

DIVISOR CORDIAL LABELING FOR SOME SNAKES AND DEGREE SPLITTING RELATED GRAPHS

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Abstract: For a graph $G = (V(G), E(G))$, the vertex labeling function is defined as a bijection $f : V(G) \rightarrow \{1, 2, \dots, |V(G)|\}$ such that an edge uv is assigned the label 1 if one $f(u)$ or $f(v)$ divides the other and 0 otherwise. f is called divisor cordial labeling of graph G if the number of edges labeled with 0 and the number of edges labeled with 1 differ by at most 1. In 2011, Varatharajan *et al.* [24] have introduced divisor cordial labeling as a variant of cordial labeling. In this paper, we study divisor cordial labeling for triangular snake and quadrilateral snake. Moreover, we investigate divisor cordial labeling for the degree splitting graph of path, shell, cycle with one chord, crown and comb graph.

Keywords and Phrases: Graph Labeling, Cordial Labeling, Divisor Cordial Labeling, Snake Graph, Degree Splitting graph.

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1. Introduction

We begin with simple, finite, connected and undirected graph $G = (V(G), E(G))$. For all standard terminologies and notations we follow Harary [12]. We will give brief summary of definitions which are useful for the present investigations.

Definition 1.1. *A graph labeling is an assignment of integers to the vertices or edges or both subject to certain condition(s). If the domain of the mapping is the set of vertices (edges) then the labeling is called a vertex labeling (an edge labeling).*