

Goniometrické funkce

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

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

$$\begin{aligned}e^{ix} &= \cos x + i \sin x \\ \sin^2 x + \cos^2 x &= 1 \\ \cos x &= \frac{e^{ix} + e^{-ix}}{2} \\ \sin x &= \frac{e^{ix} - e^{-ix}}{2i}\end{aligned}$$

$$\begin{aligned}\cosh x &= \frac{e^x + e^{-x}}{2} \\ \sinh x &= \frac{e^x - e^{-x}}{2}\end{aligned}$$

$$\begin{aligned}\sin x &\approx x - \frac{x^3}{3!} + \frac{x^5}{5!} - \dots \\ \cos x &\approx 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \dots\end{aligned}$$