

Maximum rectilinear crossing number for game board graphs

Elie Feder (Kingsborough Community College-CUNY), Heiko Harborth (TU Braunschweig, Germany), and Tamar Lichter* (Queens College-CUNY)

For the three Euclidean tessellations of the plane by squares, hexagons, and triangles game boards B_n are defined as follows: One cell is B_1 , all cells surrounding one vertexpoint is B_2 , and then B_n for $n \geq 3$ is B_{n-2} together with all neighboring cells, that is, cells having at least one vertexpoint in common with B_{n-2} . Then the game board graphs B_n have the vertexpoints of B_n as vertices and the sides of the cells as edges. For the maximum rectilinear crossing number of B_n exact values are given for small n and general lower bounds are constructed.

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