
Zbl 559.10001

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On some of my problems in number theory I would most like to see solved. (In English)

Number theory, Proc. 4th Matsci. Conf., Ootacamund/India 1984, Lect. Notes Math. 1122, 74-84 (1985).

[For the entire collection see Zbl 547.00014.]

The paper contains a summary of some problems formulated by the author in previous years. With respect to the topics concerned these problems can be divided into several classes. The first problems concern covering systems of congruences. The further problem is related to the maximal $h(n)$ such that there are a_i, $1 \leq a_1 < a_2 < ... < a_{h(n)}$ for which all the numbers $\sum_{i=1}^{n} \epsilon_i a_i$ ($\epsilon_i = 0$ or 1) are distinct. The author asks whether the estimation $h(n) < \log n / \log 2 + C$ (with an absolute constant C) holds.

The further group of problems belongs to the additive theory of numbers. A group of problems concerns the prime counting function π especially the conjecture according to which $\pi(x + y) \leq \pi(x) + \pi(y)$ and finally there are formulated some problems dealing with the greatest prime factor of $n \in \mathbb{N}$.

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Classification:
11-02 Research monographs (number theory)
00A07 Problem books
11A07 Congruences, etc.
11A41 Elemementary prime number theory
11B83 Special sequences of integers and polynomials
11P99 Additive number theory

Keywords:
problem collection; binary representation; covering systems of congruences; additive theory of numbers; prime counting function; greatest prime factor