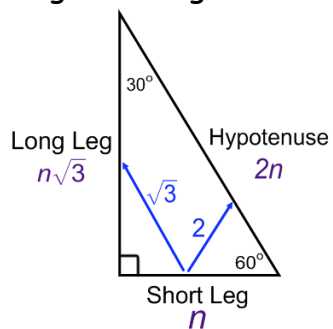# Trigonometry Prerequisite: Special Right Triangles
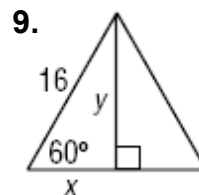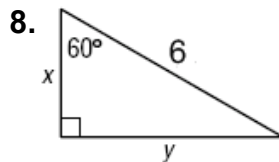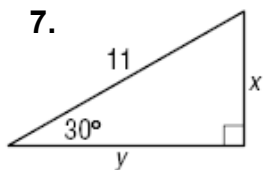
Special Right Triangles: 30° - 60° - 90°

Hypotenuse = 2 * Short Leg

Long Leg = Short Leg * $\sqrt{3}$

Find the value of x and y in each triangle.

1.

2.

3.

4.

5.

6.

7.
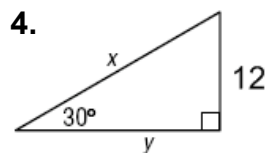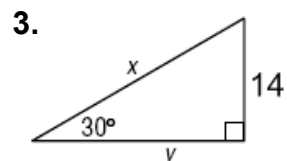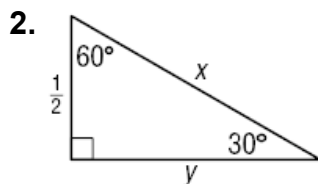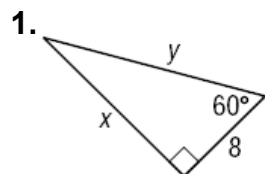

8.

9.
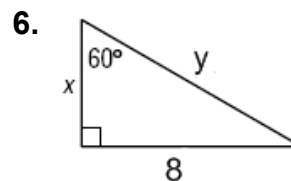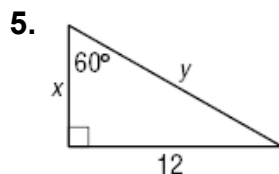
Sketch the figure that is described. Then, find the requested measure.

10. An equilateral triangle has a side length of 10 inches. Find the length of the triangles altitude.
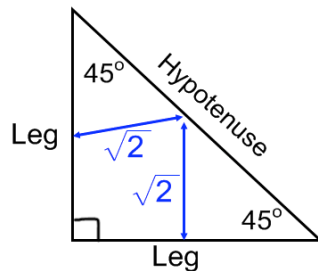
11. The altitude of an equilateral triangle is 18 inches. Find the length of a side.
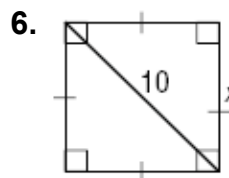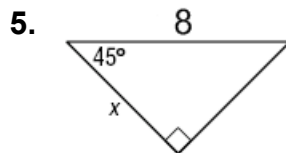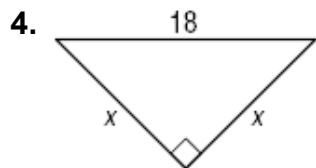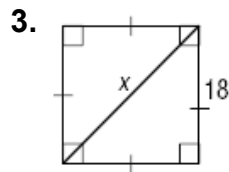
Trigonometry Prerequisite: Special Right Triangles

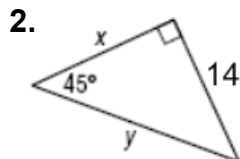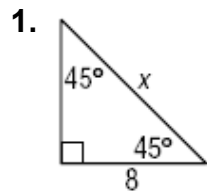## Special Right Triangles: 45° - 45° - 90°

Hypotenuse = Leg * $\sqrt{2}$ $\sqrt{2}$

Leg = $\dfrac{\text{hypotenuse}}{\sqrt{2}}$

Find the value of x in each triangle.

1.

2.

3.

4.

5.

6.

Sketch the figure that is described. Find the requested measure.

7. The perimeter of a square is 48 meters. Find the length of a diagonal.

8. The perimeter of a square is 20 cm. Find the length of a diagonal.

Find the value of x and y in each figure.

9.

10.

11.

12.

13.

14.