Problem 1. What is the name by which you would like me to call you?

Solution. I am happy with anything, but usually people just call me by my last name *Sabit*. Professor Frank Jones calls me *Mr. Bangladesh*. My mom calls me *Idiot*. □

Problem 2. What year at Rice are you?

Solution. Freshman, Class of 2027 □

Problem 3. What is your major?

Solution. I am a Theoretical Physics major. Because Rice doesn't has a by name "Theoretical" Physics, I want to take a lot of higher level maths and call it a Theoretical Physics degree. Other than that I might minor in German Studies/Philosophy/Computer Science given how I navigate through college later on. □

Problem 4. When and where did you take Linear Algebra? How do you feel about what you remember?

Solution. I have not officially taken Linear Algebra but I had a 4 year long exposure to Competitive Physics because I regularly competed in Physics Olympiads. At one point of learning Tensors and Tensor Calculus I had picked up some basic street-fighting level Linear Algebra. I have later studied bit and pieces of Linear Algebra now and then and I am confident to pick up linear algebra when it becomes necessary during this course. □

Problem 5. When and where did you take Calculus 1?

Solution. I never had taken Calculus 1 but, again, because of Physics Olympiads I have a very strong experience in using Calculus. □

Problem 6. Have you seen any multivariable calculus before? How much and where?

Solution. I studied the Physics that used Multivariable calculus extensively in 2019, it was core to solving problems. This was not a part of my school education (fun fact I didn't have a much strong formal education back in Bangladesh). It has always came up in Electrodynamics now and then, and I went through Multivariable the most before appearing at Asian Physics Olympiad this year. I absolutely love Olympiads and I can't stop talking about it, but to be fair, I know how to use multivariable to solve physics problems, but I don't know how it was derived. □

Problem 7. What courses have you taken before?

Solution. I have taken **MATH 211** last semester. This semester I am taking **MATH 354, MATH 382** alongside this one. □

Problem 8. Is there anything particular you want me to know about why are you taking this class?

Solution. I don't properly understand the question but I am taking this class because last semester I felt in 211 I learned no mathematics at all because nothing was being derived. I didn't feel challenged and by the end I gave up studying for that course. I have always been challenged before when I had practiced for Olympiads and MATH232 seems to be like that healthy nostalgia where I feel I am learning maths in general. □

Problem 9. Have you read the Homework policies in the syllabus?

Solution. Yes! I usually work alone and talk about homework after submission so it's fine by me. □

Problem 10. Go to Piazza page and respond to introduce yourself post

Solution. Okay! □

Problem 11. Let $m : \mathbb{R}^2 \to \mathbb{R}$ be a multiplication function. That is,

$$m(x, y) = xy$$

Formally show that,

$$\lim_{(x,y)\to(a,b)} m(x, y) = ab$$

Where both a, b are positive.

Solution. I like to imagine the ball around (x, y) with radius δ, when linear mapped to the function we get the answer between the region $(f(x, y))$ inside an ϵ radius ball. □