Phase Shift

$$\sin(-\theta) = -\sin\theta$$
$$\cos(-\theta) = \cos(\theta)$$
$$\tan(-\theta) = -\tan\theta$$

$$\cot(-\theta) = -\cos(\theta)$$
$$\sec(-\theta) = \sec\theta$$
$$\csc(-\theta) = -\cos(\theta)$$

$\sin(2\pi + \theta) = \sin\theta$	$\sin(2\pi - \theta) = -\sin\theta$	$\sin(\theta - 2\pi) = \sin\theta$
$\cos(2\pi + \theta) = \cos\theta$	$\cos(2\pi - \theta) = \cos\theta$	$\cos(\theta - 2\pi) = \cos\theta$
$\tan(2\pi + \theta) = \tan\theta$	$\tan(2\pi - \theta) = -\tan\theta$	$\tan(\theta - 2\pi) = \tan\theta$
$\cot(2\pi + \theta) = \cot\theta$	$\cot(2\pi - \theta) = -\cot\theta$	$\cot(\theta - 2\pi) = \cot\theta$
$\sec(2\pi + \theta) = \sec\theta$	$\sec(2\pi - \theta) = \sec\theta$	$\sec(\theta - 2\pi) = \sec\theta$
$\csc(2\pi + \theta) = \csc\theta$	$\csc(2\pi - \theta) = -\csc\theta$	$\csc(\theta - 2\pi) = \csc\theta$

$\sin(\pi + \theta) = -\sin\theta$	$\sin(\pi - \theta) = \sin\theta$	$\sin(\theta - \pi) = -\sin\theta$
$\cos(\pi + \theta) = -\cos\theta$	$\cos(\pi - \theta) = -\cos\theta$	$\cos(\theta - \pi) = -\cos\theta$
$\tan(\pi + \theta) = \tan\theta$	$\tan(\pi - \theta) = -\tan\theta$	$\tan(\theta - \pi) = \tan\theta$
$\cot(\pi + \theta) = \cot\theta$	$\cot(\pi - \theta) = -\cot\theta$	$\cot(\theta - \pi) = \cot\theta$
$\sec(\pi + \theta) = -\sec\theta$	$\sec(\pi - \theta) = -\sec\theta$	$\sec(\theta - \pi) = -\sec\theta$
$\csc(\pi + \theta) = -\csc\theta$	$\csc(\pi - \theta) = \csc\theta$	$\csc(\theta - \pi) = -\csc\theta$

$\sin(\frac{\pi}{2} + \theta) = \cos\theta$	$\sin(\frac{\pi}{2} - \theta) = \cos\theta$	$\sin(\theta - \frac{\pi}{2}) = -\cos\theta$
$\cos(\frac{\pi}{2} + \theta) = -\sin\theta$	$\cos(\frac{\pi}{2} - \theta) = \sin\theta$	$\cos(\theta - \frac{\pi}{2}) = \sin\theta$
$\tan(\frac{\pi}{2} + \theta) = -\cot\theta$	$\tan(\frac{\pi}{2} - \theta) = \cot\theta$	$\tan(\theta - \frac{\pi}{2}) = -\cot\theta$
$\cot(\frac{\pi}{2} + \theta) = -\tan\theta$	$\cot(\frac{\pi}{2} - \theta) = \tan\theta$	$\cot(\theta - \frac{\pi}{2}) = -\tan\theta$
$\sec(\frac{\pi}{2} + \theta) = -\csc\theta$	$\sec(\frac{\pi}{2} - \theta) = \csc\theta$	$\sec(\theta - \frac{\pi}{2}) = \csc\theta$
$\csc(\frac{\pi}{2} + \theta) = \sec\theta$	$\csc(\frac{\pi}{2} - \theta) = \sec\theta$	$\csc(\theta - \frac{\pi}{2}) = -\sec\theta$

Solution for $\sin x = a$ where $a \neq \pm 1$: $\quad x = n\pi + (-1)^n \sin^{-1} a \quad$ $\left(\sin^{-1} a \in \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]\right)$

Solution for $\sin x = 1$: $\quad x = \left(2n + \frac{1}{2}\right)\pi \quad$ Solution for $\sin x = -1$: $\quad x = \left(2n - \frac{1}{2}\right)\pi$

Solution for $\cos x = a$ where $a \neq \pm 1$: $\quad x = 2n\pi \pm \cos^{-1} a \quad$ $\left(\cos^{-1} a \in [0, \pi]\right)$

Solution for $\cos x = 1$: $\quad x = 2n\pi \quad$ Solution for $\cos x = -1$: $\quad x = (2n + 1)\pi$

Solution for $\tan x = a$: $\quad x = n\pi + \tan^{-1} a \quad$ $\left(\tan^{-1} a \in \mathbb{R}\right)$