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INDUCED V_4– MAGIC LABELING OF SOME STAR AND PATH RELATED GRAPHS

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Abstract: Let $V_4 = \{0, a, b, c\}$ be the Klein-4-group with identity element 0 and $G = (V(G), E(G))$, be the graph with vertex set $V(G)$ and edge set $E(G)$. Let $f : V(G) \to V_4$ be a vertex labeling and $f^* : E(G) \to V_4$ denote the induced edge labeling of f defined by $f^*(uv) = f(u) + f(v)$ for all $uv \in E(G)$. Then f^* again induces a vertex labeling $f^{**} : V(G) \to V_4$ defined by $f^{**}(u) = \Sigma f^*(uv)$ where the summation is taken over all the vertices v which are adjacent to u. A graph $G = (V(G), E(G))$ is said to be an induced V_4-Magic graph if there exists a non zero vertex labeling $f : V(G) \to V_4$ such that $f \equiv f^{**}$. The function f, so obtained is called an induced V_4-Magic labeling of G. In this paper we discuss Induced V_4 magic labeling of some graphs and the Induced V_4 magic labeling of some star and path related graphs.

Keywords and Phrases: Klein-4-group, Induced V_4-magic graphs.

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1. Introduction

In this paper we consider simple, connected, finite and undirected graphs and the Klein 4-group is denoted by $V_4 = \{0, a, b, c\}$, which is a noncyclic abelian group