



EQUITABLE EDGE COLORING OF PRISM GRAPH FAMILIES

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Abstract

An equitable edge coloring of G is an assignment of colors to all the edge of a graph G for which no two adjacent edges got the same colors and difference for any two color classes by at most one. The minimum number of colors required for such coloring is called as the equitable edge chromatic number. In this paper, we prove the results on equitable edge chromatic number for prism graph D_n , anti-prism graph A_n , and n -crossed prism graph R_n .

1. Introduction and Preliminaries

Let us consider all graphs are finite simple and undirected graph G . An edge coloring of a graph G is an assignment of colors to the set of edges of G in which the adjacent edges received different colors. The minimum number of colors required for such a proper edge coloring is called as edge chromatic number and denoted by $\chi'(G)$. Clearly $\chi'(G) \geq \Delta(G)$, where $\Delta(G)$ is the maximum degree of a graph G .

In 1964, Vizing [8] given the tight bound for edge coloring that $\Delta(G) \leq \chi'(G) \leq \Delta(G) + 1$.

In 1973, the concept of equitable coloring was defined by Meyer [4] and also given the conjectured that for any connected graph G , $\chi'(G) = \Delta(G)$.

After few years, as an extension of equitable coloring, the concept of

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