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On Mazurkiewicz sets

Abstract: A Mazurkiewicz set M is a subset of a plane with the property that each straight line intersects M in exactly two points. We modify the original construction to obtain a Mazurkiewicz set which does not contain vertices of an equilateral triangle or a square. This answers some questions by L.D. Loveland and S.M. Loveland. We also use similar methods to construct a bounded noncompact, nonconnected generalized Mazurkiewicz set.