STRONG BLOCK DOMINATION IN GRAPHS

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ABSTRACT

For any graph $G = (V, E)$, the block graph $B(G)$ is a graph whose set of vertices is the union of the set of blocks of G in which two vertices are adjacent if and only if the corresponding blocks of G are adjacent. For gives two adjacent vertices u and v we say that u strongly dominates v if $\deg(u) \geq \deg(v)$. A dominating set D of a graph $B(G)$ is a strong block dominating set G if every vertex in $V[B(G)] - D$ is strongly dominated by at least one vertex in D. Strong block domination number $\gamma_{SB}(G)$ of G is the minimum cardinality of strong block dominating set of G. In this paper, we study graph theoretic properties of $\gamma_{SB}(G)$ and many bounds were obtain in terms of elements of G and its relationship with other domination parameters were found.

Keywords: Dominating set/ Independent domination/ Block graph/ Line graph/ Semitotal block graph / Roman domination /Edge domination/ Strong split domination/ Strong block domination.

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