
Zbl 472.10001

Erdős, Paul

Some applications of graph theory and combinatorial methods to number theory and geometry. (In English)

Algebraic methods in graph theory, Vol. I, Conf. Szeged 1978, Colloq. Math. Soc. Janos Bolyai 25, 137-148 (1981).

[For the entire collection see Zbl 463.00008.]

The paper gives a survey on recent results in some geometric and number-theoretic problemd from the point of view of combinatorial approach. It contains so many results as well as open problems, that we cannot mention all of them here. So we recall only two older (however very interesting) problems: 1. (Corrádi, Erdős, Hajnal) Is it true that if there are given n points in the plane, not all on a line, then they determine at least $n-2$ different angles? 2. (Erdős, Turán) Let $1 \leq a_i \leq \ldots$ be an infinite sequence of integers; denote by $f(n)$ the number of solutions of $n = a_i + a_j$. If $f(n) > 0$ for all $n > n_0$, then $\limsup f(n) = \infty$. P. Erdős offers 500 dollars for a proof or disproof.

S.Znám

Classification:
11-02 Research monographs (number theory)
51-02 Research monographs (geometry)
11B83 Special sequences of integers and polynomials
11B75 Combinatorial number theory

Keywords:
problems in elementary and combinatorial geometry; applications of graph theory to number theory; survey on recent results