ON EFFICIENT DOMINATING SETS IN TREES

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A vertex dominates both itself and each of its neighbors. A vertex set $S$ is efficient dominating set in a graph $G$ if each vertex of $G$ is dominated by exactly one member of $S$. Trees on $n$ vertices with largest possible number of efficient dominating sets are characterized and enumerated. In particular, in the set of those trees for $n = 7b + 2i$ with $i = -1, 0, \ldots, 5$, given any prescribed tree $T$ on $b$ vertices where $b \geq 5$, there is a member which includes $T$ as an induced subtree.

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References