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Ramsey Results Involving the Fibonacci Numbers,
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Abstract

A collection \mathcal{A} of sequences of positive integers is called *regular* if for all positive integers k and r , there is a least positive integer $n = n(k, r)$ such that for every partition of $\{1, 2, \dots, n\}$ into r subsets, there is some subset that contains a k -term sequence belonging to \mathcal{A} . In this paper we examine the regularity of families related to the Fibonacci numbers. In particular, we consider the regularity of the family of arithmetic progressions whose gaps are Fibonacci numbers, the family of increasing sequences (not necessarily arithmetic progressions) whose gaps are Fibonacci numbers, and the family of all sequences satisfying the Fibonacci recurrence $x_i = x_{i-1} + x_{i-2}$.