

A NOTE ON THE FAIR DOMINATION NUMBER IN OUTERPLANAR GRAPHS

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Abstract

For $k \geq 1$, a k -fair dominating set (or just k FD-set), in a graph G is a dominating set S such that $|N(v) \cap S| = k$ for every vertex $v \in V - S$. The k -fair domination number of G , denoted by $fd_k(G)$, is the minimum cardinality of a k FD-set. A fair dominating set, abbreviated FD-set, is a k FD-set for some integer $k \geq 1$. The fair domination number, denoted by $fd(G)$, of G that is not the empty graph, is the minimum cardinality of an FD-set in G . In this paper, we present a new sharp upper bound for the fair domination number of an outerplanar graph.

Keywords: fair domination, outerplanar graph, unicyclic graph.

2010 Mathematics Subject Classification: 05C69.

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Received 14 November 2017

Revised 2 July 2018

Accepted 2 July 2018