

**ABSOLUTE MEAN GRACEFUL LABELING IN THE CONTEXT
OF m -SPLITTING AND DEGREE SPLITTING GRAPHS**

V. J. Kaneria and J. M. Shah

Department of Mathematics,
Saurashtra University,
Rajkot - 360005, Gujarat, INDIA

E-mail : kaneriavinodray@gmail.com, jaydeepshah1998@gmail.com

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Abstract: A graph G with q edges is said to be absolute mean graceful if there is a one-to-one function f from $V(G)$ to the set $\{0, \pm 1, \pm 2, \pm 3, \dots, \pm q\}$ such that when each edge xy is assigned the label $\lceil \frac{|f(x)-f(y)|}{2} \rceil$, then the resulting edge labels are distinct. In this paper, the absolute mean graceful labeling of m -splitting and degree splitting graphs of some graphs are investigated.

Keywords and Phrases: Absolute mean graceful labeling, m -splitting graph, splitting graph, degree splitting graph.

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1. Introduction and Preliminaries

All the graphs $G = (V(G), E(G))$ considered in this paper have p vertices and q edges and are simple, finite, connected and undirected. We follow Harary [8] for terminologies and notations related to graph theory.

Assigning values to the vertices or edges of graphs under certain conditions is referred to as *graph labeling*. For various graph labeling problems and references we follow the dynamic survey by Gallian [6].

Labeled graphs have wide range of applications. Some applications of labeled graphs are found in [4, 11, 16, 17, 18]. The concept of labeled graphs is originated by Rosa [14] to counter the conjecture due to Ringel [13]. Rosa [14] introduced the β -valuation. It was named graceful by Golomb [7]. Several variants of graceful