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Maximum planar sets that determine k distances. (In English)

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The authors identify subsets of points in the plane with the property that there are k interpoint distances and have as many points as possible. They do this for $k \leq 5$. They conjecture that such maximal point set for $k \geq 7$ must be subsets of the triangular lattice.

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Classification:

52C10 Erdos problems and related topics of discrete geometry

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extremal sets of points; point configurations; extremal problems; distances in graph