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Isosceles triple convexity

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ABSTRACT.

A set S in $\mathbb{R}^d$ is called it-convex if, for any two distinct points in S, there exists a third point in S, such that one of the three points is equidistant from the others.
In this paper we first investigate nondiscrete it-convex sets, then discuss about the it-convexity of the eleven Archimedean tilings, and treat subsequently finite subsets of the square lattice. Finally, we obtain a lower bound on the number of isosceles triples contained in an n-point it-convex set.

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