

On a problem of Erdős and Graham

By MIN TANG (Wuhu) and QUAN-HUI YANG (Nanjing)

Abstract. In this paper, we focus on an old problem of Erdős and Graham. Let $k \geq 3$ be an integer and $\mathcal{A} = (a_i)_{i=1}^{\infty}$ be a sequence of integers. Let $k\mathcal{A}$ be the set of all sums of k elements of \mathcal{A} with repetitions allowed. We show that if the difference sequence of \mathcal{A} is block type, then there is sequence \mathcal{B} such that $k\mathcal{A} \cap \mathcal{B} \neq \emptyset$.

MIN TANG
SCHOOL OF MATHEMATICS
AND STATISTICS
ANHUI NORMAL UNIVERSITY
WUHU 241002
P. R. CHINA

QUAN-HUI YANG
SCHOOL OF MATHEMATICS
AND STATISTICS
NANJING UNIVERSITY OF
INFORMATION SCIENCE
AND TECHNOLOGY
NANJING 210044
P. R. CHINA

Mathematics Subject Classification: 11B25, 11B75.

Key words and phrases: Erdős–Graham problem, sequences of integers.