

## Practice

**Simplifying Square Roots**

Simplify each expression.

1.  $\sqrt{169} = 13$

2.  $\sqrt{36} = 6$

3.  $\sqrt{25} = 5$

4.  $\sqrt{300} = 10\sqrt{3}$

5.  $\sqrt{75} = 5\sqrt{3}$

6.  $\sqrt{45} = 3\sqrt{5}$

7.  $\sqrt{3} \cdot \sqrt{6} = 3\sqrt{2}$

8.  $\sqrt{3} \cdot \sqrt{7} = \sqrt{21}$

9.  $\sqrt{5} \cdot \sqrt{30} = 5\sqrt{6}$

10.  $\frac{\sqrt{35}}{\sqrt{7}} = \sqrt{5}$

11.  $\frac{\sqrt{25}}{\sqrt{64}} = \frac{5}{8}$

12.  $\sqrt{\frac{64}{16}} = 2$

13.  $\frac{\sqrt{5}}{\sqrt{3}} = \frac{\sqrt{15}}{3}$

14.  $\frac{\sqrt{3}}{\sqrt{5}} = \frac{\sqrt{15}}{5}$

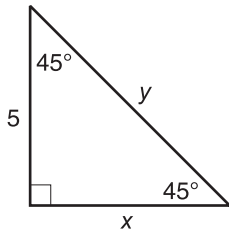
15.  $\sqrt{\frac{2}{10}} = \frac{\sqrt{5}}{5}$

## Practice

 **$45^\circ$ - $45^\circ$ - $90^\circ$  Triangles**

Find the missing measure. Write all radicals in simplest form.

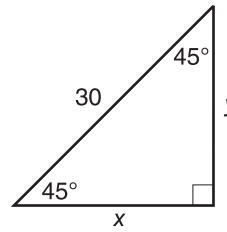
1.



$$x = 5$$

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

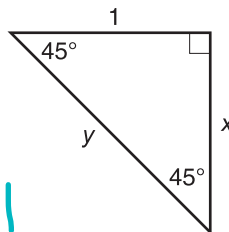
2.



$$x = 15\sqrt{2}$$

$$y = 15\sqrt{2}$$

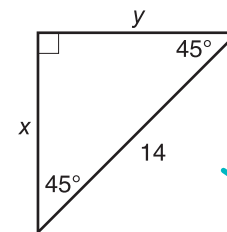
3.



$$x = 1$$

$$y = \sqrt{2}$$

4.



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

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

5. Find the length of a diagonal of a square with sides 10 inches long.

$$10\sqrt{2}$$

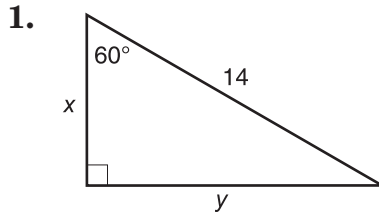
6. Find the length of a side of a square whose diagonal is 4 centimeters.

$$2\sqrt{2}$$

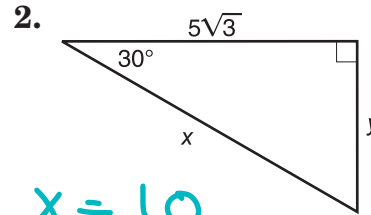
## Practice

### 30°-60°-90° Triangles

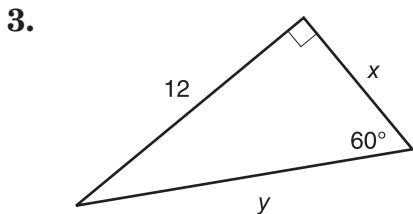
Find the missing measures. Write all radicals in simplest form.



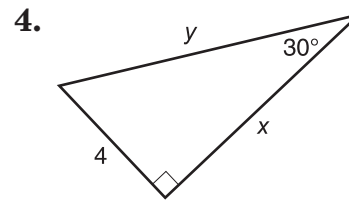
$x = 7$   
 $y = 7\sqrt{3}$



$x = 10$   
 $y = 5$



$x = 4\sqrt{3}$   
 $y = 8\sqrt{3}$

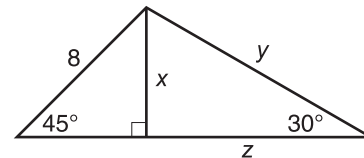


$x = 4\sqrt{3}$   
 $y = 8$

5. One side of an equilateral triangle measures 6 cm. Find the measure of an altitude of the triangle.

$3\sqrt{3}$

6. Find the missing measures in the triangle. Write all radicals in simplest form.

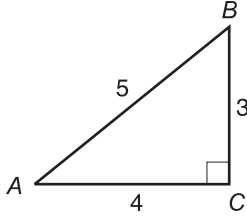


$x = 4\sqrt{2}$   
 $y = 8\sqrt{2}$   
 $z = 4\sqrt{6}$

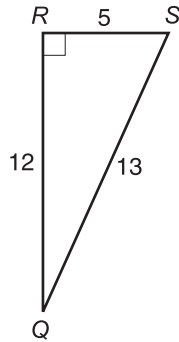
## Practice

### Tangent Ratio

Find each tangent. Round to four decimal places, if necessary.



1.  $\tan A = 0.75$

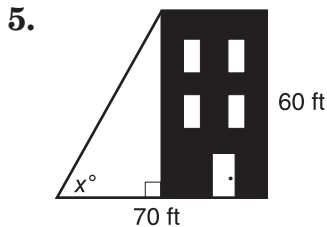


2.  $\tan B = 1.3333$

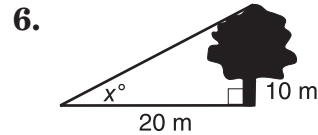
3.  $\tan S = 2.4$

4.  $\tan Q = 0.4167$

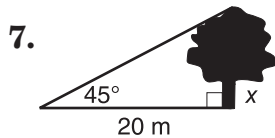
Find each missing measure. Round to the nearest tenth.



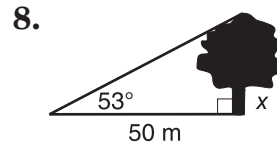
$x = 40.6^\circ$



$x = 26.6^\circ$



$x = 20\text{m}$

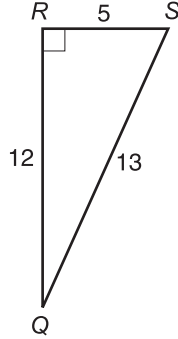
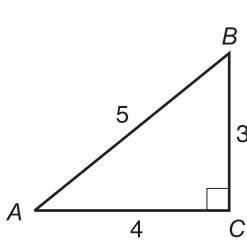


$x = 66.4\text{m}$

## Practice

### Sine and Cosine Ratios

Find each sine or cosine. Round to four decimal places, if necessary.



1.  $\sin A = 0.6$

2.  $\sin B = 0.8$

3.  $\cos Q = 0.9231$

4.  $\cos S = 0.3846$

Find each measure. Round to the nearest tenth.

