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*The Editors of the Notes welcome letters in English or French on any subject of mathematical interest but reserve the right to condense them. Those accepted for publication will appear in the language of submission. Readers may reach us at the Executive Office or at [notes-letters@cms.math.ca](mailto:notes-letters@cms.math.ca).*

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### Letter to Editor

The most recent issue of the CMS Notes included an editorial in the form of a letter to a student that begins

*How did I grow to understand mathematics? What a great question! There's the story about a tourist in New York, lost and about to be late to a concert, who stops his car, rolls down the window, and asks a traffic cop, 'Hey, officer, how do you get to Carnegie Hall?'*

*The cop shrugs. 'Practice, practice, practice.'*

Good story. But it reminded me of advice that one of my professors at Penn (Robert Ellis, who spent most of his career at U. Minn.) gave me and other graduate students. How do you do mathematics? More than likely he was advising us how to write a thesis, but his advice has stayed with me my entire career and motivated much of my work.

He said to pick a paper that interested you and learn. Read it deeply until you understand it better than the author. Read it so that if I wake you up in the middle of the night and ask you a question about it you will be able to answer it. At this point some questions will arise. Can you apply the ideas to a larger question? Eventually, one of your questions will get answered.

This has guided essentially my entire research career. In over 100 published papers, there is exactly one idea that I cannot explain as having no connection to any previously published result. (For the record, it is called the shuffle idempotent, a series of connected idempotents in the rational group algebras of the finite symmetric groups, one for each group.)

Although not exactly connected to the above, one further thought is worth mentioning. When I started out, I assumed that a successful day of research was one during which I had proved a theorem. Rather late in my career I realized that a successful day of research was one I which I understood something in the evening that I hadn't understood in the morning. In an exchange with the editor, he wanted to amend that to say that a successful day of research was one in which he understood something in the evening in a different way from how he understood it in the morning. I won't argue with that but I see no real difference. The name of the game is understanding, not proving. Proof left to the reader.

-Michael Barr

### Letter to Editor

On March 8, the world celebrated International Women's Day, and might be forgiven for contemplating the state of women in Canadian mathematics departments.

Since 2010, when less than one in five Canadian mathematics faculty members were women, not that much progress has been made. Extrapolating progress from currently available data suggests that today women represent about 22% of mathematics faculty. At the same time, women represent more than 50% of the Canadian population and have a labour force participation rate of 82%.

While much can be made of support initiatives for women in mathematics, their current state is deserving of some serious contemplation.

-Johan Budnik

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