
Zbl 325.10001

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Extremal problems in number theory. (In English)

Proc. 1972 Number Theory Conf., Univ. Colorado, Boulder 1972, 80-86 (1972).

[For the entire collection see Zbl 312.00004.]

The paper paper is one of a number of papers the author has written on the subject of extremal problems in number theory. Whilst the author gave here a report on the recent progress made in some of the older problems, reference was also made to a number of the more interesting problems that have more recently engaged the interest of workers in this area of number theory. Perhaps special mention might be made of the following conjecture settled recently by Szemerédi: Let $1 \leq a_1 < \ldots < a_k \leq n$; $1 \leq b_1 \ldots < b_\ell \leq n$ be two sequences of integers so that the products $a_i b_j$, $1 \leq i \leq k$, $1 \leq j \leq \ell$, are all distinct. Then $k\ell < cn^2/\log n$.

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Classification:
11-02 Research monographs (number theory)
11B83 Special sequences of integers and polynomials
11N05 Distribution of primes
11K65 Arithmetic functions (probabilistic number theory)