A Study of Even and Odd Labeling on Some Classes of Graph

Pratibha*, Daxesh Rohit

Department of Applied Sciences, Faculty of Engineering and Technology,
Parul University, Wahgodia Road, Vadodara, Gujarat, India

*Corresponding Author

ABSTRACT

Graph theory is the study of graphs, which are mathematical structures used to model pairwise relations between objects known as graphs that consist of vertices (or nodes) connected by edges (or arcs or lines). It is the fast-growing area of combinatorics also called combinatorial mathematics, the field of mathematics concerned with the problems of selection, arrangement, and operation with a finite or discrete system. In this paper, a graph G (N, E) is represented the set of vertices connected by edges. Here N is the set of vertices and E is the set of edges. We have used simple, finite, connected, and undirected graphs. Thereafter graph labeling is the central key point or mapping of elements in the graph theory where graph labeling is an assignment of integers to the vertices or edges or both, with subject to precise conditions. We found some rules that are based on even, odd, and prime distance to label the different classes of graphs. The main root of labeling is known as a function that dispenses a mathematical function g: G →Z (where Z is a set of integers). Graph labeling is used in many fields like circuits, x-ray, coding theory, communication networks, database management, etc. This paper gives an overview of labeling different types of graphs but mainly focuses on even, and odd labeling of graphs.

Keywords: Graphs; Prime labeling.

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