Zbl 129.39905
Erdős, Pál
On extremal problems of graphs and generalized graphs (In English)
Isr. J. Math. 2, 183-190 (1964). [0021-2172]

An r-graph G consists of a set $V(G)$ of elements called vertices of G and a set $E(G)$ whose elements (called edges of G) are subsets of $V(G)$ with cardinal number r. (Thus a 2-graph is a graph in the usual sense.) The paper deals with the following problem: given positive integers n, r, l, estimate the smallest value of f such that, for every r-graph G with n vertices and f edges, $V(G)$ has r disjoint subsets $S_1, ..., S_r$ of cardinal number l such that $\{x_1, ..., x_r\} \in E(G)$ whenever $x_1 \in S_1, ..., x_r \in S_r$. Some related matters are also briefly discussed and some interesting results and unsolved problems in this area are mentioned.
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Classification:
05C35 Extremal problems (graph theory)