Discussiones Mathematicae
Graph Theory 41 (2021) 1067–1075
https://doi.org/10.7151/dmgt.2237

HEREDITARY EQUALITY OF DOMINATION AND EXPONENTIAL DOMINATION IN SUBCUBIC GRAPHS

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Abstract

Let $\gamma(G)$ and $\gamma_e(G)$ denote the domination number and exponential domination number of graph G, respectively. Henning *et al.*, in [*Hereditary equality of domination and exponential domination*, Discuss. Math. Graph Theory 38 (2018) 275–285] gave a conjecture: There is a finite set $\mathscr{F}$ of graphs such that a graph G satisfies $\gamma(H) = \gamma_e(H)$ for every induced subgraph H of G if and only if G is $\mathscr{F}$-free. In this paper, we study the conjecture for subcubic graphs. We characterize the class $\mathscr{F}$ by minimal forbidden induced subgraphs and prove that the conjecture holds for subcubic graphs.

Keywords: dominating set, exponential dominating set, subcubic graphs.

2010 Mathematics Subject Classification: 05C69, 05C35.

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Received 11 October 2018
Revised 13 May 2019
Accepted 13 May 2019