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Richard E Klima* (klimare@appstate.edu), Department of Mathematical Sciences, Appalachian State University, 342 Walker Hall, Boone, NC 28608. *A Java Simulator for Voting Methods*. Preliminary report.

In recent years, election theory has become part of the mathematics curricula at many colleges and universities, from small parts of introductory liberal arts courses to complete advanced courses for both mathematics and non-mathematics majors. One source of frustration for many students in these courses is the tedious arithmetic that often accompanies the voting methods, which can prevent some students from appreciating the breadth of real-life applications of the methods. In this presentation, I will demonstrate a Java simulator for voting methods that includes all of the methods that are usually presented in introductory liberal arts courses. In addition to automating the calculations required for the methods, this simulator also identifies majority winners and Condorcet winners and losers, whenever they exist. The simulator was created by a student as part of his senior honors thesis in mathematics under the direction of the presenter, and has been used by the presenter in his introductory liberal arts courses. (Received July 05, 2007)