Jordan Schettler*, jordan.schettler@sjsu.edu. From Oiler to Air-Dish: Guided Group Projects in Number Theory.

Number theory has the greatest stories in all of mathematics like the tale of Ramanujan's taxi cab number or the EYPHKA! diary entry of Gauss. In my years of teaching undergraduate number theory at UC Santa Barbara and San Jose State, I have developed and refined a way for students to discover and share those stories and the math behind them through group projects. The projects have some very well-defined parameters including the mandatory explanation of historical context and the use of technology, but there are other aspects left open-ended where students can become creative in describing some deep results. Student groups must present an engaging 15 minute slide presentation which addresses some key points in the project description and also keeps the attention of their classmates. I will describe some sample projects (from Euler to Erdos), positive student feedback, and also some challenges involved. (Received September 26, 2017)