

Maximum Rectilinear Crossing Numbers for Polyiamond Graphs

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A polyiamond (triangle polyomino, triangle animal) is a set of triangles of the Euclidean tessellation of the plane by congruent equilateral triangles such that the set of triangles and its complement are edge-connected. Then a polyiamond graph has the vertexpoints of the triangles as its vertices and the sides of the triangles as its edges.

A rectilinear drawing of a graph is a mapping of its vertices into distinct points of the plane and of its edges into connecting straight line segments such that they have at most one point in common, either a vertex or a crossing. We will ask for the maximum number of crossings over all rectilinear drawings of a polyiamond graph. Some partial results are presented.

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