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BLOCK GRAPHS WITH LARGE PAIRED DOMINATION MULTISUBDIVISION NUMBER

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Abstract

The paired domination multisubdivision number of a nonempty graph G, denoted by $\mathrm{msd}_{\mathrm{pr}}(G)$, is the smallest positive integer k such that there exists an edge which must be subdivided k times to increase the paired domination number of G. It is known that $\mathrm{msd}_{\mathrm{pr}}(G) \leq 4$ for all graphs G. We characterize block graphs with $\mathrm{msd}_{\mathrm{pr}}(G) = 4$.

Keywords: paired domination, domination subdivision number, domination multisubdivision number, block graph.

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