Zbl 163.18203
Erdős, Pál
On cliques in graphs (In English)
Isr. J. Math. 4, 233-234 (1966). [0021-2172]

A complete subgraph of a graph G is called a clique if it is not contained in any other complete subgraph of G. Let $g(n)$ denote the maximum number of different sizes of cliques that can occur in a graph with n points: if $\log_k n$ denotes the k-times iterated logarithm to the base 2 of n, let $H = H(n)$ be the smallest integer such that $\log_H n < 2$. The author shows that $g(n) \geq n - \log n - H(n) - O(1)$. This extends an earlier result of the reviewer and *L.Moser* [Isr. J. Math. 3, 23-28 (1965; Zbl 144.23205)].

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Classification:
05C35 Extremal problems (graph theory)