LSK $\sum a_n$ $a_n \geq 0$ $\sum b_n$ $b_n \geq 0$

$\lim_{n\to\infty} \frac{a_n}{b_n} = k \in (0,\infty)$ $\sum a_n$ k $\iff$ $\sum b_n$ k

$\sum n^\alpha$ k $\alpha < -1$ $\sum \frac{1}{n^2}$ k

0 $\alpha \geq -1$ $\sum \frac{1}{n}$ 0

$\sum \frac{n+1}{n^3+2n}$ (a_n)

$\lim \frac{a_n}{b_n} = \lim \frac{\frac{n+1}{n^3+2n}}{\frac{1}{n^2}} =$

$\sum \frac{n}{n^3}$ $\sum \frac{1}{n^2}$ k (b_n)

$= \lim_{n\to\infty} \frac{n^3+n^2}{n^3+2n} = 1 \in (0,\infty)$

Zaver: $\sum \frac{n+1}{n^3+2n}$ k

$\sum \sin\left(\frac{1}{n}\right)\left(e^{1/n^2} - 1\right)$ $\arctan\left(\frac{1}{n}\right)$ $\arctan n$

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

$b_n = \frac{1}{n} \cdot \frac{1}{n^2}$ $\sum \frac{1}{n^3}$ k

$\lim \frac{\sin\left(\frac{1}{n}\right)\left(e^{\frac{1}{n^2}} - 1\right)}{\frac{1}{n} \cdot \frac{1}{n^2}} = 1 \in (0,\infty)$

LSK $\sum a_n$ k

$\sum n^{-3}$ $\not\sim$ $\Leftrightarrow$ $\sum \frac{1}{n^3}$ $\not\sim$

nebo li

$\sin \frac{1}{n} \approx \frac{1}{n}$

$$\sum \frac{1}{\sqrt{n}\sqrt{n+1}\left(\sqrt{n+1}+\sqrt{n}\right)} \qquad \sum \frac{1}{\sqrt{n}\sqrt{n}\sqrt{n}} = \sum \frac{1}{n^{3/2}}$$

$\sqrt{n}$ $\sqrt{n}$ $\sqrt{n}$