

A study on gamma endowed total dominating sets in graphs

A dominating set of a graph G containing a minimum dominating set of G is called a γ -endowed dominating set of G . A total dominating set of a graph $G = (V, E)$ with no isolated vertex is a set of vertices of G such that every vertex is adjacent to a vertex in S . The total domination number of G is denoted by $\gamma_t(G)$. Let k be a positive integer and $k \geq \gamma_t(G)$. A simple graph $G = (V, E)$ is called a k - γ_t endowed graph if every total dominating set of G of cardinality k contains a minimum total dominating set of G . when $k = \gamma_t$ or $k = n$, every graph is trivially γ_t endowed graph.

It is proposed to do research on k - γ_t endowed graph for $k, \gamma_t < k < n$.