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978-0-521-09186-2 - Elements of the Topology of Plane Sets of Points

M. H. A. Newman

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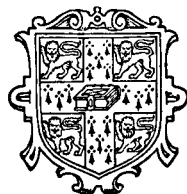
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ELEMENTS OF THE
TOPOLOGY OF PLANE SETS
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by

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CONTENTS

<i>Preface to the Second Edition</i>	<i>page vii</i>
<i>Chapter I. SETS</i>	
§ 1. The calculus of sets	1
§ 2. Enumerable and non-enumerable sets	10
<i>Chapter II. CLOSED SETS AND OPEN SETS IN METRIC SPACES</i>	
§ 1. Closed and open sets	17
§ 2. Convergent sequences of points. Compact sets	37
§ 3. Induced structure. Relative and absolute properties	48
§ 4. Complete spaces	51
<i>Chapter III. HOMEOMORPHISM AND CONTINUOUS MAPPINGS</i>	
§ 1. Equivalent metrics. Topological spaces. Homeomorphism	56
§ 2. Continuous mappings	66
<i>Chapter IV. CONNECTION</i>	
§ 1. Connected sets	71
§ 2. Components	77
§ 3. Connection in compact spaces	81
§ 4. Local connection	84
§ 5. Topological characterisation of segment and circle	93
<i>Chapter V. SEPARATION THEOREMS</i>	
§ 1. Chains on a grating	101
§ 2. Alexander's Lemma and Jordan's Theorem	110
§ 3. Invariance of dimension number and of open sets	120
§ 4. Further separation theorems	123
§ 5. Extension to sets of points in Z^p and R^p	128

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Frontmatter

[More information](#)

vi

CONTENTS

*Chapter VI. SIMPLY- AND MULTIPLY-CONNECTED PLANE
DOMAINS*

§ 1. Simply-connected domains	<i>page</i> 14
§ 2. Mapping on a standard domain	14
§ 3. Connectivity of open sets	15
§ 4. Relations of a domain to its frontier	15
§ 5. Topological mapping of Jordan domains and their closures	16

Chapter VII. HOMOTOPY PROPERTIES

§ 1. Paths and deformations	17
§ 2. Intersection and orientation of paths in R^2	18

Notes 19*Index* 21

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M. H. A. Newman

Frontmatter

[More information](#)

PREFACE TO THE SECOND EDITION

Although substantial changes have been made throughout the book, its aim is as before, to provide an elementary introduction to the ideas and methods of topology by the detailed study of certain topics, with special attention to the parts needed in the theory of functions.

The contents of the former Part II have been rearranged, the “homology” theory of simply- and multiply-connected domains occupying Chapter VI, and the “homotopy” theory (paths and their deformations) Chapter VII. The treatment of homology on a grating has been modified so as to make clear the distinction between “chains” and their point-set loci. The sections on boundary elements of domains, and on the connectivity of certain kinds of closed sets, have been omitted, and their place taken by a section on the orientation of plane curves. A number of topics, such as the properties of vector spaces of infinite dimension, the Jacobian theorems on implicit functions, and the Cauchy integral theorem (with one or more boundary curves), are treated as examples.

Notations are, on the whole, unchanged, except that in the algebra of sets the symbols \cup and \cap have replaced $+$ and \cdot , in accordance with current usage.

I am grateful to many correspondents, and particularly to M. Richardson, F. Smithies, S. Wylie and D. G. Northcott, for pointing out errors in the first edition, or suggesting improvements; to my colleagues A. H. Stone, P. Hilton, W. Ledermann and G. E. H. Reuter for reading the revised text in manuscript and proof, and making many valuable suggestions; and to the Cambridge University Press for the great care that they have taken with the printing.

M. H. A. NEWMAN

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