To help you learn some of the conventions of mathematical writing and to start you thinking about authorial strategies for writing an effective mathematics paper, on April 18 we’ll discuss the paper “Rental Harmony” by Francis Edward Su and “Three- rowed CHOMP” by Doron Zeilberger. To prepare for class, please read “Rental Harmony” and be ready to discuss the following questions in class.

1. What is the main result of “Rental Harmony”? How does Su introduce the main theorem? Where does he discuss proof strategies for this theorem? Compare Su’s approach to Zeilberger’s.

2. “Rental Harmony” was published in the MAA journal American Mathematical Monthly. “Three-rowed CHOMP” was published in Advances of Applied Mathematics. Who is the primary target audience of each journal, and what are the expectations for article content and style? (Journal websites provide such information for authors - you can usually find it by searching by the journal name and “information for authors”.)

3. What strategies does Su use to help readers understand the \( n \)-dimensional Sperner’s lemma?

4. Are either/both papers written in a formal style? Are they mathematically precise? accurate? Are the proofs complete? Do you think these choices are effective?

5. What is the role of citations in the papers? (What purpose do they serve?) How are citations handled in the text?

6. Where does Su define key terms in the paper? Why do you think he arranged them in this way instead of defining all terms together earlier in the paper? Was this choice effective for you as a reader?

7. How and why does Su discuss variations on the main theorem of the paper?

8. What questions do you have for writing your own paper?