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Extra Credit: Mathematical Writing

In “Elements of Style for Proofs” by D.C. Ernst, I found many different points instructive. None of what was written was surprising to me, but much of what was conveyed clarified conventions that I was unaware of or wondered about. I have always doubted whether writing mathematical statements as standalone sentences is acceptable, and although I intend to continue avoiding doing so, I now know that it is okay. In textbooks, I have found that some authors use logical symbols while others avoid them, so the clarification that it should be avoided shed some light on how to better improve my mathematical writing style. Finally, the proper convention for ordering equalities and inequalities has always baffled me; this article clarified this in a way that was enlightening, and I will keep it in mind for future assignments.

The second article, “Guidelines for Good Mathematical Writing” by Francis Su, was very inviting when compared against the first. Nevertheless, my main takeaway from this article was the subtext that mathematical writing is very similar to any other non-fictional writing. One major point that I found particularly interesting was writing towards your audience. This is something I have always taken to heart in all my writing and seeing this emphasized was satisfying to me. I often find myself explicitly writing out algebraic steps with the fear that my audience would assume that my understanding is incomplete otherwise. What was really surprising to me, however, was the assertion that cultural context is important in mathematical writing. I suppose that it should not be surprising, but because I have always seen mathematics as a “universal language,” it was a point that I never really considered.

From the framework laid out in these two articles, I want to work on improving conciseness while still conveying my point clearly. I think that I also might not include enough real English explanations to go with my mathematical manipulations. Instead of explicitly showing each and every step of algebraic manipulation, perhaps a simple explanation of what produced an outcome will be sufficient. Much of my mathematical writing comes from a pretty dry formula that I repeat ad nauseum. Reading these two articles have given me a bit more confidence to exercise a little more creativity in my writing that would more closely resemble my typical writing style for non-fictional writing.