

GEOMETRIC FUNCTIONS SUMMARY

Definitions:

Related Angle is always positive. Angle between vector and x-axis.

Initial Side beginning side of an angle; often positive x-axis

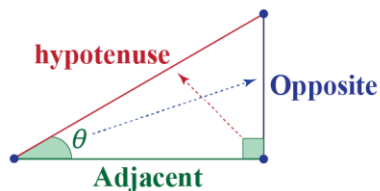
Terminal Side other side to create the angle

Coterminal Angles angles that end up in same terminal arm position (i.e. 50° and -310° ; 220° and -140°)

Trigonometric Functions

Trigonometric Ratios

sin, cos, tan, sec, csc, cot



SOH $\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$

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

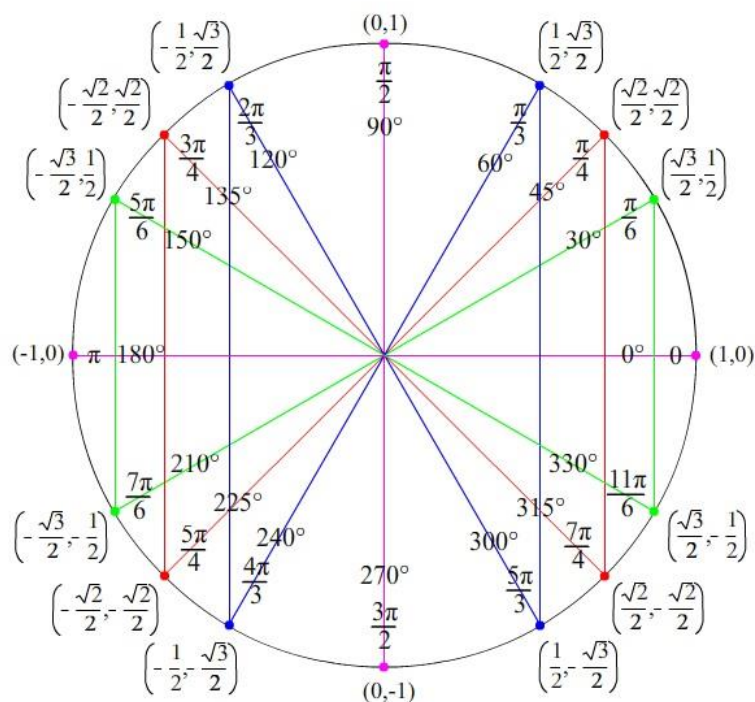
TOA $\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$

$\csc \theta = \frac{1}{\sin \theta}$

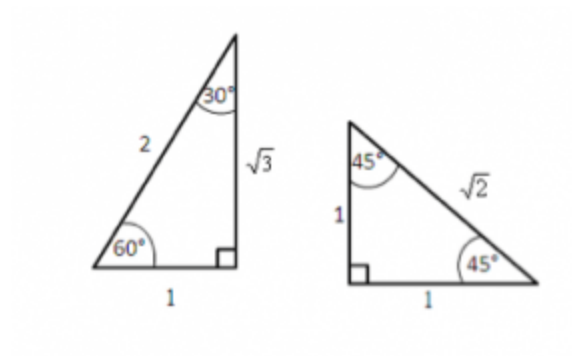
$\sec \theta = \frac{1}{\cos \theta}$

$\cot \theta = \frac{1}{\tan \theta}$

Unit Circle



Reference Triangles



Trigonometric Equations

Solving for θ when given an equation.

[L50 screenshot](#)

Solving for a Multiple of θ for an Arguments

[L52 example](#)

Factoring out Trig Functions

[L60 example](#)

Factoring out Radicals

[L65 screenshot](#)