

LOCATING EQUITABLE DOMINATION IN SUBDIVISION GRAPHS

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Abstract

Let $G = (V, E)$ be a simple, undirected finite nontrivial graph. A non empty set $D \subseteq V$ of vertices in a graph G is a dominating set if every vertex in $V - D$ is adjacent to some vertex in D . The minimum cardinality taken over all minimal dominating sets in G is called the domination number of G and is denoted by $\gamma(G)$. A dominating set D is called a locating equitable dominating set if for any two vertices $u, w \in V - D$, $N(u) \cap D \neq N(w) \cap D$, $|N(u) \cap D| = |N(w) \cap D|$. The minimum cardinality taken over all minimal locating equitable dominating sets in G is called the locating equitable domination number of G and is denoted by $\gamma_k(G)$. An edge $e = uv$ of a graph G is said to be subdivided if e is replaced by the edges uw and wv for some vertex w not in V . The graph obtained from G by subdividing each edge of G exactly once is called the subdivision graph of G and is denoted by $s(G)$. In this paper we investigate the properties of γ_{le} in $S(G)$.

Key Words : *Domination number, Domination subdivision number.*

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