

Summary of the Graphs of Trig Functions

Function:	Sine	Cosine	Tangent	Cotangent	Secant	Cosecant
Parent Function	$y = \sin(x)$	$y = \cos(x)$	$y = \tan(x)$	$y = \cot(x)$	$y = \sec(x)$	$y = \csc(x)$
Domain	$(-\infty, \infty)$	$(-\infty, \infty)$	$(-\infty, \infty)$ except $\frac{n\pi}{2}$, where n is odd	$(-\infty, \infty)$ except $n\pi$ where n is an integer	$(-\infty, \infty)$ except $\frac{n\pi}{2}$, where n is odd	$(-\infty, \infty)$ except $n\pi$ where n is an integer
Vertical Asymptotes	none	none	$x = \frac{n\pi}{2}$, where n is odd	$x = n\pi$, where n is an integer	$x = \frac{n\pi}{2}$, where n is odd	$x = n\pi$, where n is an integer
Range	$[-1, 1]$	$[-1, 1]$	$(-\infty, \infty)$	$(-\infty, \infty)$	$(-\infty, -1] \cup [1, \infty)$	$(-\infty, -1] \cup [1, \infty)$
Period	2π	2π	π	π	2π	2π
X-Intercepts	$n\pi$, where n is an integer	$\frac{n\pi}{2}$, where n is odd	midway between asymptotes	midway between asymptotes	none	none
Odd or Even Function	Odd Function	Even Function	Odd Function	Odd Function	Even Function	Odd Function
General Form	$y = A\sin(Bx-C)+D$	$y = A\cos(Bx-C)+D$	$y = A\tan(Bx-C)+D$	$y = A\cot(Bx-C)+D$	$y = A\sec(Bx-C)+D$	$y = A\csc(Bx-C)+D$
Amplitude/Stretch, Period, Phase Shift, Vertical Shift	$ A , \frac{2\pi}{B}, \frac{C}{B}, D$	$ A , \frac{2\pi}{B}, \frac{C}{B}, D$	$ A , \frac{\pi}{B}, \frac{C}{B}, D$	$ A , \frac{\pi}{B}, \frac{C}{B}, D$	$ A , \frac{2\pi}{B}, \frac{C}{B}, D$	$ A , \frac{2\pi}{B}, \frac{C}{B}, D$

