

1125-B5-510

Anne Quinn*, quinna@edinboro.edu. *Using Instructional Apps to Visualize Graph Theory.*

I will discuss several free and inexpensive graph theory smartphone apps that I have used in the classroom and have written about in recent articles (Mathematics Teacher, 2015; College Mathematics Journal, 2016). Using these apps in lecture and homework assignments for the past few years has helped me produce more professional lectures and has helped my students visualize vertex-edge graphs, investigate the interplay between matrix and graphical representations, develop insight into writing proofs, and explore transformations that led to isomorphic graphs that were bipartite and/or planar. In addition, I will use the apps to demonstrate Kuratowski's Theorem and other classic problems. Moreover, I will discuss how students became more proficient at solving problems and creating proofs without technology during this unit. Supplemental storage apps such as Dropbox will also be discussed. (Received September 04, 2016)