

On the theorem by Estrada and Kanwal

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Abstract: Let (x_n) be a sequence of positive real numbers such that the corresponding series $\sum_{n=1}^{\infty} x_n$ diverges. Then, intuitively, its subseries along “small” sets of indices converge, while subseries along “large” sets of indices diverge. Extending the known results by Estrada and Kanwal, we will present that there are also some very small sets of indices along which the subseries diverge. On the other hand, we will show that these kind of results can not be strengthened in some natural direction.