1-RESTRICTED OPTIMAL RUBBLING ON GRAPHS

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Abstract

Let $G$ be a graph with vertex set $V$ and a distribution of pebbles on the vertices of $V$. A pebbling move consists of removing two pebbles from a vertex and placing one pebble on a neighboring vertex, and a rubbling move consists of removing a pebble from each of two neighbors of a vertex $v$ and placing a pebble on $v$. We seek an initial placement of a minimum total number of pebbles on the vertices in $V$, so that no vertex receives more than one pebble and for any given vertex $v \in V$, it is possible, by a sequence of pebbling and rubbling moves, to move at least one pebble to $v$. This minimum number of pebbles is the 1-restricted optimal rubbling number. We determine the 1-restricted optimal rubbling numbers for Cartesian products. We also present bounds on the 1-restricted optimal rubbling number.
Keywords: graph pebbling, graph rubbling, optimal rubbling, $t$-restricted optimal pebbling.

2010 Mathematics Subject Classification: 05C78.

References


Received 1 May 2017
Revised 23 October 2017
Accepted 24 October 2017