Two Thesis Presentations

iPads in the Classroom

Robert Stukes, MS Math

Technology is continuously advancing and impacting all areas of modern life. Mathematics students come to classrooms familiar with various electronic devices and ways to apply them to find and utilize information. Educators should embrace these skills by incorporating interactive technologies into their pedagogies. Instructors on all levels are beginning to break through the rigidity of traditional teaching methods and beginning to explore alternatives which integrate the use of computer based learning activities. The objective of this study is to investigate the effectiveness of using Apple iPad applications in the classroom to improve students’ understanding of graphing quadratic functions. We compare the data collected from the case study to the results of the control group that was taught using a traditional lecture-based methodology to demonstrate significant improvement of understanding graphs by students who used iPad graphing technology during their learning process.

Trampoline Property: Finding Lower Bounds for Pebbling Numbers

Rebecca Gautreau, MS Math

Graph pebbling is a mathematical game in which pebbles are placed on the vertices of a graph. The game is made up of a series of pebbling moves which consist of removing two pebbles from one vertex, discarding a pebble, and placing the other on an adjacent vertex. The goal of the game is to target a particular vertex by performing a series of pebbling moves. My research has been devoted to implementing particular pebbling strategies on specific types of graphs in order to target a vertex via pebbling moves. Examples and prizes will be provided.