Roya Beheshti

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Learning Objectives:

1. SWBAT learn about Roya Bahesti, an Iranian woman who earned Ph.D in mathematics
2. SWBAT understand that education is the best tool to break the barriers by learning the story of Roya Bahesti
3. Minority students will be motivated upon finding someone who looks like them in the STEM field, while other students will benefit from a more inclusive mindset of who can be a mathematician.

Roya was born in 1977 in Iran--the most dangerous country for women. Under Iran's fundamentalist regime, a woman's life legally holds half the value of a man's life; polygamy is legal, allowing a man to have up to four wives; and men can file for divorce far more easily than women can…"(Ebadi 2022). In fact, I'm sharing this story in the wake of the death of Mahsa Amini who was killed on 16 Sep 2022 by Iranian Religious Morality Police for allegedly not wearing a hijab. Roya was raised in such an environment--hostile for women. She attended Tehran Farzanegan School, and it was this school where she met with Maryam Mirzhakani. Their friendship lasted until the death of Maryam.

Roya notes that Maryam was exceptional in every subject except math, until seventh grade. She recalls that in 7th grade, Maryam scored 95 on a math exam. She tearfully tore up the exam results. When Maryam returned from summer break, she was suddenly exceptional in mathematics. She had an unwavering ability to concentrate on a problem and found multiple solutions to any given question. When Roya reached high school, she -- along with Maryam -- became the first women to compete for Iran in the International Math Olympiad (IMO). Roya received a Silver Medal in the IMO in 1994, and was accepted to the prestigious Sharif University of Technology in Tehran, the foremost Iranian institution for Science & Mathematics. After completing Bachelor's degree in math, Roya got accepted at MIT to pursue Phd in math.

Roya proceeded to earn a Ph.D. in Mathematics from MIT, whilst Maryam completed her Ph.D. in the same subject on the other side of the Charles River.

Roya recalls fond memories of her years at MIT with Maryam: on one occasion, she was assigned a take-home exam for a math class. Roya met with Maryam for help. The pair stayed up all night until 3 AM solving all but the last two problems. Roya resigned to sleep and urged Maryam to do the same, but when she woke up the next morning, she found Maryam at the same desk--still trying to solve the problem.

Roya would later reminisce that it was this perseverance that would inspire her in mathematical pursuits later in life. Roya completed her dissertation in 2003 on Lines of Fano Hyperspaces, and proved that "the Hilbert scheme of lines on any smooth Fano hypersurface of degree 6 or less has the expected dimension." Roya subsequently became a senior mathematics researcher at the Max-Planck Institute in Germany and a postdoctoral fellow at Queen's University in Canada and at UC Berkeley. In 2006, Roya became an Assistant Professor at Washington University in St. Louis.

Bibliography:

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