

Gamma function estimates via completely monotonicity arguments

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ABSTRACT.

The aim of this paper is to improve some recent results of Sandor and Debnath [On certain inequalities involving the constant e and their applications J. Math. Anal. Appl. 249 (2000) 569-582] and Batir [Sharp inequalities for factorial n Proyecciones 27 (2008) 97-102] about the problem of approximation of gamma function. In proving the results in this paper, the proofs are not completely analytic but essentially based on formal computations obtained by means of software packages.

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