$$\lim_{k\to\infty} \frac{(-3)^k}{2^{2k}} = \lim_{k\to+\infty} \frac{(-3)^k}{4^k} = \lim_{k\to+\infty} \left(-\frac{3}{4}\right)^k = 0$$

$$q = -\frac{3}{4} \in (-1,1)$$

$$\lim_{k\to+\infty} \frac{2^k}{k^2}$$

$$\lim_{x\to+\infty} \frac{2^x}{x^2} \quad \left(\frac{\infty}{\infty}\right)$$

$$\frac{2^x \log(2)}{2x} \quad \left(\frac{\infty}{\infty}\right)$$

$$\frac{2^x \log(2) \cdot \log(2)}{2} \to +\infty$$

$$2^x = \exp(x \log(2))$$

$$\log 2^x = x \log(2)$$

$$2^x = \exp(\log(2^x))$$

$$(2^x)' = \exp(x \log(2)) \cdot \log(2) = 2^x \cdot \log(2)$$

$$(a^x)' = a^x \log(a)$$

~~$\frac{1}{k^3} \cdot 1-$~~

$$\left| \frac{k - 2\sqrt{k}}{k^4 + \sqrt{k^7}} \right| = \left| \frac{k\left(1 - \frac{2}{\sqrt{k}}\right)}{k^4\left(1 + k^{-\frac{11}{4}}\right)} \right| =$$

$$= \frac{1}{k^3} \left| \frac{1 - \frac{2}{\sqrt{k}}}{1 + k^{-\frac{11}{4}}} \right|$$

$\rightarrow |1|$

per $k \to \infty$

$A \Rightarrow B$

$0 \Rightarrow 1$ platí

$\sum a_k \in \mathbb{R}$ (má konečný součet) $\Rightarrow \lim a_k = 0$

$\{s_n\}$ je rostoucí $\Rightarrow$ existuje $\lim s_n$

předpoklad	závěr
	tvrzení

protiklady $0 \Rightarrow 1$

$\sum \frac{1}{k} = +\infty$ $\quad \lim \frac{1}{k} = 0$

$s_n = \sum_{k=1}^{n} \frac{(-1)^{k+1}}{k}$ $\quad \lim s_n$ existuje