Journal Report 9
11/11/19-11/18/19
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Period 1, White

Daily Log

Monday November 11

I worked on my STS paper/application with you. For my own project, I started mapping out the graph and seeing which vertices connected to which.

Tuesday November 12

I again worked on my STS paper/application with you. For my own project, I continued mapping out the graph and seeing which vertices connected to which points.

Thursday November 14

I finished classifying the points and mapping out edges.

Timeline

Date	Goal	Met
10/28	Find an effective approximation algorithm for MIS	No, I found algorithms but their error was way too large to be efficient in our case.
11/11	Prove a lower bound for the result for the 26 variable inequality	No, I realized that in most cases this would not be necessary. It was too large a problem with a very unlikely chance of having meaningful results
11/18	Hand-draw and analyze the symmetries for -2,-1,0,1,2. This is a graph with 124 vertices.	No, I did not actually draw this graph. But, I did analyze the graph and mentally classify/ map out edges
11/25	See what happens when we add more 0s to this set.	
12/2	Try to find a bound using inequalities for the number of 0s.	

Reflection

To be completely honest, I didn't get as much work done as I would have liked. A ton of my brain power this week was dedicated towards STS and PUMaC Power Round. (We did well at PUMaC!).

For my project, I feel like we're on good pace. I looked into the actual vertice types in the graph and I will try to classify them similarly to how I did with just 1s and 0s. Under this classification, we would have 9 groups as opposed to just 3. There is a lot of inherent symmetry, but studying this configuration will probably be immsensely difficult just due to the large size of the graph.