

Kotne funkcije

Adicijski izreki

$$\begin{aligned}\sin(x \pm y) &= \sin x \cos y \pm \sin y \cos x \\ \cos(x \pm y) &= \cos x \cos y \mp \sin x \sin y \\ \tan(x \pm y) &= \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}\end{aligned}$$

Dvojni in polovični koti

$$\begin{aligned}\cos(2x) &= \cos^2 x - \sin^2 x \\ \sin(2x) &= 2 \sin x \cos x \\ \cos^2 x &= \frac{1 + \cos(2x)}{2} \\ \sin^2 x &= \frac{1 - \cos(2x)}{2}\end{aligned}$$

Faktorizacija

$$\begin{aligned}\sin x + \sin y &= 2 \sin \frac{x+y}{2} \cos \frac{x-y}{2} \\ \sin x - \sin y &= 2 \sin \frac{x-y}{2} \cos \frac{x+y}{2} \\ \cos x + \cos y &= 2 \cos \frac{x+y}{2} \cos \frac{x-y}{2} \\ \cos x - \cos y &= 2 \sin \frac{x+y}{2} \sin \frac{y-x}{2}\end{aligned}$$

Defaktorizacija

$$\begin{aligned}\sin x \cos y &= \frac{\sin(x-y) + \sin(x+y)}{2} \\ \sin x \sin y &= \frac{\cos(x-y) - \cos(x+y)}{2} \\ \cos x \cos y &= \frac{\cos(x-y) + \cos(x+y)}{2}\end{aligned}$$

Povezave

$$\begin{aligned}\cos^2 x + \sin^2 x &= 1, \quad 1 + \tan^2 x = \frac{1}{\cos^2 x} \\ \sin\left(\frac{\pi}{2} - x\right) &= \cos x\end{aligned}$$

Vrednosti kotnih funkcij

$\theta \rightarrow$	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
$\sin \theta$	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
$\cos \theta$	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
$\tan \theta$	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	/

$$\begin{aligned}\sin(\pi - x) &= \sin x, & \cos(\pi - x) &= -\cos x \\ \sin(\pi + x) &= -\sin x, & \cos(\pi + x) &= -\cos x \\ \sin(2\pi - x) &= -\sin x, & \cos(2\pi - x) &= \cos x\end{aligned}$$