# Practice

## Solving Right Triangles

***Solve each equation if $0° \le x \le 360°$.***

**1.** $\cos x = \frac{\sqrt{2}}{2}$
**45°, 315°**

**2.** $\tan x = 1$
**45°, 225°**

**3.** $\sin x = \frac{1}{2}$
**30°, 150°**

***Evaluate each expression. Assume that all angles are in Quadrant I.***

**4.** $\tan\left(\tan^{-1}\frac{\sqrt{3}}{3}\right)$
$\frac{\sqrt{3}}{3}$

**5.** $\tan\left(\cos^{-1}\frac{2}{3}\right)$
$\frac{\sqrt{5}}{2}$

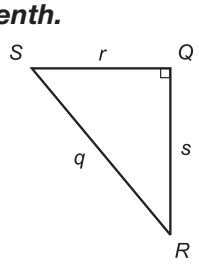
**6.** $\cos\left(\arcsin\frac{5}{13}\right)$
$\frac{12}{13}$

***Solve each problem. Round to the nearest tenth.***

**7.** If $q = 10$ and $s = 3$, find $S$.
**17.5°**

**8.** If $r = 12$ and $s = 4$, find $R$.
**71.6°**

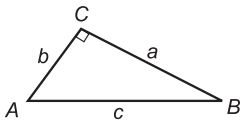
**9.** If $q = 20$ and $r = 15$, find $S$.
**41.4°**




***Solve each triangle described, given the triangle at the right. Round to the nearest tenth, if necessary.***

**10.** $a = 9, B = 49°$
**$A = 41°, b = 10.4, c = 13.7$**

**11.** $A = 16°, c = 14$
**$a = 3.9, b = 13.5, B = 74°$**




**12.** $a = 2, b = 7$
**$c = 7.3, A = 15.9°, B = 74.1°$**

**13.** ***Recreation*** The swimming pool at Perris Hill Plunge is 50 feet long and 25 feet wide. The bottom of the pool is slanted so that the water depth is 3 feet at the shallow end and 15 feet at the deep end. What is the angle of elevation at the bottom of the pool? **about 13.5°**





## Disprovi

Most geometr
angle using o
known since a
proof, some g
out to find a r
following met
allows a segm
segments. Yo
application of

**Given:**
**Claim:**
**Method:**

The proposed
$CM = MN =$
the three ang
measures to t

**1.** Express $m$
**$m\angle 3 =$**

**2.** Find the m
**$m\angle 3 \approx$**

**3.** Write $m\angle$

**4.** Find the m

**5.** Find the m

**6.** Find $m\angle C$

**7.** Explain wh
**The tang
of two a
angles.**