

Meeting: 1003, Atlanta, Georgia, MAA CP A1, MAA Session on Getting Students To Discuss and To Write About Mathematics, I

1003-A1-796 **Reva Kasman*** (kasmanr@gvsu.edu), Department of Mathematics, Grand Valley State University, Allendale, MI 49401. *Creative Proof Critiques As Writing Assignments in Abstract Algebra*. Preliminary report.

Students in advanced, proof-based mathematics courses are expected to be able to analyze arguments for validity, particularly their own. They are often overwhelmed by the challenge of choosing appropriate proof methods, writing coherent and logical arguments, and following conventions of style and notation. In Abstract Algebra I have developed writing assignments to foster these skills. In each assignment, a mathematical problem is posed and the students are provided with solutions (including proof attempts) supposedly written by fictional characters. The proofs are designed to illustrate certain misconceptions, difficult points, or typical writing flaws. Students critique the work, categorize errors, and write 2-3 page papers on their analysis. The response from students has been very favorable, especially among future teachers. (Received September 29, 2004)