**Zbl 245.05112**
**Erdős, Paul; Komlos, J.**
*On the capacity of graphs.* (In English)
**Period. Math. Hung. 3, 125-133 (1973). [0031-5303]**

Let $G_n$ be a graph of $n$ vertices. Denote by $v(G_n)$ the capacity of $G_n$ (i.e. the number of non isomorphic spanned (in other words induced) subgraphs of $G_n$). Put $v(n) = \max_{G_n} v(G_n)$. Clearly $n \le v(n) \le 2^n - 1$. Goldberg conjectured $\lim_{n\to\infty} v(n)/2^n = 0$. The authors disprove this conjecture and in fact prove the following stronger Theorem. For every $\epsilon > 0$ and almost all graphs $G_n$ (i.e. all but $o(2^{\binom{n}{2}}$ graphs $G_n$) we have $v(G_n) > 2^n - 2^{n(1+\epsilon)/2}$. On the other hand for all graphs $G_n$ we have $v(G_n) \le 2^n - 2^{[n/2]} - 1$. After submitting their paper the authors found that their main result has been proved earlier in a somewhat different form by *A. D. Korshunov* [Mat. Zametki 9, 263-273 (1971; Zbl 206.26201), Engl. translation in Math. Notes 9, 155-160 (1971; Zbl 226.05118)].

Classification:
05C35 Extremal problems (graph theory)
05C25 Graphs and groups