

Title: On the sumset of binary recurrence sequences

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For a subset $\mathcal{A}$ of $\mathbb{Z}$ we define the restricted sumset of $\mathcal{A}$ by

$$\mathcal{A} \hat{+} \mathcal{A} := \{a + b : a \in \mathcal{A}, b \in \mathcal{A}, a \neq b\}.$$

Answering a question of I. Z. RUZSA, A. BÉRCZES gave a complete description of the restricted sumset of geometric progressions having positive real quotient. In this connection, it is natural to ask whether it is possible to give a similar description of the restricted sumset of binary recurrence sequences? The present paper answers the question for Lucas sequences.

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