

Contents

A Description of the Arithmetic Fuchsian Groups with Signature $\langle 2; - \rangle$ PETER ACKERMANN	1
Outer Automorphism Groups of Certain Orientable Seifert 3-Manifold Groups R. B. J. T. ALLENBY, GOANSU KIM, and C. Y. TANG	15
The Search for Origins of the Commutator Calculus MICHAEL ANSHEL and ANTHONY M. GAGLIONE	23
A Note on Nondiscrimination of Nilpotent Groups and Mal'cev Completions G. BAUMSLAG, B. FINE, A. M. GAGLIONE, and D. SPELLMAN	29
A Proposed Public Key Cryptosystem Using the Modular Group GILBERT BAUMSLAG, BENJAMIN FINE, and XIAOWEI XU	35
Gröbner Basis Techniques in the Computation of Two-Sided Syzygies HOLGER BLUHM and MARTIN KREUZER	45
Normal Subgroups of the Modular Group and Other Hecke Groups MARSTON CONDER and PETER DOBCSÁNYI	65
Commutativity of Units in Group Rings OSNEL BROCHE CRISTO and CÉSAR POLCINO MILIES	87
Presentations of Groups Involving More Generators Than Are Necessary. II. MARTIN J. EVANS	101
Unions of Varieties and Quasivarieties BENJAMIN FINE, ANTHONY M. GAGLIONE, and DENNIS SPELLMAN	113
Finitely Presented Infinite Torsion Groups and a Question of V. H. Dyson BENJAMIN FINE, ANTHONY M. GAGLIONE, and DENNIS SPELLMAN	119
Context-Free Irreducible Word Problems in Groups ANA FONSECA and RICHARD M. THOMAS	125
Autocommutators and the Autocommutator Subgroup DAVID GARRISON, LUISE-CHARLOTTE KAPPE, and DENISE YULL	137
Informative Words and Discreteness JANE GILMAN	147
An Algorithm for Potentially Positive Words in F_2 RICHARD GOLDSTEIN	157

Using Group Theory for Knowledge Representation and Discovery GABRIELE KERN-ISBERNER	169
Quotient Tests and Gröbner Bases MARTIN KREUZER, ALEXEI MYASNIKOV, GERHARD ROSENBERGER, and ALEXANDER USHAKOV	187
Transitivity of Normality and Pronormal Subgroups L. A. KURDACHENKO and I. YA. SUBBOTIN	201
Torsion in Maximal Arithmetic Fuchsian Groups C. MACLACHLAN	213
Nilpotent $\mathbb{Q}[x]$ -Powered Groups STEPHEN MAJEWICZ	227
On the Rosenberger Monster ROBERT FITZGERALD MORSE	251
Density of Test Elements in Finite Abelian Groups CHUCK F. ROCCA JR.	261
Adjoining a Root Does Not Decrease the Rank RICHARD WEIDMANN	269