

عنوان مقاله:

Application of superhypergraphs-based domination number in real world

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خلاصه مقاله:

The concept of (quasi) superhypergraphs as a generalization of graphs makes a relation between some sets of elements in detail and in general (in the form of parts to parts, parts to whole, and whole to whole elements of sets) and is very useful in the real world. This paper considers the novel concept of (quasi) superhypergraphs and introduces the notation of dominating set and domination number of (quasi) superhypergraphs. Especially, we have analyzed the domination number of uniform (quasi) superhypergraphs and computed their domination number on different cases. The flows (from right to left, from left to right, and two-sided) as maps play a main role in (quasi) superhypergraphs and it is proved that domination numbers of (quasi) superhypergraphs are dependent on the flows. We define the valued-star (quasi) superhypergraphs for the design of hypernetworks and compute their domination numbers. We have shown that the domination numbers of valued-star (quasi) superhypergraphs are distinct in different flow states. In final, we introduce some applications of dominating sets of (quasi) superhypergraphs in .hypernetwork as computer networks and treatment networks with the optimal application

کلمات کلیدی:

Quasi)superhypergraph, Dominating set, Domination number, r-star quasi superhypergraph, Flow)

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