

Trigonometri Formülleri



$$\sin \alpha = \frac{\text{karsi}}{\text{hipotenüs}}$$

$$\cos \alpha = \frac{\text{komsu}}{\text{hipotenüs}}$$

$$\tan \alpha = \frac{\text{karsi}}{\text{komsu}}$$

$$\cot \alpha = \frac{\text{komsu}}{\text{karsi}}$$

$$\tan \alpha = \frac{\sin \alpha}{\cos \alpha}$$

$$\cot \alpha = \frac{\cos \alpha}{\sin \alpha}$$

$$\sec \alpha = \frac{1}{\cos \alpha}$$

$$\csc \alpha = \frac{1}{\sin \alpha}$$

$$\sin(a+b) = \sin a \cdot \cos b + \sin b \cdot \cos a$$

$$\sin(a-b) = \sin a \cdot \cos b - \sin b \cdot \cos a$$

$$\cos(a+b) = \cos a \cdot \cos b - \sin a \cdot \sin b$$

$$\cos(a-b) = \cos a \cdot \cos b + \sin a \cdot \sin b$$

$$\left. \begin{aligned} \tan(a+b) &= \frac{\tan a + \tan b}{1 - \tan a \cdot \tan b} \\ \tan(a-b) &= \frac{\tan a - \tan b}{1 + \tan a \cdot \tan b} \end{aligned} \right\} \text{Cot için pay ve paydân yeri değişir!}$$

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

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

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

$$\tan 2x = \frac{2 \tan x}{1 - \tan^2 x}$$

$$\cot 2x = \frac{1 - \cot^2 x}{2 \cot x}$$