Základní limity:

$$\lim_{x \to 0} \frac{\sin x}{x} = 1$$

$$\lim_{x \to 0} \frac{1 - \cos x}{x^2} = \lim_{x \to 0} \frac{1 - \cos^2 x}{x^2 (1 + \cos x)} = \lim_{x \to 0} \left(\frac{\sin x}{x}\right)^2 \frac{1}{1 + \cos x} = \frac{1}{2}$$

$$\lim_{x \to 0} \frac{e^x - 1}{x} = 1$$

$$\lim_{x \to 0} \frac{a^x - 1}{x} = \lim_{x \to 0} \frac{e^{\ln a \cdot x} - 1}{\ln a \cdot x} \cdot \ln a = \ln a$$

$$\lim_{x \to 0} \frac{\ln(1+x)}{x} = \lim_{y \to 1} \frac{\ln y}{y - 1} = 1$$

limity typu "1^∞" : $\quad \lim_{x \to a} (f(x))^{g(x)} = e^{\lim_{x \to a} g(x) \ln(f(x))}$

Goniometrické vzorce:

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

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

$$\cos(x+y) = \cos x \cos y - \sin x \sin y$$

$$\cos(x-y) = \cos x \cos y + \sin x \sin y$$

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

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

$$\sin x + \sin y = 2 \sin \frac{x+y}{2} \cos \frac{x-y}{2}$$

$$\sin x - \sin y = 2 \cos \frac{x+y}{2} \sin \frac{x-y}{2}$$

$$\cos x + \cos y = 2 \cos \frac{x+y}{2} \cos \frac{x-y}{2}$$

$$\cos x - \cos y = -2 \sin \frac{x+y}{2} \sin \frac{x-y}{2}$$

RSJ