

V-SUPER AND E-SUPER VERTEX-MAGIC TOTAL LABELING OF GRAPHS

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ABSTRACT

Let G be a graph of order p and size q . A vertex-magic total labeling is an assignment of the integers $1, 2, \dots, p + q$ to the vertices and the edges of G , so that at each vertex, the vertex label and the labels on the edges incident at that vertex, add to a fixed constant, called the magic constant of G . Such a labeling is V -super vertex-magic total if $f(V(G)) = \{1, 2, \dots, p\}$, and is an E -super vertex-magic total if $f(E(G)) = \{1, 2, \dots, q\}$. A graph that admits a V -super vertex-magic total labeling is called V -super vertex-magic total. Similarly, a graph that admits an E -super vertex-magic total labeling is called E -super vertex-magic total. In this paper, we provide some properties of E -super vertex-magic total labeling of graphs and we prove V -super and E -super vertex-magic total labeling of the product of cycles $C_m \times C_n$ where $m, n \geq 3$ and m, n odd.

KEYWORDS: Vertex Magic Total Labeling, V -Super Vertex Magic Total Labeling, E - Super Vertex Magic Total Labeling

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