TEACHING STATEMENT

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I gained my first teaching experiences as an undergraduate student at BYU through my involvement in programs for young gifted Utah students. I had been drawn to deeper mathematical pursuits through high school contests, and I looked for opportunities to encourage others to follow the same path. Some of these opportunities were organized by BYU. I ran a subgroup of the BYU math circle, and was twice an instructor at BYU’s summer math camp. Other opportunities I pursued on my own. I helped coach the Utah state ARML team two years in a row, and, in 2012, I co-founded the Utah Math Olympiad, a more approachable version of the USAMO for Utah students. Additionally, as a four-time member of BYU’s Putnam team, I attended a BYU class for students preparing for the exam. This class was largely student-run and gave me many positive experiences mentoring fellow undergraduates who were excited about learning contest math.

I began working as a TA when I started my PhD at UCLA. My first quarter, I taught Math 1, college algebra, at 8 a.m. This was a baptism by fire. I quickly learned that students in Math 1 were less driven and less enthusiastic about math than exceptional high school students. Especially at 8 a.m.! The instructor had encouraged us to write several problems on the board and give students fifteen minutes on their own to solve them. I quickly discovered that students did not know how to use that much time without guidance, and did not like being asked to do undirected work. I transitioned to a more interactive format, encouraging questions, building my lectures around the questions they asked, and asking my own questions to assess their understanding.

I have been the TA for a broad range of classes, including lower division courses, upper division courses, and computer programming courses in C++ and Python. One of my favorite classes I taught was Math 31AL, a new approach to teaching calculus at UCLA. I was chosen to be one of the TAs for the experimental first run of the course based on my teaching record at UCLA. I met with the same group of students twice a week (instead of the usual two different groups of students once a week) which allowed me to develop a strong rapport with the students and work more with them individually in areas where they were weak. The weekly TA meetings we had with the instructor gave me insight into the work that goes into designing a curriculum and managing a large class.

My first goal as a TA is always to create a learning environment where students feel comfortable asking questions. One of the perennial problems of teaching math is that the students who most need help are the least likely to ask for help. They fear that, by opening their mouths, they will betray how little they understand, and everyone else will think poorly of them. There are some practical measures that can be taken to address this. Quizzes, homework and worksheets give me opportunities to determine areas where students are weak. I also hold extra office hours before a midterm, rather than a review session, since review sessions encourage students
to be more passive in their learning. Ultimately, though, helping students feel comfortable in a classroom is a problem of personality. I am confident in front of an audience, and I project enthusiasm for the subject matter while maintaining a conversational style. Sometimes I tell jokes.

Early on, the responses to my teaching style were mixed. My scores on student evaluations were high, and many students said I had been one of their most helpful and approachable TAs. But some other students wrote that I was too informal, skipped too many steps, or went too quickly. I altered my approach, keeping my personal style relaxed but making my mathematical exposition more deliberate, and I received far fewer negative comments. Despite the increasing demands of research on my schedule, I have received some of my highest student evaluation scores in the last year. I look forward to continuing to improve as a teacher as I move forward in my academic career.