

Visualization Projects for Abstract Algebra



From the PascGalois Project by Michael J. Bardzell and Kathleen M. Shannon Salisbury University

Including PascalGT for Windows

Support provided by the National Science Foundation award #DUE-0087644 and by the Richard A. Henson endowment for the Richard A. Henson School of Science and Technology at Salisbury University.



Contents

Introduction to the student

PascGalois Project 1: Pattern recognition and Pascal's Triangle Modulo n

PascGalois Project 2: Pattern Recognition Using Dihedral Groups

PascGalois Project 3: Building A Group with PascGalois Triangles

PascGalois Project 4: Direct Products and Automorphisms

PascGalois Project 5: Quotient Groups 1

PascGalois Project 6: Quotient Groups 2

PascGalois Enhancement Projects:

Self-Similarity and the Klein-4 Group

Rings and Fields

Two Dimensional Automata

Appendix: Brief Introduction to the PascalGT Software

Support provided by the National Science Foundation award #DUE-0087644 and by the Richard A. Henson endowment for the Richard A. Henson School of Science and Technology at Salisbury University.