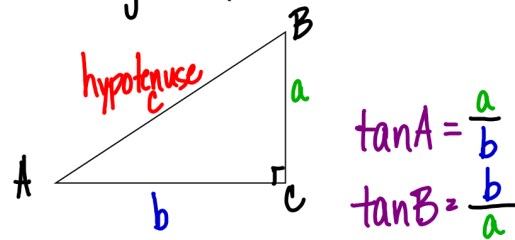
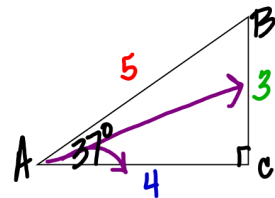


## 10.1 Tangent Ratio



$$\tan \theta = \frac{\text{opposite leg}}{\text{adjacent leg}}$$



$$\tan A = \frac{3}{4} \quad \tan B = \frac{4}{3}$$

To find measure of  $\angle$  use  $\tan^{-1}$

$$\tan^{-1}(3 \div 4)$$

$$\tan^{-1}(.75) = 36.8699$$

$$m\angle A = 37^\circ$$

$$\tan^{-1}(4 \div 3) = 53.1301$$

$$m\angle B = 53^\circ$$

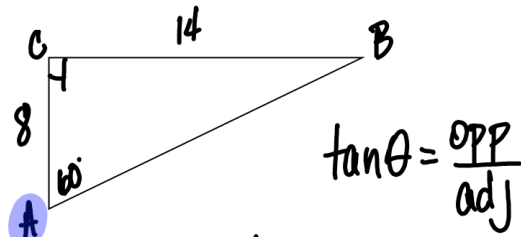
$$\tan 37^\circ \approx .7536$$

to find tangent ratio

use tan key

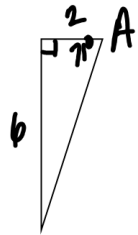
ten thousandths

KNOW  
mL



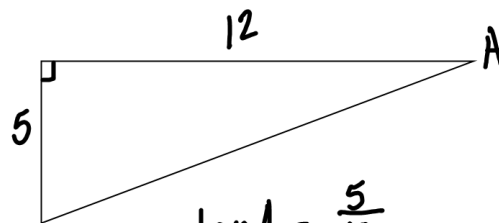
$$\tan A = \frac{14}{8}$$

$$\tan A = 1.7500$$



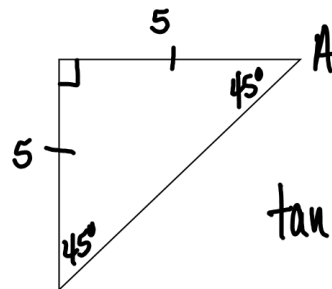
$$\tan A = \frac{b}{2}$$

$$\tan A = 3.0000$$



$$\tan A = \frac{5}{12}$$

$$\tan A = .4167$$



$$\tan A = \frac{5}{5} = 1$$

$$\tan 40^\circ \approx .8391$$

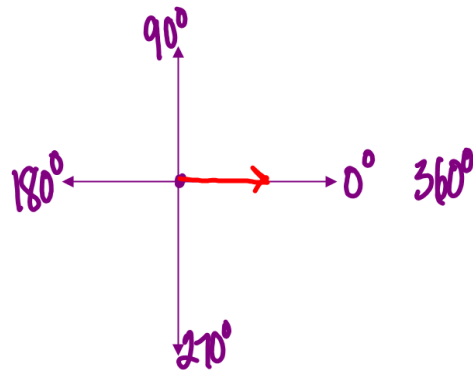
$$\tan 16^\circ = .2867$$

$$\tan 89^\circ = 57.2900$$

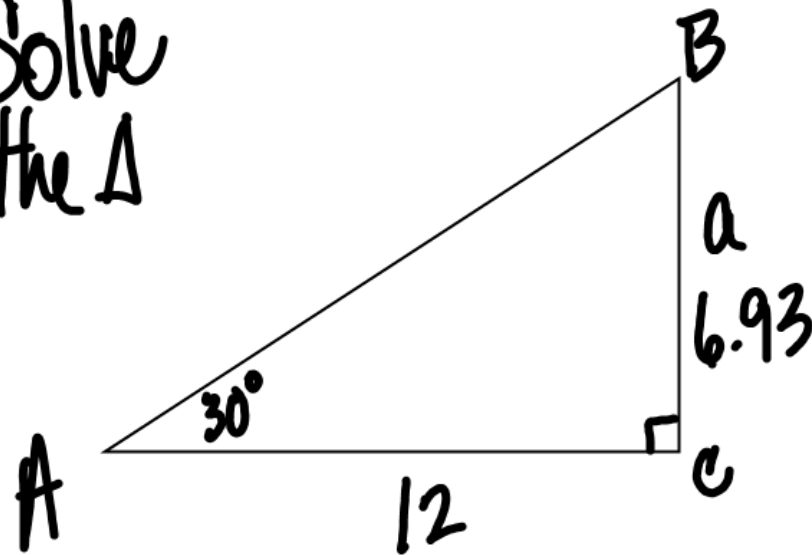
$$\frac{5}{7} \quad \begin{array}{l} \text{Inverse tangent} \\ \text{Arctangent} \\ \tan^{-1} \end{array}$$

$$\tan^{-1} \frac{5}{7} = 35.5^\circ \\ \approx 36^\circ$$

$$\tan^{-1} 0 = 0^\circ$$



Solve  
the  $\Delta$



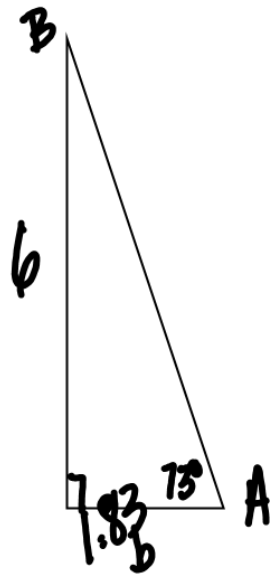
$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\tan 30 = \frac{a}{12}$$

$$12 \cdot .5774 = \frac{a}{12} \cdot 12$$

calc  $\tan 30$

$$6.93 = a$$



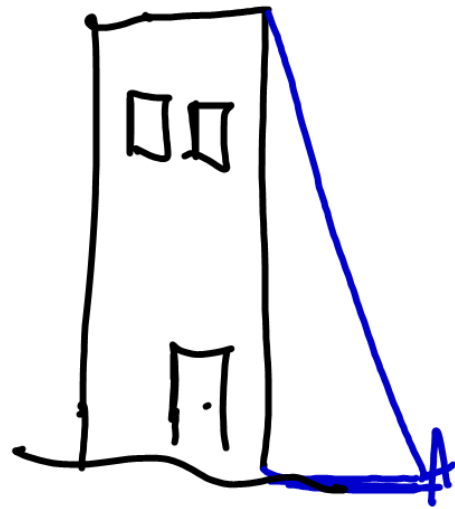
$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\tan 73 = \frac{6}{b}$$

$$3.2709 \cdot b = \frac{6}{b} \cdot b$$

$$\frac{3.2709b}{3.2709} = \frac{6}{3.2709}$$

$$b = 1.83$$



p 635

12-32 E

35, 36

$$12. \quad \tan A = \frac{12}{21}$$

$$\tan A = .5714$$

18-22 tenths and ks

Tangent

$\tan$

Sine

$\sin$

Cosine

$\cos$

Ratio

Comparison of 2 numbers