

Limity posloupností

$r \in \mathbb{R}$

$$\lim_{n \rightarrow \infty} \sqrt[n]{a} = 1 \quad a > 0$$

$$\lim_{n \rightarrow \infty} \sqrt[n]{n} = 1$$

$$\lim_{n \rightarrow \infty} \sqrt[n]{n!} = \infty$$

$$\lim_{n \rightarrow \infty} \frac{n^r}{b^n} = 0 \quad b > 1$$

$$\lim_{n \rightarrow \infty} \frac{n^r}{c^n} = \infty \quad c \in (0; 1)$$

$$\lim_{n \rightarrow \infty} \frac{a^n}{n!} \quad a > 0$$

$$\lim_{n \rightarrow \infty} n a^n = 0 \quad |a| < 1$$

$$\lim_{n \rightarrow \infty} \left(1 + \frac{1}{n}\right)^n = e$$

$$\lim_{n \rightarrow \infty} n \left(a^{\frac{1}{n}} - 1\right) = \ln a$$

$$\lim_{n \rightarrow \infty} \frac{\log_a n}{n} = 0$$

Limity funkcí

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

$$\lim_{x \rightarrow 0} \frac{1 - \cos x}{x^2} = \frac{1}{2}$$

$$\lim_{x \rightarrow 0} \frac{\arcsin x}{x} = 1$$

$$\lim_{x \rightarrow 0} \frac{\arctan x}{x} = 1$$

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

$$\lim_{x \rightarrow 0} \frac{\ln(1+x)}{x} = 1$$

$$\lim_{x \rightarrow \infty} \frac{x^n}{e^x} = 0 \quad n \in \mathbb{N}$$

$$\lim_{x \rightarrow \infty} \frac{\ln x}{x^n} = 0 \quad n \in \mathbb{N}$$

$$\lim_{x \rightarrow 0^+} x^n \ln x = 0 \quad n \in \mathbb{N}$$