Osnovne granične vrednosti

1. $\lim\limits_{n\to\infty} \dfrac{1}{n^\alpha} = \begin{cases} 0, & \alpha > 0 \\ 1, & \alpha = 0 \\ \infty, & \alpha < 0 \end{cases}$

2. $\lim\limits_{n\to\infty} q^n = \begin{cases} 0, & |q| < 1 \\ 1, & q = 1 \\ \infty, & q > 1 \\ \text{ne postoji}, & q \leq -1 \end{cases}$

3. $\lim\limits_{n\to\infty} \sqrt[n]{a} = 1, a > 0$

4. $\lim\limits_{n\to\infty} \sqrt[n]{n} = 1$

5. $\lim\limits_{n\to\infty} \left(1 + \dfrac{1}{n}\right)^n = e$

6. $\lim\limits_{x\to 0} \dfrac{\sin x}{x} = 1$ $(\triangle)$

7. $\lim\limits_{x\to 0} \dfrac{\ln(x+1)}{x} = 1$ $(\triangle)$

8. $\lim\limits_{x\to 0} \dfrac{e^x - 1}{x} = 1$ $(\triangle)$

9. $\lim\limits_{x\to\infty} \dfrac{P_n(x)}{Q_m(x)} = \begin{cases} 0, & n < m \\ \pm\infty, & n > m \\ \text{broj}, & n = m \end{cases}$

$(\triangle)$ $\sin x \sim \ln(x+1) \sim (e^x - 1) \sim x (\sim \operatorname{tg} x \sim \arcsin x \sim \operatorname{arctg} x), x \to 0$

Skala rasta funkcija:

$\ln n \prec n^a \prec n^b \prec p^n \prec q^n \prec n! \prec n^n$ pri čemu je $0 < a < b$ i $1 < p < q$