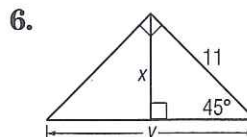
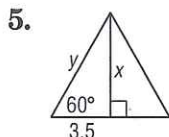
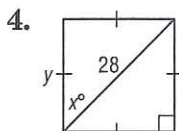
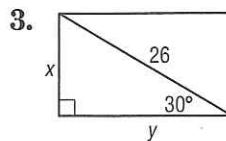
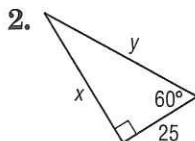
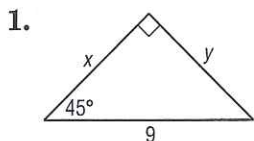


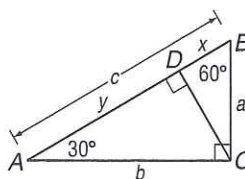
7-3 Practice

Special Right Triangles

Find x and y .



For Exercises 7–9, use the figure at the right.



7. If $a = 4\sqrt{3}$, find b and c .

8. If $x = 3\sqrt{3}$, find a and CD .

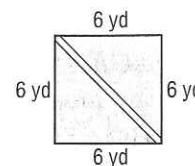
9. If $a = 4$, find CD , b , and y .

10. The perimeter of an equilateral triangle is 39 centimeters. Find the length of an altitude of the triangle.

11. $\triangle MIP$ is a 30° - 60° - 90° triangle with right angle at I , and \overline{IP} the longer leg. Find the coordinates of M in Quadrant I for $I(3, 3)$ and $P(12, 3)$.

12. $\triangle TJK$ is a 45° - 45° - 90° triangle with right angle at J . Find the coordinates of T in Quadrant II for $J(-2, -3)$ and $K(3, -3)$.

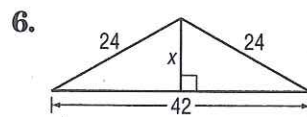
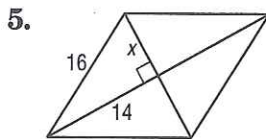
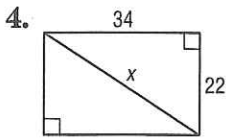
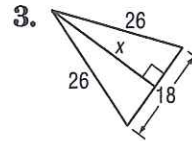
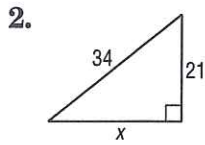
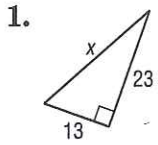
13. **BOTANICAL GARDENS** One of the displays at a botanical garden is an herb garden planted in the shape of a square. The square measures 6 yards on each side. Visitors can view the herbs from a diagonal pathway through the garden. How long is the pathway?



7-2 Practice

The Pythagorean Theorem and Its Converse

Find x .



Determine whether $\triangle GHI$ is a right triangle for the given vertices. Explain.

7. $G(2, 7), H(3, 6), I(-4, -1)$

8. $G(-6, 2), H(1, 12), I(-2, 1)$

9. $G(-2, 1), H(3, -1), I(-4, -4)$

10. $G(-2, 4), H(4, 1), I(-1, -9)$

Determine whether each set of measures can be the measures of the sides of a right triangle. Then state whether they form a Pythagorean triple.

11. 9, 40, 41

12. 7, 28, 29

13. 24, 32, 40

14. $\frac{9}{5}, \frac{12}{5}, 3$

15. $\frac{1}{3}, \frac{2\sqrt{2}}{3}, 1$

16. $\frac{\sqrt{4}}{7}, \frac{2\sqrt{3}}{7}, \frac{4}{7}$

17. **CONSTRUCTION** The bottom end of a ramp at a warehouse is 10 feet from the base of the main dock and is 11 feet long. How high is the dock?

