

# Choosing Female Role Models in Mathematics

*Please choose your favorite mathematician as a pseudonym.* Whom did you choose? I have recently asked pseudonyms to my students to be able to discuss mistakes anonymously (“name the sin but not the sinner”). Female students tended to select female mathematicians, and none of the male students selected a female mathematician.

One can find top female mathematicians as role models, old and new, for example: Emmy Noether, Maryam Mirzakhani, Katherine Johnson, and Melanie Matchett Wood. However, women in mathematics are still underrepresented and underrecognized, to the extent that it still seems difficult to have 40% female plenary speakers at conferences (the few female mathematician superstars receive so many speaking invitations that they have to turn most of them down).

Notice the subtleties of female role models, like in the expression *Superwomen in STEM*. Do we need superpowers to be female scientists? (Or do you think Newton had superpowers?) And overly strong role models can be intimidating; the bar is too high. They should be inspiring (like the tennis player Serena Williams), but one must not think, “I need to be as good as Serena Williams to make a living out of tennis.”

Coming back to the pseudonym choice, we see that we impose restrictions on ourselves that do not actually exist. We are only making a *Gedankenexperiment*, so we can be Gauss, or Thales, or Noether alike. Let’s reveal the mind trap while choosing a character from a book or a movie. For example, if you know *Pride and Prejudice*: before, I thought that the only two possible choices were Elizabeth or Jane; now, I would, without hesitation, be Mr. Darcy.

So, what’s the takeaway? Make sure to also offer students female role models they can actually relate to, like a female alum who had success in mathematical competitions, one who pursued STEM studies, or a female scientist from a nearby university. And don’t forget to remind female students that they can also have male role models—why not?

Let’s keep in mind that the aim of role models for female students is to convince them, on an emotional level, that they have the potential to be the best version of themselves—and, in particular, that they should not be afraid to pursue a career in STEM, regardless of their gender.