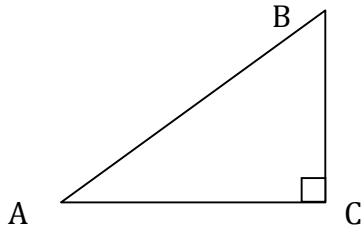
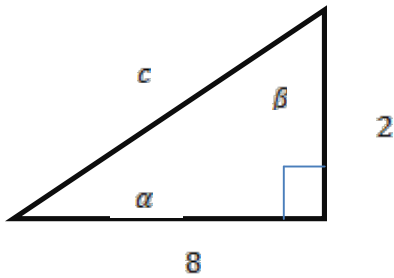


1. Solve the triangle in which $B = 65^\circ$ and $a = 14$.
Do NOT use rounded off versions to compute missing sides or angles. Instead, use given information whenever possible.



4. Find c , α and β .



1. A person standing at the top of a 40-foot tall building sights a friend on the ground. The angle of depression is 52° . How far is the friend from the base of the building?
2. At a point 100 feet from the base of a building, the angle of elevation to the bottom of a smoke stack is 37° , the angle of elevation to the top is 42° . Find the height of the smoke stack alone.

1. Use the Co-function Identities to complete each statement.

$$\sin 25^\circ = \underline{\hspace{2cm}}$$

$$\sec\left(\frac{\pi}{12}\right) = \underline{\hspace{2cm}}$$

$$\cot 60^\circ = \underline{\hspace{2cm}}$$

$$\cos\left(\frac{\pi}{3}\right) = \underline{\hspace{2cm}}$$

2. $m\angle A = 66^\circ$, $m\angle B = 34^\circ$, $c = 12$ (ASA case – two angles and an included side)

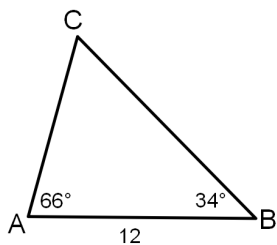
What is known? $\underline{\hspace{1cm}}$ angle(s), $\underline{\hspace{1cm}}$ side(s)

Is there anything I can find *without* proportions?

$$m\angle A = \underline{\hspace{1cm}} \quad a = \underline{\hspace{1cm}}$$

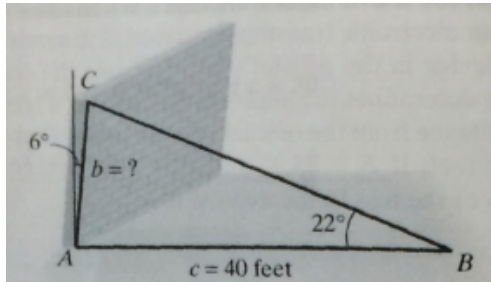
$$m\angle B = \underline{\hspace{1cm}} \quad b = \underline{\hspace{1cm}}$$

$$m\angle C = \underline{\hspace{1cm}} \quad c = \underline{\hspace{1cm}}$$

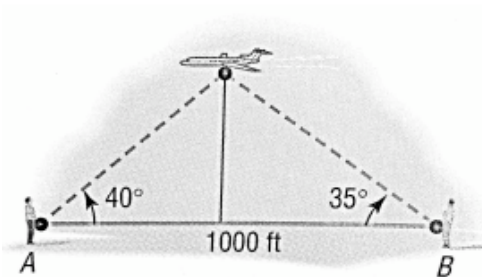


1. Leaning Wall

A leaning wall is inclined 6° from the vertical. At a distance of 40 feet from the wall, the angle of elevation to the top is 22° . Find the height of the wall to the nearest foot.



6. An aircraft is spotted by two observers who are 1000 feet apart. As the airplane passes over the line joining them, each observer takes a sighting of the angle of elevation to the plane, as indicated in the figure. How high is the airplane?



1. $a = 6, b = 18, \alpha = 25^\circ$

2. $a = 17, c = 14, \gamma = 42^\circ$

3. $b = 16, c = 10, \beta = 17^\circ$

4. $a = 10, c = 110, \alpha = 5^\circ$

1. $b = 5, c = 3, \beta = 100^\circ$

4. $b = 4, c = 6, \beta = 20^\circ$.