Journal of Chelsie Wollett for Winter 2008

Chelsie Wollett

March 16, 2008

1 Week of January 7, 2008

1.1 Began work on Nebraska Presentation

I was asked last quarter whether I wanted to go to a math conference at the University of Nebraska-Lincoln for female undergraduate math majors. I accepted, and was then asked if I wanted to present some of the research I've done with Dr. Mohlenkamp the past few quarters. Again, I said yes.

It has now hit me that this conference is in about 4 weeks. In this time I need to understand the proof we were working on last quarter, and be able to give an intelligent presentation over it. Most of my extra time has been trying to understand this proof, and learning how to make slides and new notations on LaTeX.

2 Week of January 14, 2008

2.1 Preperation for First Try at Presentation

My goal for the week was to prepare for my first attempt at giving this determinant presentation. That basically entailed working on the technology part. I had never done anything but reports and journals in LaTeX, so trying to do slides was almost like learning all over again. I got Srikanth to send me our slides from our presentation at the end of last quarter, and tried to learn from those. Learning the commands from that went just fine. The problems was that my computer did not have the necessary packages to run the file, so I spent a couple of days updating my tex programs until it finally worked.

3 Week of January 21, 2008

3.1 First Attempt and New Formulas

I gave my first presentation attempt, and basically bombed it. It was a definite eye opener that I had a lot more work to do than I first thought. I understood

the gist of what I was supposed to be talking about, but details were lost. I was unable to answer questions that would surely arrouse because I was also unable to explain anything in depth.

I met one-on-one with Dr. M and we decided to revamp some things. Some of the notation in the proof itself was changed, and we worked on the flow of the presentation to–hopefully–make it easier for listeners to grasp. We'll see how it goes next Tuesday.

4   Week of January 28, 2008

4.1   Try Number 2

This presentation went a lot better. I was a lot more comfortable with what I was saying. It made more sense to me, and so it was easier to explain things out. I forgot the details however, so there were questions to answer, but I felt really good with what went down. All that needed to be done was to make the slides more audience friendly.

5   Week of February 4, 2008

5.1   Try Number 3 and Nebraska

Regression. This presentation did not go so hot. I have had zero time this week to really work on anything, and was unprepared. Plus, I had mistakes. Really bad for my last go before I leave. However, I think I'll be ok if I just remember to be calm, and walk around so I am comfortable.

The presentation actually went quite well. There were some surprised looks when I finished, but no questions. I'm hoping the looks were amazement that something at this conference was understandable, because I had many people come up to me afterwards and tell me that it was the easiest presentation to understand during the entire weekend.

6   Week of February 11, 2008

6.1   Week Off

After being freaked out that I was going to do a horrible job at Nebraska, it is over and done with and I survived the experience. I now get a break from all the presenting and explaining of things for the week.

7 Week of February 18, 2008

7.1 Editing the Paper

I got back into the flow of working this week. My task for the week was to LaTeX some examples for the paper. The cases where $k = 0$ and $k = 1$ were incredibly easy. When $k = 2$ however, I ran into problems. I can figure out what all the places in the tensor should be, but I have absolutely no idea how to type a tensor up.

8 Week of February 25, 2008

8.1 Lots of Examples

The goal of the week was to finish typing the examples, including the tensor. After the matrix idea Dr. M gave me last week, the tensor was really easy to type up. Now I have to prove that our determinant of a sum equals the sum of our inner products.

9 Week of March 3, 2008

9.1 Proofreading

I did some minor math stuff with our determinant proof. I started to look at the case of a 3×3 matrix, but that was really overwhelming. However, I only wanted to see if there is any pattern in the canceling of terms with the 2×2. There does not seem to be, so I gave up on writing out all the terms. My other objective for the week was to read through all the additions to Dr. Mohlenkamp's paper and make sure it was still understandable. I am still working on that, and hope to get through the entire paper this week.

10 Week of March 10, 2008

10.1 More examples and Final Report

I finished all the examples for the 2×2 case and sent those to Dr. Mohlenkamp to be inserted into the main paper. I also wrote up my final report about everything I did this quarter as well as what I have learned and how I feel about the flow of the overall group.