Mindy Beth Capaldi* (mindy.capaldi@valpo.edu), 1900 Chapel Dr., Valparaiso, IN 46383.

Teaching Proofs in Abstract Algebra: How important are proof structure, group work, and student presentations?

In addition to learning the material in Abstract Algebra, one of the most vital aspects of the class is the enhancement of the students' proof-writing abilities. Students may enter the class from different proof-writing backgrounds with varying levels of confidence about their proofs. In this class, I investigated the importance of teaching proofs with an emphasis on rigorous structure, as well as the benefits/drawbacks of assigning proofs as group work to be presented to the class by a group member. Goals included increasing student self and peer assessment of proof logic and flow, and reduction of proof memorization in favor of direct involvement. In this presentation, I discuss the results as evaluated through grade assessment and student feedback. (Received September 16, 2010)