the dimensions whether the corners of the frame are right angles? Explain.



In Exercises 7–9, verify that the segment lengths form a triangle. Is the triangle *acute*, *right*, or *obtuse*?

7. 14, 48, and 50      8. 7.1, 13.3, and 19.5      9.  $\sqrt{67}$ , 4, and 9

10. A triangle has side lengths of 12 feet and 18 feet. Your friend claims that the third side must be greater than 6 feet. Is your friend correct? Explain.

11. The diagram shows the design of a house roof. Each side of the roof is 24 feet long, as shown. Use the Pythagorean Theorem (Theorem 9.1) to answer each question.
- What is the approximate width  $w$  of the house?
  - What is the approximate height  $h$  of the roof above the ceiling?

