

<<群论和物理学>>

图书基本信息

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内容概要

Group theory is one of the great achievements of 19th century mathematics. It emerged as a unifying idea drawing on four different sources: number theory, the theory of equations, geometry, and crystallography. The early motivation from number theory stemmed from the work of Euler, Legendre and Gauss on power residues. In the theory of equations, the study of various permutation groups became increasingly important through the work of Lagrange, Ruffini, Gauss, Abel, Cauchy, and especially Galois. The discovery of new types of geometries-including non-Euclidean, affine, projective etc.-led, eventually, to the famous Erlangen program of Klein, which proposed that the true study of any geometry lies in an analysis of its group of motions. In crystallography, the possible symmetries of the internal structure of a crystal were enumerated long before there was any possibility of its physical determination (by X-ray analysis).

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