

NOTE ON THE GAME COLOURING NUMBER OF POWERS OF GRAPHS

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Abstract

We generalize the methods of Esperet and Zhu [6] providing an upper bound for the game colouring number of squares of graphs to obtain upper bounds for the game colouring number of m -th powers of graphs, $m \geq 3$, which rely on the maximum degree and the game colouring number of the underlying graph. Furthermore, we improve these bounds in case the underlying graph is a forest.

Keywords: game colouring number, marking game, graph power, game chromatic number, forest.

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