

Double Domination Number of Some Graphs

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ABSTRACT

In a graph G , a set D of its vertices is a double dominating set if $|[v] \cap D| \geq 2$ for every $v \in V(G)$, where $N[v]$ is the closed neighbourhood of v , that contains v and all its adjacent vertices. The double domination number of G is the minimum cardinality among all double dominating sets of G . In this article we find the double domination number of sunlet graph and the graphs obtained from sunlet graph such as line graph of sunlet graph, middle graph of sunlet graph. Also we find the double domination number of helm graph, line graph of helm graph, middle graph of helm graph. Further we find the double domination number of some other classes of graphs.

Keywords: Dominating set, Domination number, Double domination number

