Funkcie – goniometrické funkcie

$$x \in R, \ x \neq k\tfrac{\pi}{2}, \ k \in Z$$

$$\operatorname{tg} x \cdot \operatorname{cotg} x = 1.$$

$$x \in \left(0 \, ; \, \tfrac{\pi}{2}\right)$$

$$0 < \sin x < x < \operatorname{tg} x.$$

Vzťahy medzi goniometrickými funkciami $\qquad x \in \left(0 \, ; \, \tfrac{\pi}{2}\right)$

$$\sin x = \quad \sin x \quad = \sqrt{1 - \cos^2 x} = \frac{\operatorname{tg} x}{\sqrt{1 + \operatorname{tg}^2 x}} = \frac{1}{\sqrt{1 + \operatorname{cotg}^2 x}}.$$

$$\cos x = \sqrt{1 - \sin^2 x} = \quad \cos x \quad = \frac{1}{\sqrt{1 + \operatorname{tg}^2 x}} = \frac{\operatorname{cotg} x}{\sqrt{1 + \operatorname{cotg}^2 x}}.$$

$$\operatorname{tg} x = \frac{\sin x}{\sqrt{1 - \sin^2 x}} = \frac{\sqrt{1 - \cos^2 x}}{\cos x} = \quad \operatorname{tg} x \quad = \frac{1}{\operatorname{cotg} x}.$$

$$\operatorname{cotg} x = \frac{\sqrt{1 - \sin^2 x}}{\sin x} = \frac{\cos x}{\sqrt{1 - \cos^2 x}} = \frac{1}{\operatorname{tg} x} = \quad \operatorname{cotg} x.$$