EQUITY AND INCLUSION STATEMENT
JENNIFER ELDER

For the last nine years, I have been involved in a variety of programs that are trying to address the existing equity issues in math. Specifically, making sure that the students in my classes all have an equitable experience, and efforts to make sure that the students that reach my classes are a diverse student body that feels included in the mathematics community.

During my undergraduate and masters degrees at Fresno State, I became one of the founding organizers of the university's Sonia Kovalevsky Math Day. The goal of that event is to encourage local high school girls to continue studying STEM, and to show them the options available as math majors. I was an organizer and activity leader for this event for my final three years at Fresno State. When I arrived at ASU for my PhD, I was able to connect with the ASU West Campus to participate in their yearly Sonia Kovalevsky Day as a speaker, panelist, and activity leader. I also worked with the main campus' Math Day, an event for all high school students, to encourage them to continue with math.

At ASU, I was also able to become involved in several graduate student organizations. I worked with the student chapter of the Association for Women in Mathematics for two years, becoming President of this organization in the final year of my PhD program. During that year (2020), I coordinated the push for more equity in the department. The AWM submitted a letter calling for change to the university's administration with the specific goal of recruiting and retaining Black Mathematics students at all levels, and with the goal of also creating a more diverse faculty pool. We listed recommendations for additional funding for conference visits to recruit a grad student body that better reflects the world around us. We included the removal of financial road blocks like application fees, GRE tests, and the cost of campus visits. We introduced long term goals, like a bridge program, so that no one could say the students did not have the specific course background to succeed in the ASU program. Our recommendations also incorporated specific strategies for creating a better environment for BIPOC, Women, the LGBTQ community, and students with disabilities.

I have five years of experience with mentorship of undergraduate and graduate students. At ASU, I worked with the School of Mathematical and Statistical Sciences Peer Mentoring Program, for three years. I also did whatever I could outside the official mentor program to encourage the other women at ASU to stay in their degree programs, and to push past the various roadblocks that pop up to impede their progress. Through AWM, we were able to

invite excellent speakers to talk to us about how to better mentor under represented students. I also volunteered for several opportunities with Fresno State after I left, to encourage the students in their programs. And I had the opportunity over the summer of 2022 to TA with the Summer@ICERM program. In addition to general mentorship and support duties with the program, I was fortunate enough to be able to work as a research mentor to a group of three undergraduate women. This job was a dream opportunity for me; it closed the loop and allowed me to be the sort of research mentor that I always wanted to become. These students have done amazing work, and I am so proud to have been involved with their growth.

For the two summers during my Masters degree, I worked with the Educational Opportunities Program at Fresno State as an instructor in their Summer Bridge Program. This program is for first generation college students about to start their freshman year. Completely free of cost to the students, this three week program gives them the chance to live in the dorms, and work with instructors, mentors, and academic advisors, on setting up a plan of success for their undergraduate degree. They also use that time to focus on passing the Math and English remediation exams. Throughout the programs existence, it has had a better overall graduation rate than the university as a whole. Working with Summer Bridge shaped a lot of who I am as teacher, and has influenced what I find important in my teaching philosophy, and what opportunities I seek out as an instructor.

In my postdoctoral job at Rockhurst University, I had discussions with my department about how to structure our classes to be more equitable and inclusive. I go into more detail about changes to my class set-up, lessons, and assessments in my teaching statement. Over my two years with the department, the math faculty are worked together to create DEI and social justice focused assignment modules for each core class. For example, in my integral calculus class for the last two semesters, my students worked through assignments on modeling the Deepwater Horizon oil spill. The students used this project to write a report on methods of integration, and also included an overview of the environmental impact to the area, and the communities impacted.

Every semester, I offer an extra credit writing opportunity to each of my classes. They can either watch the documentary Picture a Scientist, or read three profiles in Living Proof. Then they write a short response on what did or did not surprise them, the most interesting aspect of what they watched/read, and at least one new thing they learned. These assignments are designed to help them be more aware of systemic bias, and help shift their view of who is mathematically capable. I have AMS posters in my office for *Living Proof* and *The Next*

Generation of Mathematics, as well as signage stating that the future of academia is inclusive. My hope is that my students take these messages to heart, and feel safe and seen in my classes.

Outside of what I have already implemented in my classes, I am also continuing to pursue training and learning opportunities. In the 2022-23 academic year, I participated in the program Home For All, an eight session DEI program run by Rockhurst. This was a limited participant pilot program which the organizers hope to continue to run in the future, and share with other schools. Some of the topics include "Stereotyping, Unconscious Bias, and Microaggression," "Opening Doors and Opportunities for Individuals with Disabilities," and "Supporting Gender Identity and Expression." The Center for Learning and Teaching Excellence at Rockhurst is also offering a bookclub that I participated in this year. We discussed the book *Teaching: Strategies for Promoting Equity in the College Classroom*, by Kelly Hogan and Viji Sathy.

I am a member of Red '22 cohort of Project NExT, (New Experiences in Teaching), with the MAA. In addition to the pedagogical development I hope to gain in this program, I am hoping to learn more about supporting underrepresented groups in the classroom, and service opportunities. During MathFest in August 2022, I attended workshops on inquiry based classroom practices, social justice in data science, and advising math majors for non-academic careers. Over the full academic year, I was also a part of a teaching support group that discussed a variety of classroom issues with an eye on making the math class experience more equitable for all the students.

In March 2023, I participated in the American Institute of Math (AIM) workshop called GEMS of Combinatorics. In addition to research problems, the main focus of this workshop was on expanding our focus from "Women in Math" to "Gender Minorities in Math." We discussed equity and inclusion issues across the whole academic spectrum; from the classroom to research to conferences. We have a variety of forthcoming articles on both equity and research topics that were generated during the workshop.

All of my efforts over the last decade have been focused on solving these specific problems: recruit and then retain a more diverse student body in math programs. This is where my passions lie, and what I intend to continue to work on as a faculty member at my new institution through undergraduate research, teaching, and outreach activities.