1145-AH-1063   **Jonathan K Hodge*** (`hodgejo@gvsu.edu`), Department of Mathematics, Grand Valley State University, 1 Campus Drive, Allendale, MI 49401. *Mathematical arguments in Dudum v. Arntz.* Preliminary report.

In a 2011 court case, Dudum v. Arntz, the Ninth Circuit Court of Appeals upheld the city of San Francisco's use of restricted Instant Runoff Voting (IRV)—a version of IRV that allows voters to rank at most three candidates. We will explore the mathematical arguments and reasoning that arose in this landmark case. Which types of arguments were persuasive, which were not, and what lessons can be learned about the role of mathematics in litigation involving voting and democracy? (Received September 18, 2018)