

Bases which admit exactly two expansions

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Abstract. Given a positive integer m , let $\Omega_m = \{0, 1, \dots, m\}$, and let $\mathcal{B}_2(m)$ denote the set of bases $q \in (1, m + 1]$ in which there exist numbers having precisely two q -expansions over the alphabet Ω_m . Sidorov [23] firstly studied the set $\mathcal{B}_2(1)$ and raised some questions. Komornik and Kong [15] further investigated the set $\mathcal{B}_2(1)$ and partially answered Sidorov's questions. In the present paper, we consider the set $\mathcal{B}_2(m)$ for general positive integer m , and generalise the results obtained by Komornik and Kong.

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