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H-DOMINATION IN HYPERGRAPHS

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Abstract

In this paper we have introduced a variant of domination for hypergraphs which is called H-domination. An H-dominating set in hypergraph is always a dominating set. A maximal stable subset of a hypergraph is always an H-dominating set. We have proved that if a hypergraph does not have isolated vertices then the compliment of a minimal dominating set is an H-dominating set and the compliment of a minimal H-dominating set is a dominating set. We have obtained some upper bounds for H-domination. We have also proved that the H- domination number of a hypergraph G does not increase when a vertex is removed and the sub-hypergraph is considered.

Key Words : *Dominating set, Domination number, Minimal dominating set, H-dominating set, Minimal H-dominating set, H-domination number, Stable set, Maximal stable set.*

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