自相似集边界的结构及维数

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摘要 该文研究了一类由平面上点的表示系统所生成的内部非空的自相似集,证明其边界曲线的一半是三个A-完备集的并集,并给出计算这类完备集的结构矩阵的简单方法,

从而利用Marion定理得出这类自相似集边界的Hausdorff维数.

关键词 表示系统,自相似集,A-完备集,结构矩阵,

分类号

STRUCTURE AND DIMENSION FOR THE BOUNDARY OF SELF-SIMILAR SETS

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Abstract In this paper,a large class of self-similar sets with interior nonempty constructed in the representing system of $[KX()] R [KX)] \sim 2$ is studied, we proved that the half boundary of such self-similar sets is union of three A-perfect sets and obtained a simple method to calculate its construction matrix A, therefore the Hausdorff dimensions of the boundary for the self-similar sets are obtained by using the Marion theorem.

Key words Representing system self-similar sets A-perfect sets Construction matrix

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