

γ -Paired Dominating Graphs of Paths and Cycles

Pannawat Eakawinrujee*, Nantapath Trakultraipruk, Thammasat University

A set D of vertices in a graph G is a paired dominating set of G if every vertex not in D is adjacent to some vertex in D and the subgraph induced by D contains a perfect matching. The paired domination number of G , denoted by $\gamma_{pr}(G)$, is the minimum cardinality of a paired dominating set of G . A paired dominating set of cardinality $\gamma_{pr}(G)$ is called a $\gamma_{pr}(G)$ -set. The γ -paired dominating graph of G , denoted by $PD_{\gamma}(G)$, is the graph whose vertices are $\gamma_{pr}(G)$ -sets and two $\gamma_{pr}(G)$ -sets are adjacent in $PD_{\gamma}(G)$ if one can be obtained from the other by removing one vertex and adding another vertex of G . In this talk, we present the results on γ -paired dominating graphs of paths and cycles.

Keywords: paired dominating graph, paired dominating set, paired domination number