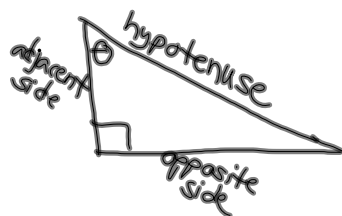


## 5.1 Trigonometric Functions of Acute Angles

acute  $\angle$ 's are <sup>strictly</sup> between  $0^\circ$  and  $90^\circ$

right triangle -  $\Delta$  w/ a  $90^\circ \angle$



$\theta$  theta  
 $\alpha$  alpha  
 $\beta$  beta  
 $\gamma$  gamma

6 trig functions -  
 ratios of sides of a  
 right triangle

sine  $\sin \theta = \frac{\text{length of opposite side}}{\text{length of hypotenuse}}$

cosine  $\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$

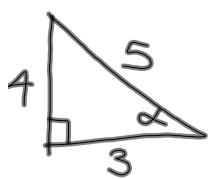
tangent  $\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$

Soh Cah Toa

secant  $\sec \theta = \frac{\text{hyp}}{\text{adj}} = \frac{1}{\cos \theta}$

cosecant  $\csc \theta = \frac{\text{hyp}}{\text{opp}} = \frac{1}{\sin \theta}$

cotangent  $\cot \theta = \frac{\text{adj}}{\text{opp}} = \frac{1}{\tan \theta}$



$\sin \alpha = \frac{4}{5}$

$\cos \alpha = \frac{3}{5}$

$\tan \alpha = \frac{4}{3}$

$\sec \alpha = \frac{5}{3}$

$\csc \alpha = \frac{5}{4}$

$\cot \alpha = \frac{3}{4}$