

1125-05-2419 **Lindsay A Erickson*** (lindsay.erickson@augie.edu), 2001 S Summit Avenue, FSC #383,
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Although there is an increasingly sizable body of knowledge on how converting traditional pedagogy into game play improves educational outcomes, little work has been done examining how games can be used for research outcomes, particularly in mathematics. What has been done in the area of digital topology shows great promise for this novel line of research. We examine how game data can be used to positively impact research into the solution of Nim on graphs by developing and programming a human vs. computer version of Nim on the $K_{3,3}$, enabling web play, collecting and filtering game data, and analyzing data to find a solution to the game. In the process of solving the $K_{3,3}$, the solution to other classes of graphs, including the general solution to Nim on the $K_{2,n}$, were found. (Received September 20, 2016)