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MULTIPLY DIVISOR CORDIAL LABELING IN CONTEXT OF JOINT SUM OF GRAPHS

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Abstract: Multiply divisor cordial labeling of a graph G^* having set of node V^* is a bijective h from $V(G^*)$ to $\{1, 2, ..., |V(G^*)|\}$ such that an edge xy is assigned the label 1 if 2 divides $(h(x) \cdot h(y))$ and 0 otherwise, then the number of edges labeled with 0 and the number of edges labeled with 1 differ by at most 1. A graph having multiply divisor cordial labeling is said to be a multiply divisor cordial graph.

Keywords and Phrases: Multiply Divisor Cordial Labeling, Multiply Divisor Cordial Graph, Joint sum of graphs.

2020 Mathematics Subject Classification: 05C76, 05C78.

1. Introduction

Graph theory is a useful tool for quantifying and simplifying the various moving aspects of dynamic systems given a collection of nodes and connections that can abstract anything from city plans to computer data. Many arrangements, networking, optimization, matching, and operational problems can indeed be solved by studying graphs using a framework. Many people in Artificial Intelligence and Data Science use graph theory for presentation, and there are some good libraries for it. To store graph data directly in native graph form and support graph-oriented queries, many people will also adopt graph databases like Neo4j. But there are still certain specialised applications for graph databases.