A Technique of Studying Sums of Central Cantor Sets

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Abstract. This paper is concerned with the structure of the arithmetic sum of a finite number of central Cantor sets. The technique used to study this consists of a duality between central Cantor sets and sets of subsums of certain infinite series. One consequence is that the sum of a finite number of central Cantor sets is one of the following: a finite union of closed intervals, homeomorphic to the Cantor ternary set or an $M$-Cantorval.