

Super Edge-Magic Deficiencies of Books and Cycles

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An edge-magic total labeling (EMT) is a labeling of the vertices and edges with consecutive integers such that the sum of an edge label with its vertex labels is some constant for all edges. Super edge-magic total labeling (SEMT) is a type of edge-magic labeling where the first consecutive integers are assigned to the vertices, and then the remaining integers are assigned to the edges. The super edge-magic deficiency $\mu(G)$ of a graph G is the minimum n such that $G \cup nK_1$ is super edge-magic. If no such n exists, then $\mu(G) = \infty$. We made advancements in the classification of the super edge-magic deficiency of books and the disjoint union of four stars.

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