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Math 241
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Final Project Script

1. Our names are Rachel Maugeri and Kimi Starnes. The goal of our presentation was to create a sketch that explores linear algebra on a graph.
2. More specifically we wanted to look at what happened to the dependent Y variable (total cost) when the independent X variable (amount of cinnamon) changes.
3. The basic sketch works like this: Slider controls the X value, which is the amount of cinnamon. The purple line shows the exact value of \$14.04, which is the targeted price for the 9-ounce jar of mixes spices. The green line shows the equation of the problem ($1.36x+1.80(9-x)$), which shows the relationship between the amount of cinnamon and total cost.
4. The main way this investigation is different from paper and pencil is that it enables us to play with the “what if” by being able to physically move the value of X. For example, “What if we set the slider to 5 ounces of cinnamon? Would that give us the correct cost of \$14.04 for a 9-ounce jar?”
5. Based on SMP #5, the Geogebra tools that we used include; B: Plotting and tracing a point that has X as the independent variable and Y as the dependent variable and G: Slider that controls X so that we can find the point of intersection of the equation, X value, and Y value.
6. Two other Standards for Mathematical Practice that we used when creating this sketch are:
MP 1 – Making sense of problems and persevere in solving them because there was a bit of a struggle to understand what values X and Y should represent and then how that would transfer onto a graph on Geogebra.
MP 4 – Model with mathematics because this was a real world problem that is easily relatable to everyday life and can be modeled both algebraically and graphically.
7. The things we liked best about this project were being able to show relationships between real world situations and mathematical calculations/graphing. Also, making the sketch bright and colorful was fun!