

UNION OF DISTANCE MAGIC GRAPHS

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Abstract

A distance magic labeling of a graph $G = (V, E)$ with $|V| = n$ is a bijection ℓ from V to the set $\{1, \dots, n\}$ such that the weight $w(x) = \sum_{y \in N_G(x)} \ell(y)$ of every vertex $x \in V$ is equal to the same element μ , called the *magic constant*. In this paper, we study unions of distance magic graphs as well as some properties of such graphs.

Keywords: distance magic labeling, magic constant, sigma labeling, graph labeling, union of graphs, lexicographic product, direct product, Kronecker product, Kotzig array.

2010 Mathematics Subject Classification: 05C76, 05C78.

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¹The author was supported by National Science Centre grant no. 2011/01/D/ST/04104

²The author was supported by Polish Ministry of Science and Higher Education.

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Received 23 July 2015
Revised 11 April 2016
Accepted 11 April 2016