Decompositions of Compact Convex Sets

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Abstract: In a recent paper R. Urbanski [13] investigated the minimality of pairs compact convex sets which satisfy additional conditions, namely the minimal convex pairs. In this paper we consider some different possibilities of decomposing a given compact convex set into smaller compact convex sets which are related by translations or by reflections. Combining our results with the characterization of minimality of convex pairs of compact convex sets given in [13] we prove in the second part of this paper that for the two-dimensional case the following statements: M: equivalent minimal pairs of compact convex sets are uniquely determined up to translations (see [3], [11]) CM: equivalent convex minimal pairs of compact convex sets are uniquely determined up to translations (see [13]) are equivalent.

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