

A NOTE ON HILBERT'S INEQUALITY

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Abstract. In this paper, it is shown that some sharp results on Hilbert's inequality for double series can be obtained by means of the refined Cauchy's inequality.

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REFERENCES

- [1] G. H. HARDY, J. E. LITTLEWOOD AND G. POLYA, *Inequalities*, Cambridge Univ. Press, Cambridge, 1995.
- [2] GAO MINGZHE, A Note on the Hardy-Hilbert Inequality, J. Math. Anal. Appl. Vol. 204, No. 1 (1996), 346–351.
- [3] GAO MINGZHE AND YANG BICHEN, on the Extended Hilbert's Inequality, Proc. Amer. Math. Soc. Vol. 126, No. 3 (1998), 751–759.
- [4] W. H. GREUB, Linear Algebra, Springer Verlag, Berlin, 1963, p. 161.

