

Maximum Rectilinear Crossing Numbers of Polyomino Graphs

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From a given polyomino one can construct a graph by placing vertices at the corners of its squares and edges along the boundaries of its squares. We consider maximum rectilinear crossing numbers of graphs in $Po(n)$, the class of polyomino graphs with n squares. We compute the maximum rectilinear crossing numbers for particular polyomino graphs, corresponding to specific trominoes, tetrominoes, and pentominoes. Additionally, we consider the maximum and minimum value of the maximum rectilinear crossing number in each class $Po(n)$, and find that for all n , the maximum value is realized for the ladder graph L_n .

Keywords: maximum rectilinear crossing number, polyomino