

EDITORIAL

“All our knowledge has its origins in our perceptions.”

Leonardo da Vinci

If you asked me what was my least favourite class as an undergrad, I would tell you Multivariate Calculus, hands down. All I remember doing in that course is computing double and triple integrals, switching the order of integration, computing numerous partial derivatives and memorizing everything about quadric surfaces. The class was technical, there seemed no apparent reason for anything to be solved the way we were asked to solve it and the methods used were nothing short of arbitrary. (Of course, it didn't help that the class was held at 6-8pm twice a week.) That was my view of the course as an undergrad. Although I still did well in the course and actually enjoyed the next course in Vector Calculus, I knew this branch of mathematics was not for me. So imagine my mixed feelings when I was asked to teach Multivariate Calculus last year.

I said yes. It was time to face my fears, so to speak. I expected to like this course better than I did as an undergrad (low bar for comparison), but I didn't expect to like it quite as much. So I wondered, why was my perception of the material so different this time around? Was it because I was not taking this course for credit and could actually spend time enjoying the math as opposed to being stressed out about it? Was it because I now had friends whose research involved multivariate calculus tools and so it seemed more personally relevant? Was it because I was more mathematically mature and could see more connections within the material itself?

I have experienced similarly diverse feelings with various other things that I have encountered as a young student and later as a more developed mathematician; this includes contest and olympiad problems. While I did participate in these events and did well in them, I can't actually say I ever truly enjoyed them. And I most definitely enjoy them now!

Whatever the reason for my changed appreciation for Multivariate Calculus or math competition problems, it has taught me to give a second chance to things I have made up my mind about. So I urge you to keep an open mind about various types of problems or even whole areas of mathematics that you at some point dismissed as not interesting to you. If you are a fan of inequalities, give geometry problems a chance. If you normally stick to the Problems section of *Cruz*, take a look at our Contest Corner. You might be surprised by the math you discover.

(For a piece that inspired this Editorial, see “Changing the way we think about mathematical ability” by Caroline Junkins, CMS Notes, September 2016.)

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