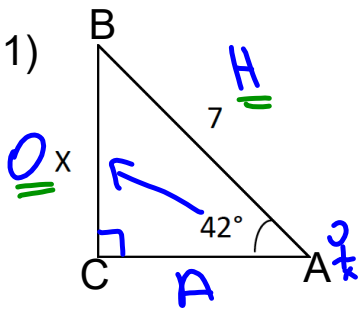
Finding a Missing Side using Sin, Cos, Tan

Steps:

1. Label sides O,A,H
2. Choose SOH, CAH, TOA
3. Solve

Examples: Solve for x

1)



H
O
A

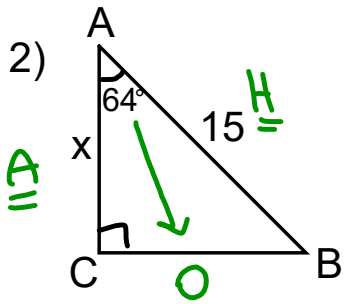
$\sin A = \frac{O}{H}$

$\sin 42° = \frac{x}{7}$

$x = 7 \cdot \sin 42°$

$x = 4.68$ u

2)



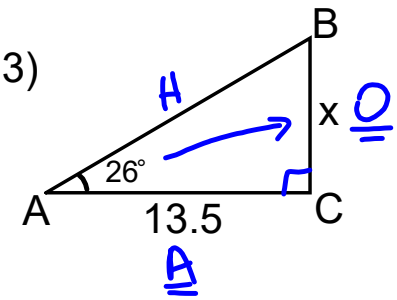
H
A
O

$\cos A = \frac{A}{H}$

$\cos 64° = \frac{x}{15}$

$x = 6.58$ u

3)



O
A

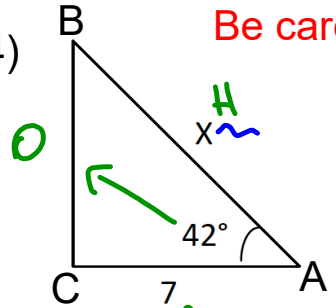
$\tan A = \frac{O}{A}$

$\tan 26° = \frac{x}{13.5}$

$x = 6.58$ u

4)

Be careful here!!!



H
O
A

$\cos A = \frac{A}{H}$

$\cos 42° = \frac{7}{x}$ swap!

$x = \frac{7}{\cos 42°}$

$= 9.42$ u