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Erdős, Paul; Spencer, Joel

Monochromatic sumsets. (In English)

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The sumset $P(S)$ is defined to be the set of all finite sums of distinct elements in $S \subset \mathbb{N}$. The number $F(k)$ is defined to be the least n such that if { 1,...,n} is two coloured then there is a k-set S with $P(S) \subset \{1, ..., n\}$ and $P(S)$ monochromatic. A short proof that $F(k) > 2^{ck^2/\log k}$ is given, and a conjecture related to removing the logarithmic term is posed.

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Classification:
11B13 Additive bases
05A05 Combinatorial choice problems
11B75 Combinatorial number theory