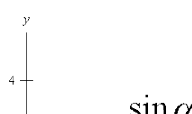
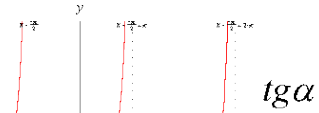
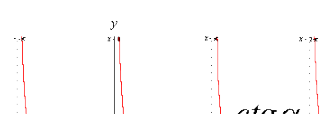


KOTNE FUNKCIJE

Funkcijski predpis: $f: R \rightarrow R$

Funkcijski predpis	Graf	Lastnosti
$f(x) = \sin x$		$D_f = R$ $Z_f = [-1, 1]$
$f(x) = \cos x$		$D_f = R$ $Z_f = [-1, 1]$
$f(x) = \operatorname{tg} x$		$D_f = R - \left\{ \frac{\pi}{2} + k\pi; k \in Z \right\}$
$f(x) = \operatorname{ctg} x$		$D_f = R - \{k\pi; k \in Z\}$ $Z_f = R$

Zveze med kotnimi funkcijami:

$$\sin^2 x + \cos^2 x = 1$$

$$\operatorname{tg} x = \frac{\sin x}{\cos x}$$

$$\operatorname{ctg} x = \frac{\cos x}{\sin x}$$

$$1 + \operatorname{tg}^2 x = \frac{1}{\cos^2 x}$$

$$1 + \operatorname{ctg}^2 x = \frac{1}{\sin^2 x}$$

$$\sin\left(\frac{\pi}{2} - x\right) = \cos x$$

$$\operatorname{tg}\left(\frac{\pi}{2} - x\right) = \operatorname{ctg} x$$

$$\sin 2x = 2 \sin x \cos x$$

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

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

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

Adicijski izreki:

$$\sin(x \pm y) = \sin x \cos y \pm \cos x \sin y$$

$$\cos(x \pm y) = \cos x \cos y \mp \sin x \sin y$$

$$\operatorname{tg}(x \pm y) = \frac{\operatorname{tg} x \pm \operatorname{tg} y}{1 \mp \operatorname{tg} x \operatorname{tg} y}$$

Faktorizacija in defaktorizacija:

$$\sin x \pm \sin y = 2 \sin \left(\frac{x \pm y}{2} \right) \cos \left(\frac{x \mp y}{2} \right)$$

$$\cos x + \cos y = 2 \cos \left(\frac{x + y}{2} \right) \cos \left(\frac{x - y}{2} \right)$$

$$\cos x - \cos y = -2 \sin \left(\frac{x + y}{2} \right) \sin \left(\frac{x - y}{2} \right)$$

$$\sin x \sin y = \frac{1}{2} [\cos (x - y) - \cos (x + y)]$$

$$\sin x \cos y = \frac{1}{2} [\sin (x - y) + \sin (x + y)]$$

$$\cos x \cos y = \frac{1}{2} [\cos (x - y) + \cos (x + y)]$$