

# Domination hypergraphs of certain digraphs

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## Abstract

If  $D = (V, A)$  is a digraph, its *domination hypergraph*  $\mathcal{DH}(D) = (V, \mathcal{E})$  has the vertex set  $V$  and  $e \subseteq V$  is an edge of  $\mathcal{DH}(D)$  if and only if  $e$  is a minimal dominating set of  $D$ .

We investigate domination hypergraphs of special classes of digraphs, namely tournaments, paths and cycles. Finally, using a special decomposition/composition method we construct edge sets of domination hypergraphs of a certain digraphs.

*Keywords:* hypergraph; dominating set; directed graph

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