Some New Results on Weak Integer Additive Set-Labeling of Graphs

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 128
Number 5

Year of Publication: 2015

Authors:
N.K. Sudev, K.A. Germina

10.5120/ijca2015906514

Abstract

Let $\mathbb{N}_0$ denote the set of all non-negative integers and $P(\mathbb{N}_0)$ be its power set. An integer additive set-labeling (IASL) of a graph $G$ is an injective function $f : V(G) \rightarrow P(\mathbb{N}_0)$ such that the induced function $f^+ : E(G) \rightarrow P(\mathbb{N}_0)$ is defined by $f^+(uv) = f(u) \cup f(v)$. 


Some New Results on Weak Integer Additive Set-Labeling of Graphs

\[ f(u) + f(v) \]

where \( f(u) + f(v) \) is the sumset of

\( f(u) \) and

\( f(v) \).

An IASL \( f \) is said to be an integer additive set-indexer (IASI) if the associated edge-function \( f + \)
is also injective. An IASL \( f \) of a given graph \( G \) is said to be a weak integer additive set-labeling (WIASL) of \( G \) if the cardinality of the set-label of every edge of \( G \) is equal to the cardinality of the set-label of at least one end vertex of it. In this paper, we study the admissibility of weak integer additive set-labeling by different graphs.

References

15. N. K. Sudev, K. A. Germina and K. P. Chithra, Weak Integer Additive Set-Labeled...
Some New Results on Weak Integer Additive Set-Labeling of Graphs


Index Terms

Computer Science Applied Mathematics

Keywords

Integer additive set-labeled graphs, weak integer additive setlabeled graphs, sparing number of graphs