Vertex magic total labeling of selected trees

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Abstract: A VMT labeling of a graph with v vertices and e edges is defined as a one-to-one map taking the vertices and edges onto the integers 1,2,...,v+e with the property that the sum of the label on a vertex and the labels on its incident edges is a constant independent of the choice of vertex. In MacDougall et. al. [1] along with many interesting results on VMT graphs, the authors observed that, for the given graph a VMT labeling exists if there is not much variation among the degrees of the vertices. In this study further VMT labelings of a class of simple trees with vertex degrees less than four will be given.

Keywords: Vertex magic, total labeling, trees, graphs

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References

[1] J. A. MacDougall, M. Miller & W.D. Wallis, Vertex-magic total labelings of graphs. Utilitas Mathematics, 61, 3-21, 2002.