

Contents

Quasigroups and loops

Chapter I: Quasigroups and loops

I.0	Introduction.....	1
I.1	Groupoids, quasigroups and loops.....	2
I.2	Subgroups and subloops.....	8
I.3	Nuclei and center of a quasigroup.....	16
I.4	Inverse property.....	20
I.5	Multiplication group and inner mapping group.....	24
I.6	Isomorphy.....	26
I.7	Homomorphy theory for quasigroups.....	28

Chapter II: Quasigroups and geometry

II.1	Quasigroups and 3-webs.....	34
II.2	Isotopy, parastrophy, isostrophy.....	39
II.3	Web configurations and loop laws.....	47
II.4	Affine incidence planes.....	52

Chapter III: Isotopy theory for quasigroups

III.1	Isotopy for groupoids.....	57
III.2	Isotopy theory for quasigroups and loops.....	59
III.3	Autotopisms.....	66
III.4	Pseudo-automorphisms of quasigroups.....	74
III.5	Derivatives.....	79
III.6	The isotopy-isomorphy property of loops.....	82

Chapter IV: Moufang loops

IV.1	Basic properties of Moufang loops.....	88
IV.2	Moufang's theorem.....	93
IV.3	Some theorems concerning pseudo-automorphisms, the nucleus, the Moufang center and self-adjoint subgroups of Moufang loops.....	97
IV.4	Isotopy of Moufang loops.....	101
IV.5	Commutative Moufang loops.....	107
IV.6	Bol loops.....	112

Chapter V: Some classes of quasigroups

V.1	Totally symmetric quasigroups.....	122
V.2	Distributive and entropic quasigroups.....	131

Bibliography.....	143
-------------------	-----

Subject Index.....	146
--------------------	-----