

1135-15-2876      **Brian Camara\*** (bcmara@student.bridgew.edu), 63 Wing Road, Acushnet, MA 02743, and  
**John Pike.** *Algebraic Voting Theory.*

My research over the summer of 2017 through Bridgewater State University's Adrian Tinsley Program focused on the mathematical theory of voting, its connections with representation theory, and ways to explain some results in this area using linear algebra. Voting is of immense practical significance in our society, so understanding it from a mathematical point of view is of utmost importance. I will begin by discussing a ubiquitous class of voting systems and their connections with representation theory as detailed in a paper by Daugherty, Eustis, Minton, and Orrison. I will then sketch an alternate proof of the main theorem in that paper using less sophisticated mathematics and introduce a novel result of my own. Time permitting, I will comment on an intriguing open problem. (Received September 26, 2017)