	α	**sin α**	**cos α**	**tg α**	**ctg α**
0°	0	0	1	0	/
30°	$\pi/6$	½	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{3}}$	$\sqrt{3}$
45°	$\pi/4$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	1	1
60°	$\pi/3$	$\frac{\sqrt{3}}{2}$	½	$\sqrt{3}$	$\frac{1}{\sqrt{3}}$
90°	$\pi/2$	1	0	/	0
180°	π	0	-1	0	/
270°	$3\pi/2$	-1	0	/	0
360°	2π	0	1	0	/

$\cos(\alpha \pm \beta) = \cos\alpha \cos\beta \mp \sin\alpha \sin\beta$
$\sin(\alpha \pm \beta) = \sin\alpha \cos\beta \pm \cos\alpha \sin\beta$
$\sin(\pi/2 - \alpha) = \cos\alpha$
$\cos(\pi/2 - \alpha) = \sin\alpha$

$\cos 2\alpha = \cos^2\alpha - \sin^2\alpha$
$\sin 2\alpha = 2\sin\alpha\cos\alpha$

$\cos \alpha/2 = \pm \sqrt{\frac{1+\cos\alpha}{2}}$

$\sin \alpha/2 = \pm \sqrt{\frac{1-\cos\alpha}{2}}$

+ = ←
- = →

$tg\alpha = \sin\alpha/\cos\alpha$
$ctg\alpha = \cos\alpha/\sin\alpha$

$1+tg^2\alpha = 1/\cos^2\alpha$
$1+ctg^2\alpha = 1/\sin^2\alpha$

$ctg\alpha = tg(\pi/2-\alpha)$
$tg\alpha = ctg(\pi/2-\alpha)$

$ctgx = tg^{-1}$

$\cos\alpha = \pm \sqrt{\frac{1}{tg^2\alpha + 1}}$

$x = r*\cos\alpha$ $\quad r = \sqrt{x^2 + y^2}$
$y = r*\sin\alpha$ $\quad \alpha = arctg\, y/x + k\pi$

$\sin\alpha + \sin\beta = 2\sin \alpha+\beta/2 \cos \alpha-\beta/2$
$\cos\alpha + \cos\beta = 2\cos \alpha+\beta/2 \cos \alpha-\beta/2$
$\cos\alpha - \cos\beta = -2\sin \alpha+\beta/2 \sin \alpha-\beta/2$

$\sin\alpha \cos\beta = ½(\sin(\alpha+\beta)+\sin(\alpha-\beta))$
$\cos\alpha \cos\beta = ½ (\cos(\alpha+\beta)+\cos(\alpha-\beta))$
$\sin\alpha \sin\beta = ½(\cos(\alpha+\beta)-\cos(\alpha-\beta))$

$y = A\sin(\omega x+\rho)$
A - amplituda
ω - krožna frekvenca
osn. perioda: **$2\pi/\omega$**
$p*\sin x+q*\cos x = A*\sin(x+\alpha)$

$\sin(\pi+\alpha) = -\sin\alpha$
$\cos(\pi+\alpha) = -\cos\alpha$
$\sin(\pi-\alpha) = \sin\alpha$
$\cos(\pi-\alpha) = -\cos\alpha$

$tg(\alpha+\beta) = tg\alpha+tg\beta$ / $1-tg\alpha\, tg\beta$

$tg(x/2) = \pm \sqrt{\frac{1+\cos\alpha}{2}}$

sinx=a x=arcsina +2kπ
x=π-arcsina + 2kπ
cosx=a x=arccosa + 2kπ
x=-arccosa + 2kπ
tgx=a x=arctga + kπ
ctgx=a x=arcctga + kπ