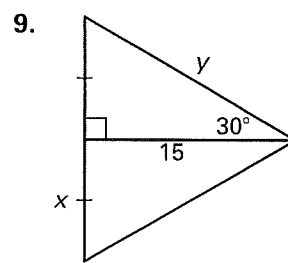
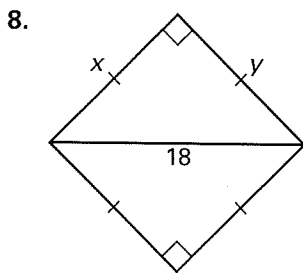
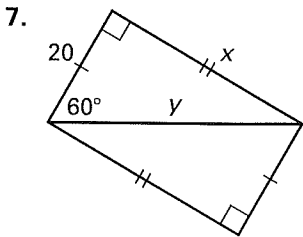
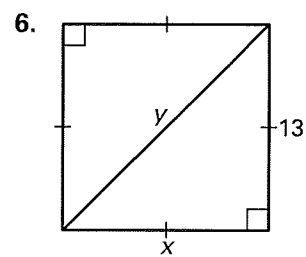
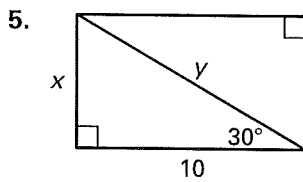
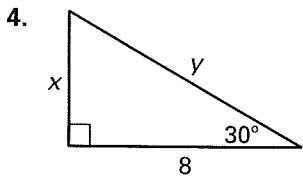
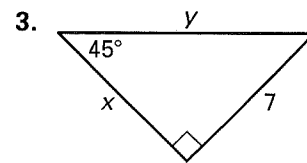
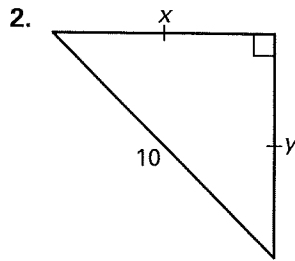
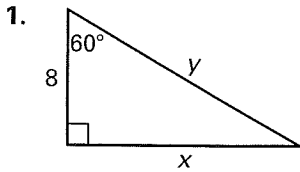


Practice B

For use with pages 551–557

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

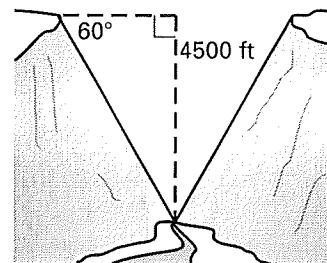


Sketch the figure that is described. Find the requested length. Round decimals to the nearest tenth.

10. The perimeter of a square is 20 centimeters. Find the length of a diagonal.
11. The altitude of an equilateral triangle is 18 inches. Find the length of a side.
12. The hypotenuse of an isosceles right triangle is 16 centimeters. Find the length of a side.
13. The length of the diagonal of a square is $\frac{5\sqrt{2}}{2}$. Find the length of a side.

Canyon In Exercises 14–16, use the diagram and the following information.

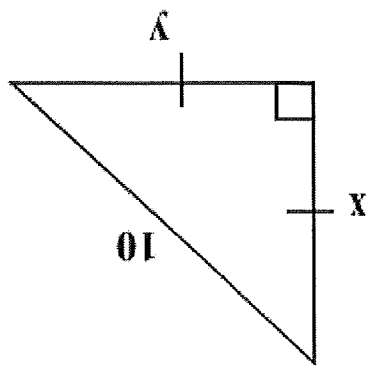
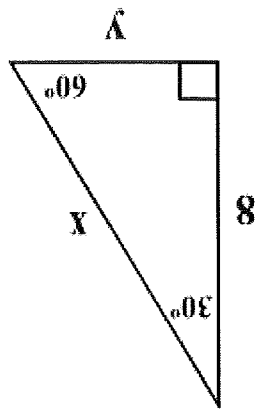
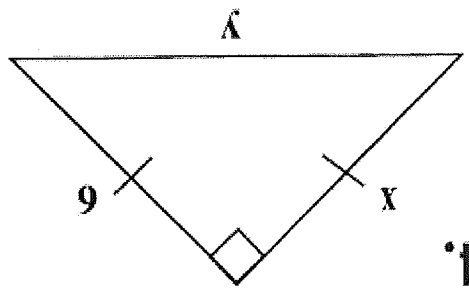
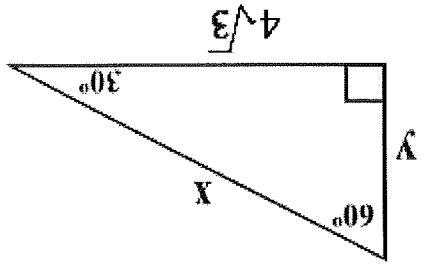
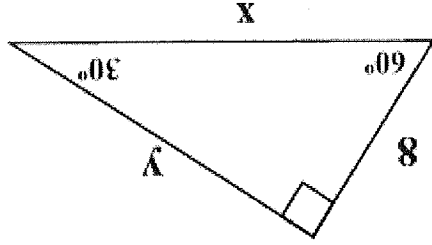
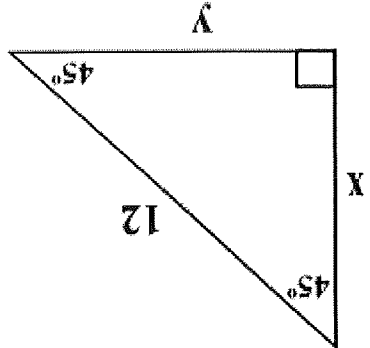
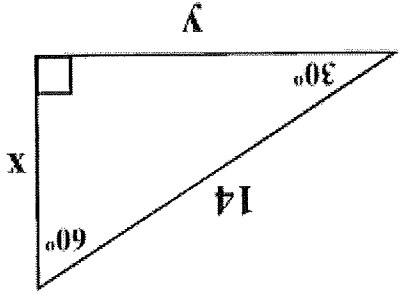
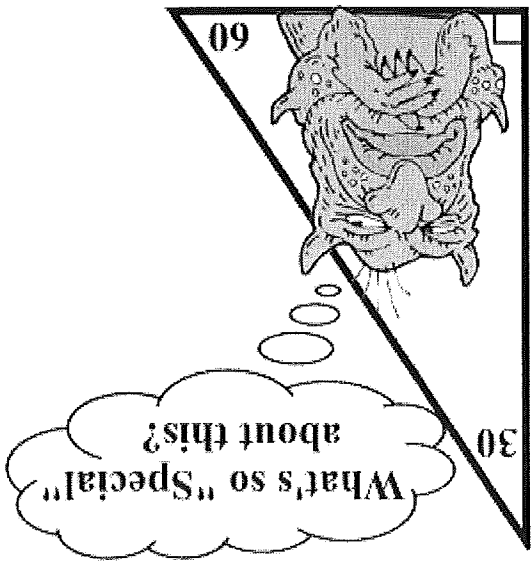
A point on the edge of a symmetrical canyon is 4500 feet above a river that cuts through the canyon floor. The angle of depression from each side of the canyon to the canyon floor is 60° .



14. Find the distance across the canyon.
15. Find the length of the canyon wall (from the edge to the river).
16. Is it more or less than a mile across the canyon? (5280 feet = 1 mile)

SPECIAL RIGHT TRIANGLES

Find the unknown lengths.

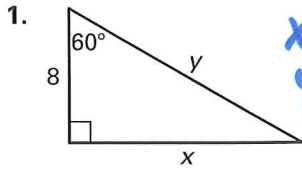


Practice B

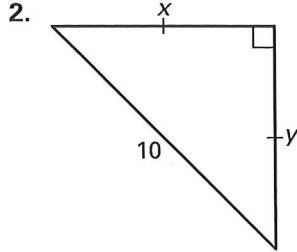
For use with pages 551-557

Key

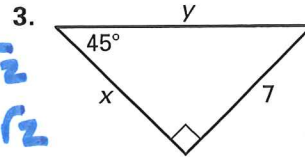
Find the value of each variable. Write answers in simplest radical form.



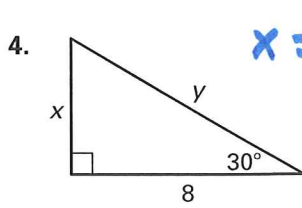
$x = 8\sqrt{3}$
 $y = 16$



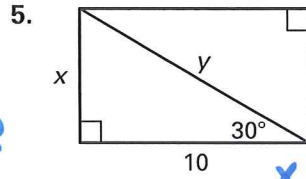
$x = 5\sqrt{2}$
 $y = 5\sqrt{2}$



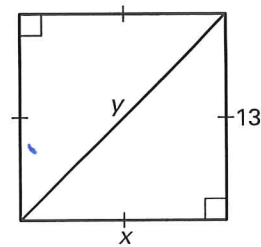
$x = 7$
 $y = 7\sqrt{2}$



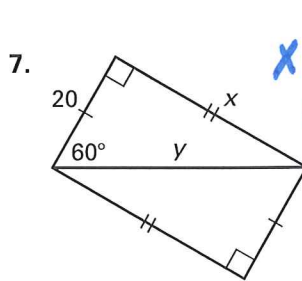
$x = \frac{8\sqrt{3}}{3}$
 $y = \frac{16\sqrt{3}}{3}$



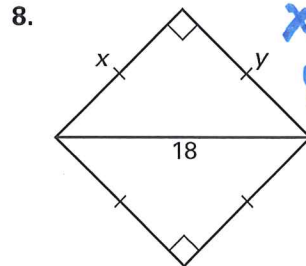
$y = \frac{20\sqrt{3}}{3}$
 $x = \frac{10\sqrt{3}}{3}$



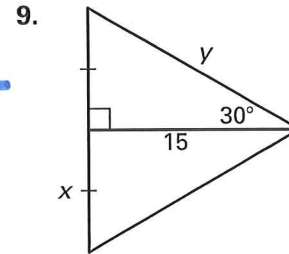
$x = 13$
 $y = 13\sqrt{2}$



$x = 20\sqrt{3}$
 $y = 40$



$x = 9\sqrt{2}$
 $y = 9\sqrt{2}$



$x = 5\sqrt{3}$
 $y = 10\sqrt{3}$

Sketch the figure that is described. Find the requested length. Round decimals to the nearest tenth.

10. The perimeter of a square is 20 centimeters. Find the length of a diagonal.



11. The altitude of an equilateral triangle is 18 inches. Find the length of a side.



$x = 12\sqrt{3} \text{ in}$

12. The hypotenuse of an isosceles right triangle is 16 centimeters. Find the length of a side.



$s = 8\sqrt{2} \text{ cm}$

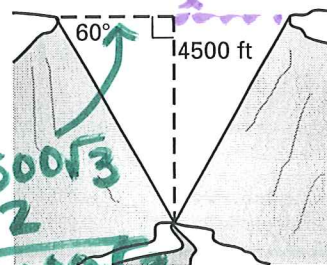
13. The length of the diagonal of a square is $\frac{5\sqrt{2}}{2}$. Find the length of a side.

$s = \frac{5}{2}$



Canyon In Exercises 14-16, use the diagram and the following information.

A point on the edge of a symmetrical canyon is 4500 feet above a river that cuts through the canyon floor. The angle of depression from each side of the canyon to the canyon floor is 60° .



14. Find the distance across the canyon. $3000\sqrt{3} \text{ ft}$

15. Find the length of the canyon wall (from the edge to the river). $3000\sqrt{3} \text{ ft}$

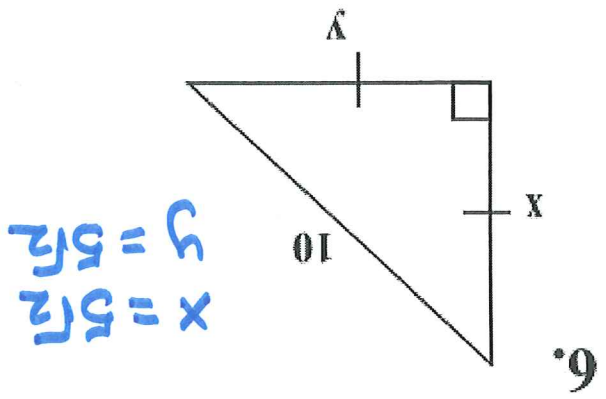
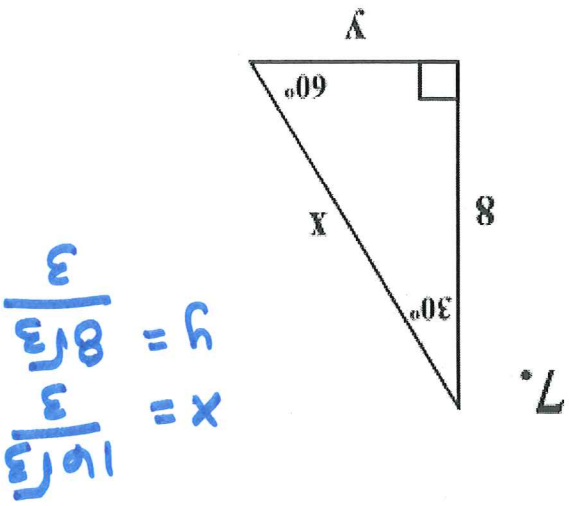
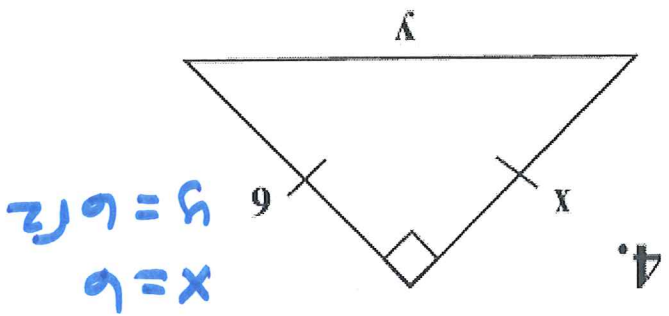
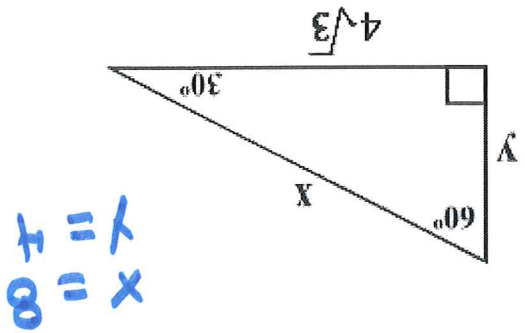
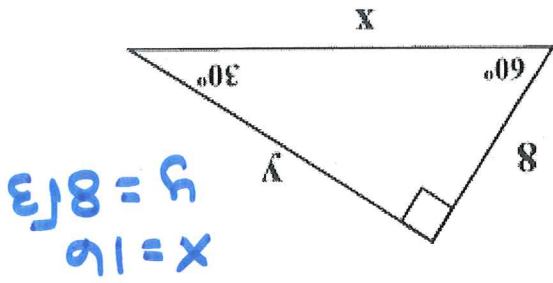
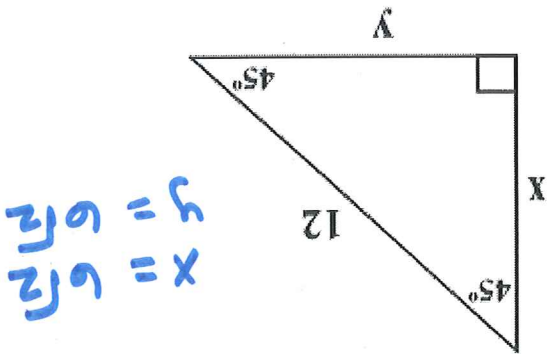
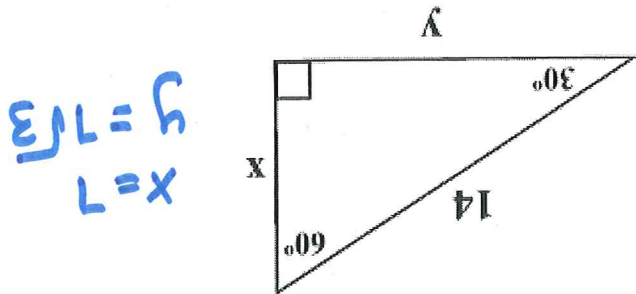
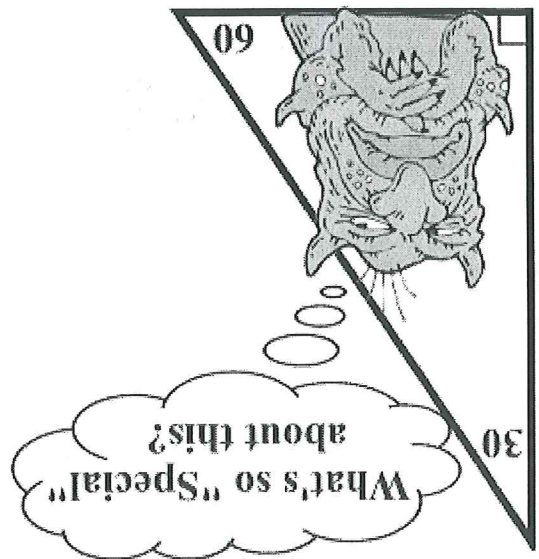
16. Is it more or less than a mile across the canyon? (5280 feet = 1 mile)

$3000\sqrt{3} \approx 5196.15 \text{ ft}$

smaller than a mile

SPECIAL RIGHT TRIANGLES

Find the unknown lengths.



Key