$$\cancel{\sum_{j,k=1}^{\infty} \frac{1}{j^2+k^2} = \sum_{j=1}^{\infty}\sum_{k=1}^{\infty} \frac{1}{j^2+k^2} = \sum_{j=1}^{\infty} \frac{1}{j^2} \sum_{k=1}^{\infty} \frac{1}{k^2}}$$

j/k	1	2	3	4
1	$\frac{1}{1+1}$	$\frac{1}{1+2^2}$	$\frac{1}{1+3^2}$	$\frac{1}{1+4^2}$
2	$\frac{1}{2^2+1}$	$\frac{1}{2^2+2^2}$	$\frac{1}{2^2+3^2}$	
3	$\frac{1}{3^2+1}$	$\frac{1}{3^2+2^2}$	$\frac{1}{3^2+3^2}$	
4	$\frac{1}{4^2+1}$	$\frac{1}{4^2+2^2}$	$\frac{1}{4^2+3^2}$	$\frac{1}{4^2+4^2}$

j/k	1	2	3	4	5
1	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{17}$	$\frac{1}{26}$
2	$\frac{1}{5}$	$\frac{1}{8}$	$\frac{1}{13}$	$\frac{1}{20}$	
3	$\frac{1}{10}$	$\frac{1}{13}$	$\frac{1}{18}$	$\frac{1}{25}$	
4	$\frac{1}{17}$	$\frac{1}{20}$	$\frac{1}{25}$	$\frac{1}{32}$	
5	$\frac{1}{26}$				

$$\sum_{j,k=1}^{\infty} \frac{1}{j^2+k^2} \geq \sum_{j,k=1}^{n} \frac{1}{j^2+k^2}$$

$$\cancel{\sum_{j,k=1}^{\infty} \frac{1}{j^3+k^3} = \sum_{j=1}^{\infty} \frac{1}{j^3} \sum_{k=1}^{\infty}}$$

$$\Rightarrow \sum_{j,k=1}^{n} \frac{1}{j^2+k^2} \geq \sum_{d=1}^{n} d \cdot \frac{1}{d^2+1} \geq \sum_{d=1}^{n} d \cdot \frac{1}{d^2+d^2} = \sum \frac{d}{2d^2} = \frac{1}{2d}$$

$$= \frac{1}{2} \cdot \sum \frac{1}{d}$$

Anm. d ist die diagonale:

$$\text{z. B. } \underbrace{\frac{1}{10} + \frac{1}{8} + \frac{1}{10}}_{\text{Summe d. diagonale von 3 bis 3}} \geq \underbrace{\frac{1}{10} + \frac{1}{10} + \frac{1}{10}}_{d \cdot \frac{1}{d+1} \text{ für } d=3}$$

$\Downarrow$ divergente Minorante

$$\Rightarrow \sup_{n \in \mathbb{N}} |x_{jk}| = \infty \quad \Rightarrow \text{nicht summierbar}$$