

Zbl 708.11002

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Uses of and limitations of computers in number theory. (In English)

Computers and mathematics, Proc. Int. Conf., Stanford/CA (USA) 1986, Lect. Notes Pure Appl. Math. 125, 241-260 (1990).

[For the entire collection see Zbl 698.00036.]

This is a survey of the ways in which computers have been used or might be used to disprove or fortify conjectures, or suggest fresh ones. It ranges widely over number theory, including problems on $\pi(x)$, $\mu(x)$, and $d(x)$, extremal problems, properties of sequences, representational problems, prime factors of binomial coefficients, and primes in arithmetic progression.

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Classification:

11-02 Research monographs (number theory)

11Yxx Computational number theory

11N25 Distribution of integers with specified multiplicative constraints

11N37 Asymptotic results on arithmetic functions

11N60 Distribution functions (additive and positive multipl. functions)

11B13 Additive bases

11N13 Primes in progressions

Keywords:

survey; extremal problems; representational problems; prime factors of binomial coefficients; primes in arithmetic progression