

[Episode 11 - A Conversation between Katie Griffith & Tori Roberts  
Transcript]

Hello! My name is Katie Griffith, and I'm here today with Tori Roberts, and we're going to chat a little bit about our experiences as women in math and science and enjoying our weird lives. [laughs] With that being said, Tori, where are you from? What do you like to do? Who are you?

(Roberts) Hi! I'm Tori. I am a math student, I guess. I... I don't know if I should talk about where I'm from.

(Griffith) Where are you from? Just tell me. I'm from Montana.

(Roberts) You're from Montana?!

(Griffith) I'm from Montana, yeah.

(Roberts) Really?! How'd you get to Santa Cruz?

(Griffith) Magic!

(Roberts) I'm from Santa Cruz. I've lived here pretty much my whole life. That's where I'm from.

(Griffith) See, you're allowed. [laughs] So what are you thinking about when it comes to math? What class are you in right now?

(Roberts) Right now I'm in second semester calculus, and it's fun. There are definitely a few times every day that it's not my favorite class, but most of the time it is.

(Griffiths) That's how it goes.

(Roberts) I really like lecture. I like the homework part slightly less. I don't like the exam part, but I like sitting there and being... I don't know... being introduced to so many topics so quickly. It's a really fast-paced class, and I like being opened up to everything.

(Griffiths) Yeah, like which part specifically if there is one that you could pinpoint as just kind of standing out to you?

(Roberts) It's hard to say. We've been working with integrals the entire semester; that's all we do, but I like the versatility of it. We've learned this semester so many different ways to evaluate those integrals and I think it's

so interesting that there's so many ways to go about a single problem, and it's frustrating sometimes because you have to decide how to do it, but I think that's true with all aspects of math: that there's a lot of different ways to get to one point.

(Griffiths) Yeah, and I think a lot of the stigma in elementary through even high school math is very much like, "Here's the way you do it. You do it. You don't ask questions. Hurry up. Do the problems and take a test."

(Roberts) I agree. It's really different than that because people think there's one way to do everything when really there's one set of rules that you have to follow, but there are a lot of ways to get around the rules and manipulate them.

(Griffiths) Uh huh, and I think for me, especially when I took the same class you're taking last semester, very much opened my brain up to those kinds of things like "Actually now we're just gonna do this, because it's allowed. You know?"

(Roberts) Yeah!

(Griffiths) Technically this is multiplying by one, which is allowed! Things like that, and that really opened me up to trying new things in math and considering math more as like an art almost. And that's what I get excited about.

(Roberts) A quote that I came across from Sofia Kovalevskaya who I just did my biography on, she said something along the lines of a real mathematician must also be a poet, because it is such an art form.

(Griffiths) That's so cool.

(Roberts) Yeah, but you don't realize until you're manipulating all of these different formulas and different solutions and problems and... I don't know. You have to be really creative about it. Because you can't just look at a problem and do it the way it is. You have to change it.

(Griffiths) Yeah, it's like it's a language. Something you can just talk about. That's so well put!

(Roberts) I was also just saying that I finally found a good use for completing the square [both laugh] that I did not understand.

(Griffiths) Yeah, and again, we're given all those tools in pre-algebra and all that, and just "Why? Why? Why?" Forever. And now it's very much, "Here's why. Here's why. Also, here's why." You know? And I think that makes it seem less... It's still daunting. It's a lot of work, and you just do it over and over, and there's homework, and there's tests, but getting to that point where you can say "You know what? There was a reason for all those things, and this actually means something. It's not just a bunch of scribbles on paper; it actually can apply to area, curves, and all that stuff." In physics too, there's so many relationships... Ooh! So exciting!

(Roberts) And before... I mean we're working hard now, but before we were working hard also to learn all these concepts, but we didn't really have an end sight of what we were doing. We were just doing it for the heck of it. And now it's so cool feeling like all that work learning that all these mechanics were really worth it, because I can actually use them now.

(Griffiths) Yay! That's so exciting. Do you have any remembrances of first being interested in science and math or is it just kind of a new pursuit that you feel has happened recently?

(Roberts) I feel like I've always liked math. I have not always liked science for sure. But I've always really liked numbers and counting, and I actually went to a Montessori school when I was in kindergarten, and they had this whole idea of letting kids choose what they want to learn about, and I was always really drawn to the math counting games and what you can do with the clock spinning around rather than reading stories. That seemed silly. And I noticed there was a problem when I got to elementary school that I was not on par with my reading skills, but I was able to do all of the math problems, and I thought it was really cool, but in elementary school, reading was much more praised than math skills. And I was always so frustrated that I was pretty good at the math, and I liked it, and I wasn't a good reader.

(Griffiths) That's kind of interesting. We were talking about math being a language, and math was your first language in a way.

(Roberts) Yeah! It's the one that I chose, and then I kind of was not accepted when I was all of six years old. And it frustrated me and I liked that I had what I thought was an odd interest.

(Griffiths) Yeah, but just culturally, and here you are now succeeding because of it.

(Roberts) And we have a whole STEM center of people who are just as odd as me.

(Griffiths) Exactly! [laughs]

(Roberts) I love that.

(Griffiths) I love that there are communities for it now, for sure. And experiencing the cultural norms of "Hey we learned this." And if you're not good at this, but you're good at something else, we kind of brush that off in a way. I think it's changing. I want to believe that.

(Roberts) It is. Just slowly.

(Griffiths) I want to think that over time we get better as a society at accepting all of the types of learning, and especially being part of the prep program, now as a TA it's emphasized. We want to know what your way of learning is. What do you like to learn about? How do you learn? Especially in the STEM center, do you learn with all of these people around, or do you need a quiet place? Or can we try both to maybe improve all of your learning? And just talking about it like this is so important, you know?

(Roberts) Yeah, I agree. I know, it's so fun.

(Griffiths) You sure you don't want to tell us what you wanna do with all of your math brain later in life?

(Roberts) Yeah.

(Griffiths) No? [laughs] Okay, fine. I'm excited to see what you do whatever it is.

(Roberts) I'm excited.

(Griffiths) Well, that's good. That's a good... you know... leave it as a cliffhanger. What will Tori do next? [laughs] Tune in next time to find out.

(Roberts) Tune in next year to find out.

(Griffiths) Next year, okay. You heard it from Tori. Tune in next year to find out. [laughs]

(Roberts) Maybe... [laughs]

(Griffiths) Well it's lovely chatting.

(Roberts) Thanks!