

Bugeaud, Y.

On a property of Pisot numbers and related questions. (English) Zbl 0923.11148
Acta Math. Hung. 73, No. 1-2, 33-39 (1996).

Summary: Denote by q a real number satisfying $1 < q < 2$. Let k be a positive integer and let $0 =: y_0^{(k)} < y_1^{(k)} < y_2^{(k)} < \dots$ be the increasing sequence of those real numbers y which have at least one representation of the form $y = \varepsilon_0 + \varepsilon_1 q + \varepsilon_2 q^2 + \dots + \varepsilon_i q^i$, where $i \geq 1$ and $\varepsilon_0, \dots, \varepsilon_i \in \{0, 1, \dots, k\}$. We define the difference sequence $(u_n^{(k)})_{n \geq 0}$ by $u_n^{(k)} = y_{n+1}^{(k)} - y_n^{(k)}$.

A typical result of the paper is: Theorem 1. The real $q \in]1, 2[$ is a Pisot number if and only if we have $\liminf(u_n^{(k)}) > 0$ for all positive integers k .

MSC:

11R06 PV-numbers and generalizations; other special algebraic numbers; Mahler measure Cited in 19 Documents

Keywords:

Pisot numbers

Full Text: [DOI](#)

References:

- [1] D. Berend and C. Frougny, Computability by finite automata and Pisot bases, *Math. Systems Theory*, 27 (1994), 275-282. · [Zbl 0819.11005](#) · [doi:10.1007/BF01578846](#)
- [2] A. Bogm?r, M. Horv?th and A. S?vegj?rt?, On some problems of I. Jo?, *Acta Math. Hungar.*, 58 (1991), 153-155. · [Zbl 0766.11004](#) · [doi:10.1007/BF01903557](#)
- [3] P. Erd?s, I. Jo? and M. Jo?, On a problem of Tam?s Varga, *Bull. Soc. Math. France*, 120 (1992), 507-521. · [Zbl 0787.11002](#)
- [4] P. Erd?s, I. Jo? and V. Komornik, Characterization of the unique expansion 39-1 and related problems. *Bull. Soc. Math. France*, 118 (1990), 377-390.
- [5] P. Erd?s, I. Jo? and V. Komornik, In preparation.
- [6] C. Frougny, Representations of number and finite automata, *Math. Systems Theory*, 25 (1992), 37-60. · [Zbl 0776.11005](#) · [doi:10.1007/BF01368783](#)
- [7] G. Rauzy, Sur les d?veloppements en base non enti?re, *Colloque de th?orie des nombres (Alger, 21-23 octobre 1989)*.

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.