

ZMATH 2013d.00794

Colen, Yong S.; Navaratna, Channa; Colen, Jung; Kim, Jinho

Power indices and U.S. presidential elections.

Math. Teach. (Reston) 106, No. 3, 184-190 (2012).

From the text: The 2012 U.S. presidential election is the perfect opportunity to present a timely civics lesson on how a U.S. president is elected. More important, it offers opportunities for students to reason mathematically about election issues – for example, about how much time and resources the candidates should invest in particular states. The results of the previous U.S. presidential election provide an ideal backdrop for introducing the electoral voting system, weighted voting, and the Banzhaf and Shapley-Shubik power indices. Investigating these concepts, students will solve authentic, real-world problems and value the utility of mathematics.

Classification: M90 M40 K90

Keywords: voting; elections; problem based learning; problem solving; mathematical concepts; mathematics activities; lesson plans; mathematical applications; Shapley-Shubik power indices

doi:10.5951/mathteacher.106.3.0184 <http://www.nctm.org/publications/article.aspx?id=34453>