THE WELL-COVERED DIMENSION OF PRODUCTS OF GRAPHS

ISAAC BIRNBAUM\textsuperscript{1}, MEGAN KUNELI\textsuperscript{1}

ROBYN MCDONALD\textsuperscript{2}, KATHERINE URABE\textsuperscript{1}

AND

OSCAR VEGA\textsuperscript{1}

\textsuperscript{1} Department of Mathematics
California State University, Fresno
Fresno, CA, USA

\textsuperscript{2} California State University, Stanislaus
Turlock, CA, USA

e-mail: isaacb1@mail.fresnostate.edu
mrkunelius@mail.fresnostate.edu
rmcdonald@csustan.edu
kturabe@mail.fresnostate.edu
ovega@csufresno.edu

Abstract

We discuss how to find the well-covered dimension of a graph that is the Cartesian product of paths, cycles, complete graphs, and other simple graphs. Also, a bound for the well-covered dimension of $K_n \times G$ is found, provided that $G$ has a largest greedy independent decomposition of length $c < n$.

Formulae to find the well-covered dimension of graphs obtained by vertex blowups on a known graph, and to the lexicographic product of two known graphs are also given.

Keywords: well-covered dimension, maximal independent sets.

2010 Mathematics Subject Classification: 05C50, 15A03.

References

doi:10.1137/S0895480101393039


Received 13 December 2012
Revised 19 November 2013
Accepted 19 November 2013