

HEREDITARY EQUALITY OF DOMINATION AND EXPONENTIAL DOMINATION

MICHAEL A. HENNING

*Department of Pure and Applied Mathematics
University of Johannesburg
Auckland Park, 2006, South Africa
e-mail:* mahenning@uj.ac.za

SIMON JÄGER

AND

DIETER RAUTENBACH

*Institute of Optimization and Operations Research
Ulm University, Ulm, Germany
e-mail:* simon.jaeger@uni-ulm.de
dieter.rautenbach@uni-ulm.de

Abstract

We characterize a large subclass of the class of those graphs G for which the exponential domination number of H equals the domination number of H for every induced subgraph H of G .

Keywords: domination, exponential domination, hereditary class.

2010 Mathematics Subject Classification: 05C69.

REFERENCES

- [1] M. Anderson, R.C. Brigham, J.R. Carrington, R.P. Vitray and J. Yellen, *On exponential domination of $C_m \times C_n$* , AKCE Int. J. Graphs Comb. **6** (2009) 341–351.
- [2] A. Aytaç and B. Atay, *On exponential domination of some graphs*, Nonlinear Dyn. Syst. Theory **16** (2016) 12–19.
- [3] S. Bessy, P. Ochem and D. Rautenbach, *Bounds on the exponential domination number*, Discrete Math. **340** (2017) 494–503.
doi:10.1016/j.disc.2016.08.024

- [4] S. Bessy, P. Ochem and D. Rautenbach, *Exponential domination in subcubic graphs*, Electron. J. Comb. **23** (2016) #P4.42.
- [5] P. Dankelmann, D. Day, D. Erwin, S. Mukwembi and H. Swart, *Domination with exponential decay*, Discrete Math. **309** (2009) 5877–5883.
doi:10.1016/j.disc.2008.06.040
- [6] T.W. Haynes, S.T Hedetniemi and P.J. Slater, Fundamentals of Domination in Graphs (Marcel Dekker, New York, 1998).
- [7] M.A. Henning, *Distance domination in graphs*, in: T.W. Haynes, S.T. Hedetniemi and P.J. Slater (Eds.), Domination in Graphs: Advanced Topics, Marcel Dekker, New York (1998) 321–349.
- [8] M.A. Henning, S. Jäger and D. Rautenbach, *Relating domination, exponential domination, and porous exponential domination*, Discrete Optim. **23** (2017) 81–92.
doi:10.1016/j.disopt.2016.12.002
- [9] E.S. Wolk, *A note on “the comparability graph of a tree”*, Proc. Amer. Math. Soc. **16** (1965) 17–20.

Received 17 May 2016
 Revised 25 November 2016
 Accepted 25 November 2016