

Basic Derivative Rules:

expression	derivative
c	0
x^p	px^{p-1}
e^x	e^x
a^x	$(\ln a)a^x$
$\ln x$	$1/x$
$cf(x)$	$cf'(x)$
$f(x) + g(x)$	$f'(x) + g'(x)$
$f(x) - g(x)$	$f'(x) - g'(x)$
$f(x)g(x)$	$f(x)g'(x) + f'(x)g(x)$
$f(x)/g(x)$	$(g(x)f'(x) - f(x)g'(x))/g(x)^2$
$f(g(x))$	$f'(g(x))g'(x)$
$\sin x$	$\cos x$
$\cos x$	$-\sin x$
$\tan x$	$\sec^2 x$
$\csc x$	$-\csc x \cot x$
$\sec x$	$\sec x \tan x$
$\cot x$	$-\csc^2 x$
$\sin^{-1} x$	$1/\sqrt{1-x^2}$
$\tan^{-1} x$	$1/(x^2+1)$
$\sinh x$	$\cosh x$
$\cosh x$	$\sinh x$

Hyperbolic Functions:

$$\begin{aligned} \cosh x &= (e^x + e^{-x})/2 \\ \sinh x &= (e^x - e^{-x})/2 \\ \tanh x &= \sinh x / \cosh x \\ \cosh^2 x - \sinh^2 x &= 1 \end{aligned}$$

Basic Trig Values:

	0	$\pi/6$	$\pi/4$	$\pi/3$	$\pi/2$	$2\pi/3$	$3\pi/4$	$5\pi/6$
cos	1	$\sqrt{3}/2$	$1/\sqrt{2}$	$1/2$	0	$-1/2$	$-1/\sqrt{2}$	$-\sqrt{3}/2$
sin	0	$1/2$	$1/\sqrt{2}$	$\sqrt{3}/2$	1	$\sqrt{3}/2$	$1/\sqrt{2}$	$1/2$
	π	$7\pi/6$	$5\pi/4$	$4\pi/3$	$3\pi/2$	$5\pi/3$	$7\pi/4$	$11\pi/6$
cos	-1	$-\sqrt{3}/2$	$-1/\sqrt{2}$	$-1/2$	0	$1/2$	$1/\sqrt{2}$	$\sqrt{3}/2$
sin	0	$-1/2$	$-1/\sqrt{2}$	$-\sqrt{3}/2$	-1	$-\sqrt{3}/2$	$-1/\sqrt{2}$	$-1/2$

Trig Facts:

$$\begin{aligned} \tan x &= \sin x / \cos x \\ \sec x &= 1 / \cos x \\ \csc x &= 1 / \sin x \\ \cot x &= 1 / \tan x = \cos x / \sin x \\ \cos^2 x + \sin^2 x &= 1 \\ 1 + \tan^2 x &= \sec^2 x \end{aligned}$$

Inverse Trig:

$$\begin{aligned} \arcsin &= \sin^{-1} \text{ has domain } [-1, 1], \text{ range } [-\pi/2, \pi/2] \\ \arccos &= \cos^{-1} \text{ has domain } [-1, 1], \text{ range } [0, \pi] \\ \arctan &= \tan^{-1} \text{ has domain } (-\infty, \infty), \text{ range } (-\pi/2, \pi/2) \end{aligned}$$