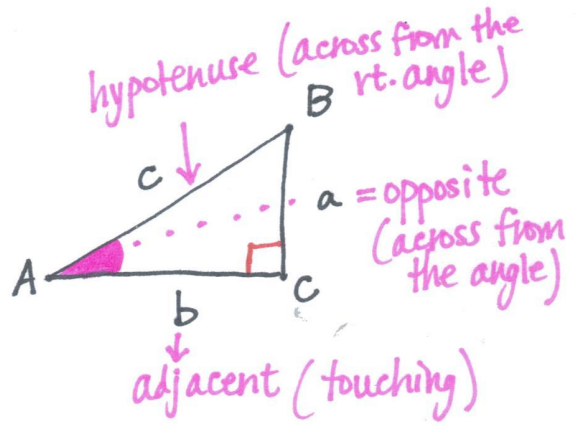


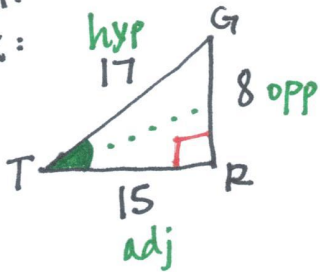
Trigonometry (Section 11-3)

* SOH CAH TOA $\rightarrow \tan A = \frac{\text{opp}}{\text{adj}}$

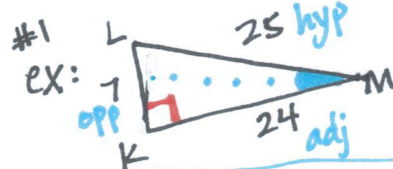
$\rightarrow \sin A = \frac{\text{opp}}{\text{hyp}}$ $\rightarrow \cos A = \frac{\text{adj}}{\text{hyp}}$



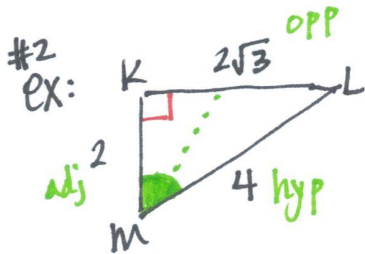
Got it?
ex:



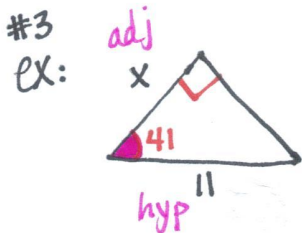
$$\begin{aligned} \sin T &= 8/17 \\ \cos T &= 15/17 \\ \tan T &= 8/15 \end{aligned}$$



$$\begin{aligned} \sin M &= 7/25 \\ \cos M &= 24/25 \\ \tan M &= 7/24 \end{aligned}$$



$$\begin{aligned} \sin M &= \frac{2\sqrt{3}}{4} = \frac{\sqrt{3}}{2} \\ \cos M &= \frac{2}{4} = \frac{1}{2} \\ \tan M &= \frac{2\sqrt{3}}{2} = \frac{\sqrt{3}}{1} = \sqrt{3} \end{aligned}$$

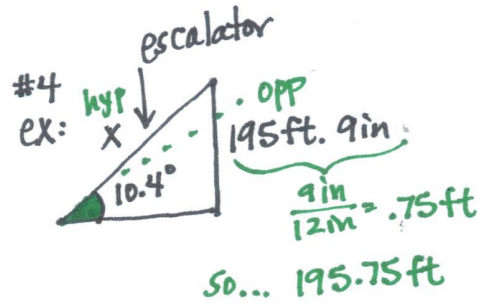


$\frac{\text{adj}}{\text{hyp}} = \cos A$

$\frac{x}{11} = \cos 41^\circ$ *make sure you are in "degrees" in the calc!*

$x = 11 \cdot \cos 41$

$x = 8.30$



$\frac{\text{opp}}{\text{hyp}} = \sin A \rightarrow \frac{195.75}{x} = \sin(10.4)$

quick switch!

* \sin^{-1} , \cos^{-1} , \tan^{-1} : inverse of the trig function.

uses the ratio of the sides to find the angle.

$\frac{195.75}{\sin(10.4)} = x$

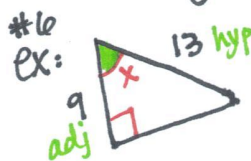
$x = 1084.37 \text{ ft}$



$\frac{\text{opp}}{\text{adj}} = \tan x$

$\frac{8}{5} = \tan x$

$x = \tan^{-1}(8/5) = 58^\circ$



$\frac{\text{adj}}{\text{hyp}} = \cos x$

$\frac{9}{13} = \cos x$

$x = \cos^{-1}(9/13) = 46.2^\circ$