



SEMINARIUM MATEMATYKA DYSKRETNA

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Upper bounds on the domination and total domination numbers of a graph in terms of minimum degree

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In this talk, we present a survey of the currently best known upper bounds on the domination number $\gamma(G)$ and total domination number $\gamma_t(G)$ of a graph G in terms of its order n and minimum degree δ . We focus mainly on results for small values of δ , namely $\delta \leq 6$. For example, we show that if $\delta = 6$, then $\gamma(G) \leq \frac{127}{418} n \approx 0.30382775 n$ (see [1]) and $\gamma_t(G) \leq \frac{5138}{14145} n < \left(\frac{4}{11} - \frac{1}{2510}\right) n$ (see [2]).

Literatura

- [1] Cs. Bujtás and M. A. Henning, On the domination number of graphs with minimum degree six. *Discrete Math.* **344** (2021), 112449.
- [2] M. A. Henning and A. Yeo, A new upper bound on the total domination number in graphs with minimum degree six, manuscript.