

ON THE H -FORCE NUMBER OF HAMILTONIAN GRAPHS AND CYCLE EXTENDABILITY

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Abstract

The H -force number $h(G)$ of a hamiltonian graph G is the smallest cardinality of a set $A \subseteq V(G)$ such that each cycle containing all vertices of A is hamiltonian. In this paper a lower and an upper bound of $h(G)$ is given. Such graphs, for which $h(G)$ assumes the lower bound are characterized by a cycle extendability property. The H -force number of hamiltonian graphs which are exactly 2-connected can be calculated by a decomposition formula.

Keywords: cycle, hamiltonian graph, H -force number, cycle extendability.

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