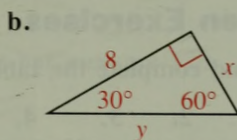
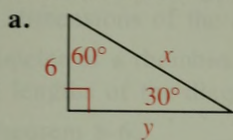


Example 2 Find the values of x and y .



Solution a. hyp. = $2 \cdot$ shorter leg

$$x = 2 \cdot 6$$

$$x = 12$$

$$\text{longer leg} = \sqrt{3} \cdot \text{shorter leg}$$

$$y = 6\sqrt{3}$$

b. longer leg = $\sqrt{3} \cdot$ shorter leg

$$8 = \sqrt{3} \cdot x$$

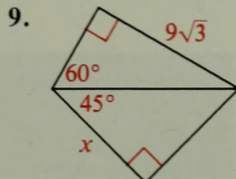
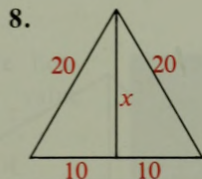
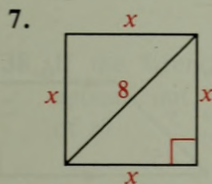
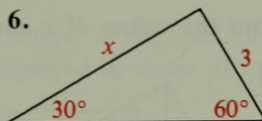
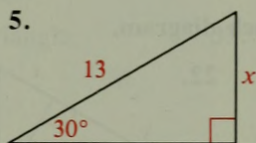
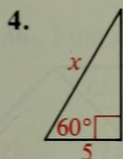
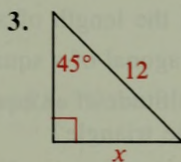
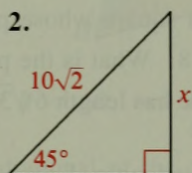
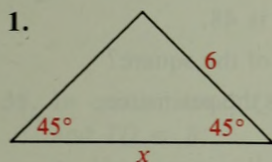
$$x = \frac{8}{\sqrt{3}} = \frac{8\sqrt{3}}{3}$$

hyp. = $2 \cdot$ shorter leg

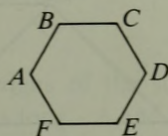
$$y = 2 \cdot \frac{8\sqrt{3}}{3} = \frac{16\sqrt{3}}{3}$$

Classroom Exercises

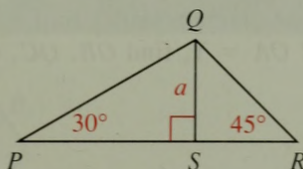
Find the value of x .



10. In regular hexagon $ABCDEF$, $AB = 8$. Find AD and AC .



11. Express PQ , PS , and QR in terms of a .



12. If the measures of the angles of a triangle are in the ratio $1:2:3$, are the lengths of the sides in the same ratio? Explain.