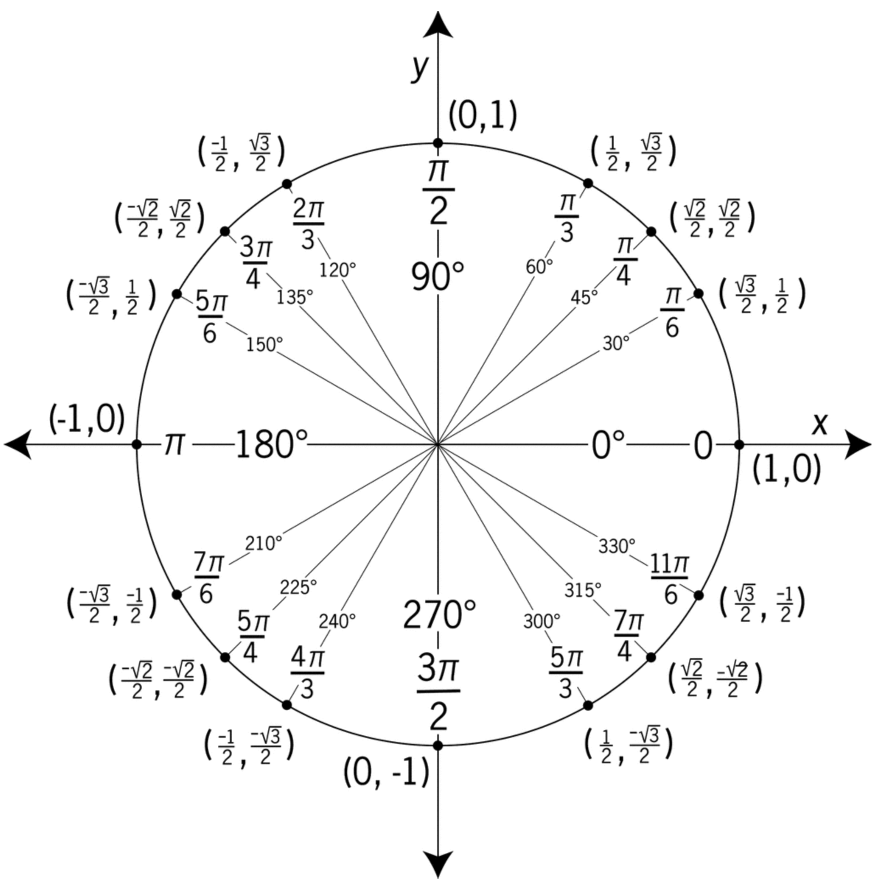
Derivative Formulas:

Constant	$\frac{d}{dx}(c) = 0$, if c is a constant
Power Rule	$\frac{d}{dx}(u^n) = nu^{n-1}\frac{du}{dx}$
Product Rule	$\frac{d}{dx}(uv) = u\frac{dv}{dx} + v\frac{du}{dx}$
Quotient Rule	$\frac{d}{dx}\left(\frac{u}{v}\right) = \frac{v\left(\frac{du}{dx}\right) - u\left(\frac{dv}{dx}\right)}{v^2}$
Chain Rule	$\frac{dy}{dx} = \frac{dy}{du}\frac{du}{dx}$

Special Derivatives	
Natural Logarithm $\frac{d}{dx}(\ln u) = \frac{1}{u}\frac{du}{dx}$	Logarithm $\frac{d}{dx}(\log_a u) = \frac{\log_a u}{u}\frac{du}{dx}$
Natural Exponential $\frac{d}{dx}(e^u) = e^u\frac{du}{dx}$	Exponential $\frac{d}{dx}(a^u) = a^u \ln a\frac{du}{dx}$



Trigonometric Functions

$\sin x = \frac{\text{opp}}{\text{hyp}}$ | $\cos x = \frac{\text{adj}}{\text{hyp}}$ | $\tan x = \frac{\text{opp}}{\text{adj}} = \frac{\sin x}{\cos x}$

$\csc x = \frac{\text{hyp}}{\text{opp}} = \frac{1}{\sin x}$ | $\sec x = \frac{\text{hyp}}{\text{adj}} = \frac{1}{\cos x}$ | $\cot x = \frac{\text{adj}}{\text{hyp}} = \frac{1}{\tan x} = \frac{\cos x}{\sin x}$

Pythagorean Identities

$\sin^2 x + \cos^2 x = 1$ | $\tan^2 x + 1 = \sec^2 x$ | $1 + \cot^2 x = \csc^2 x$

Sum and Difference Identities

$\sin(x+y) = \sin x \cos y + \cos x \sin y$ | $\cos(x+y) = \cos x \cos y - \sin x \sin y$ | $\tan(x+y) = \frac{\tan x + \tan y}{1 - \tan x \tan y}$

$\sin(x-y) = \sin x \cos y - \cos x \sin y$ | $\cos(x-y) = \cos x \cos y + \sin x \sin y$ | $\tan(x-y) = \frac{\tan x - \tan y}{1 + \tan x \tan y}$

Double Angle Identities

$\sin 2x = 2 \sin x \cos x$ | $\cos 2x = \cos^2 x - \sin^2 x$ | $\tan 2x = \frac{2 \tan x}{1 - \tan^2 x}$

Half-Angle Identities

$\sin^2 x = \frac{1}{2}(1 - \cos 2x)$ | $\cos^2 x = \frac{1}{2}(1 + \cos 2x)$

Derivatives of Trig Functions

$\frac{d}{dx}(\sin x) = \cos x$ | $\frac{d}{dx}(\cos x) = -\sin x$ | $\frac{d}{dx}(\tan x) = \sec^2 x$

$\frac{d}{dx}(\csc x) = -\csc x \cot x$ | $\frac{d}{dx}(\sec x) = \sec x \tan x$ | $\frac{d}{dx}(\cot x) = -\csc^2 x$

Derivatives of Inverse Trig Functions

$\frac{d}{dx}(\sin^{-1} x) = \frac{1}{\sqrt{1-x^2}}$ | $\frac{d}{dx}(\cos^{-1} x) = -\frac{1}{\sqrt{1-x^2}}$ | $\frac{d}{dx}(\tan^{-1} x) = \frac{1}{1+x^2}$

$\frac{d}{dx}(\csc^{-1} x) = -\frac{1}{x\sqrt{x^2-1}}$ | $\frac{d}{dx}(\sec^{-1} x) = \frac{1}{x\sqrt{x^2-1}}$ | $\frac{d}{dx}(\cot^{-1} x) = -\frac{1}{1+x^2}$

Integrals of Trig Functions

$\int \sin u du = -\cos u + C$ | $\int \cos u du = \sin u + C$ | $\int \tan u du = \ln|\sec u| + C$

$\int \csc u du = \ln|\csc u - \cot u| + C$ | $\int \sec u du = \ln|\sec u + \tan u| + C$ | $\int \cot u du = -\ln|\csc u| + C$

Miscellaneous Trig Integrals

$\int \sec^2 u du = \tan u + C$ | $\int \sec u \tan u du = \sec u + C$ | $\int \frac{du}{\sqrt{a^2 - u^2}} = \sin^{-1} \frac{u}{a} + C$

$\int \csc^2 u du = -\cot u + C$ | $\int \csc u \cot u du = -\csc u + C$ | $\int \frac{du}{a^2 + u^2} = \frac{1}{a} \tan^{-1} \frac{u}{a} + C$