

Practice

An Introduction to Trigonometry

Using the triangle shown, write an equation involving \sin , \cos , or \tan that can be used to find the missing measure. Then solve the equation. Round measures of sides to the nearest tenth.

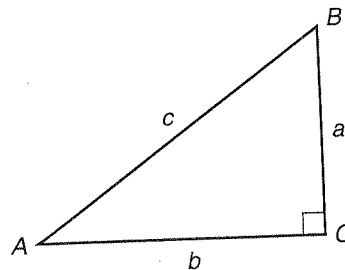
1. If $A = 20^\circ$ and $c = 32$, find a .

2. If $A = 49^\circ$ and $a = 17$, find b .

3. If $A = 27.3^\circ$ and $a = 7$, find c .

4. If $a = 19.2$ and $A = 63.4^\circ$, find b .

5. If $a = 28$ and $B = 41^\circ$, find c .



Solve each right triangle. Assume that C represents the right angle and c is the hypotenuse. Round measures of sides and angles to the nearest tenth.

6. $a = 12$, $A = 35^\circ$

7. $b = 25$, $B = 71^\circ$

8. $a = 4$, $b = 7$

9. $b = 52$, $c = 95$

Solve each problem. Round measures of lengths to the nearest tenth.

10. An airplane is directly above a beacon that is 10,000 feet from an airport control tower. The angle of depression from the plane to the base of the control tower is 6° . How high above the beacon is the plane?

11. John views the top of a water tower at an angle of elevation of 36° . He walks 120 meters in a straight line toward the tower. Then he sights the top of the tower at an angle of elevation of 51° . How far is John from the base of the tower?