
Zbl 1112.40003**Pataki, Gergely****On the convergence of some particular series.** (English)

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<http://tatra.mat.savba.sk/>

The author gives some interrelationships of properties of sequences from $]0, 1]$ with convergence properties of some particular series. Namely there are studied series of the types

$$\sum a_n^{1-x_n/n} \quad \text{and} \quad \sum a_n^{1-x_n/\log(1+n)}.$$

The results are given in five theorems by using L'Hospital's rule according to the well-known series convergence problem of the types

$$\sum_{n=1}^{\infty} n^{-\alpha}, \quad \sum_{n=2}^{\infty} n^{-1} \cdot (\log n)^{-\alpha}, \quad \sum_{n=3}^{\infty} n^{-1} \cdot (\log n)^{-1} \cdot (\log \log n)^{-\alpha}, \dots$$

for some $\alpha > 0$.

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