

<<等周不等式>>

图书基本信息

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作者：I.Chavel

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内容概要

This book discusses two venues of the isoperimetric inequality: (i) the sharp inequality in Euclidean space, with characterization of equality, and (ii) isoperimetric inequalities in Riemannian manifolds, where precise inequalities are unavailable but rough inequalities nevertheless yield qualitative global geometric information about the manifolds. In Euclidean space, a variety of proofs are presented, each slightly more ambitious in its application to domains with irregular boundaries. One could easily go directly to the final definitive theorem and proof with little ado, but then one would miss the extraordinary wealth of approaches that exist to study the isoperimetric problem. An idea of the overwhelming variety of attack on this problem can be quickly gleaned from the fundamental treatise of Burago and Zalgaller (1988); and I have attempted on the one hand to capture some of that variety, and on the other hand to find a more leisurely studied approach that covers less material but with more detail.

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