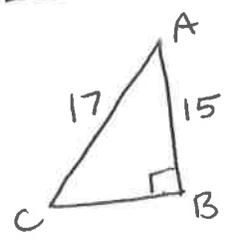


Notes



Complementary Angles Relationship

$$\left. \begin{aligned} \sin(C) &= \frac{15}{17} \\ \cos(A) &= \frac{15}{17} \end{aligned} \right\} \text{Angle A and Angle C are complementary angles}$$

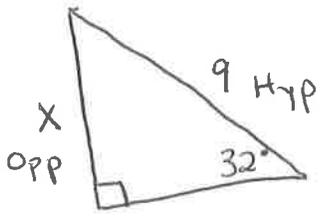
- So, this is true...
- $\sin(C) = \cos(A)$
 - $\cos(C) = \sin(A)$

Example: If $\cos(40) = \sin(x)$, what does x equal?
 $40^\circ + x^\circ = 90^\circ$ $x = 50^\circ$

Example: If $\sin(20) = \cos(y)$, what does y equal?
 $20 + y = 90$ $y = 70^\circ$

Solving For the missing side:

Example:



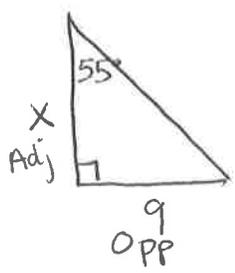
sine because we have the opposite + hyp.
 $\sin(32) = \frac{x}{9}$

~~$\frac{\sin(32)}{1} = \frac{x}{9}$~~ cross multiply

$$9 \cdot \sin(32) = x$$

$$4.8 = x$$

Example:



tangent because we have the opposite + adjacent
 $\tan(55) = \frac{9}{x}$

~~$\frac{\tan(55)}{1} = \frac{9}{x}$~~ cross multiply

$$\frac{x \cdot \tan(55)}{\tan(55)} = \frac{9}{\tan(55)}$$

$$x = \frac{9}{\tan(55)} \rightarrow x = 6.3$$