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Triangles in convex polygons. (In English)

Geombinatorics 2, No.4, 72-74 (1993).

The authors pose the following “maximin” problem.

Determine $\Delta(n, k) := \max(\min \Delta(V))$. Here V is a finite set of $n + k$ points in the Euclidean plane such that the convex hull $\text{conv } V$ of V has area 1 and n points of V are vertices of $\text{conv } V$, the other k points lying in the interior of $\text{conv } V$. $\min \Delta(V)$ denotes the minimum area of a triangle with vertices in V , and the maximum is taken over all such sets V .

B.Kind (Bochum)

Classification:

52A10 Convex sets in 2 dimensions (including convex curves)

52A40 Geometric inequalities, etc. (convex geometry)

Keywords:

triangles in convex polygons