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Extremal graphs with the given primitivity. (Russian) Zbl 0609.05058

Metody Diskretn. Anal. 42, 62-71 (1985).

Finite, non-oriented graphs without loops and multiple edges are considered. The primitivity $f(G)$ of a graph G is such a maximal number k that there exists a skeleton in G with k pendant vertices. Let $m(n,k)$ be the maximal number of edges in an n -vertex connected graph, the primitivity of which does not exceed k . Such a graph is called extremal, if its number of edges is equal $m(n,k)$. In the case $k = n - 3$, all extremal graphs are described and a proof of the formula $m(n, n - 3) = (n^2 - 5n + 10)/2$ is given which differs from the proof of *B. Zelinka* [Casopis Pest. Mat. 98, 56-66 (1973; [Zbl 0256.05116](#))].

Reviewer: [J.Rosenknop](#)

MSC:

[05C75](#) Structural characterization of families of graphs

[05C30](#) Enumeration in graph theory

Keywords:

characterization of graphs; enumeration of graphs; primitivity of a graph