
Zbl 324.05124

Erdős, Paul; Graham, Ronald L.

On partition theorems for finite graphs. (In English)

Infinite finite Sets, Colloq. Honour Paul Erdős, Keszthely 1973, Colloq. Math. Soc. Janos Bolyai 10, 515-527 (1975).

[For the entire collection see Zbl 293.00009.]

For a finite graph G and positive integer k, let $r(G;k)$ denote the least integer r such that if the edges of K_r, the complete graph on r vertices are arbitrarily partitioned into k classes then some class contains a subgraph isomorphic to G. The existence of $r(G;k)$ follows from the well known theorem of Ramsey. In this paper, the authors have investigated the behavior of $r(G;k)$ for various classes of graphs including trees, forests and cycles C_n, where n is odd or even. A typical result is given by $2^k n < r(C_{2n+1};k) < 2(k+2)!n$.

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Classification:
05C99 Graph theory
05C35 Extremal problems (graph theory)