

Matala-Aho, Tapani; Väänänen, Keijo

On Diophantine approximations of mock theta functions of third order. (English)

Zbl 1001.11030

Ramanujan J. 4, No. 1, 13-28 (2000).

Summary: The paper gives bounds for the approximation of the values of Ramanujan's mock theta functions of third order and more generally of some q -hypergeometric functions by the elements of an algebraic number field. Simultaneous approximations for the values of the q -exponential function are also obtained. All the results are given both in the Archimedean and p -adic case.

MSC:

11J82 Measures of irrationality and of transcendence

11J61 Approximation in non-Archimedean valuations

11J72 Irrationality; linear independence over a field

Cited in **3** Documents

Keywords:

irrationality measure; Padé approximation; simultaneous approximations; bounds; values of Ramanujan's mock theta functions of third order; q -hypergeometric functions; values of q -exponential function

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