Grading Rubric for MATH 2705W Math Papers

The following is a list of items (and code number) for generic issues and comments that we have seen as we review drafts of your papers. Papers are graded out of 20 points so, for example, -1 point below means -1 out of 20 possible points. In grading, a reference to code $\#n$ refers to point n. below.

1. **The paper is not prepared using LaTeX** (paper is not accepted; grade is 0 for the assignment).

2. **LaTeX was not compiled correctly, or there are LaTeX issues** (-1 to -10 points, depending on the gravity of the compiling error). One very common issue: use `\left( ... \right)` for parentheses within equations so that they adjust to the size of the formulas within the parentheses.

3. **Paper does not properly use Environments** (-1 for each time an environment is not properly used.)

4. **Your environments are not appropriately numbered** (-1 point).

5. **Paper does not use Sections for different parts of the paper** (-2 points).

6. **Paper does not use the hyperref package for appropriate links** (-1 point).

7. **No references cited**. This includes citing references within the text at the appropriate places (-3 points).

8. **Problems with the format for references**. This includes missing bibliographical information (author name, title, journal/web, page numbers). Also, the format of references should be homogeneous for all items cited (-1 point).

9. **Proofs are schematic (bullet points) instead of written in readable prose**. Write proofs in complete sentences that explain the logic of the arguments (-3 points).

10. **The overall presentation of your work is poor.** This may include unclear solutions, sloppy writing, or poor organization in general of your work in your pages. (-1 to -10 points, depending on presentation).

11. **Your paper lacks reasoning, explanations, a thoughtful discussion** (-1 to -5 points).

12. **Your work lacks explanations of the steps in your proofs** (-1 to -5 points).

13. **Your work lacks words!** Your work needs to contain complete sentences and fully formed explanations of what is it that you are doing in each problem. (-1 to -5 points).

14. **Your work lacks an explanation of your computer calculations.** Please provide an explanation of what software and commands you used. A print out of your code or screen as an appendix is ideal (-1 to -5 points).

15. **Your work lacks appropriate diagrams or images to illustrate your paper** (-2 points).

16. **You need to display certain important equations (using double dollar signs)** (-2 points).

17. **Do not use symbols or equations to begin a sentence, and avoid finishing a sentence with a symbol.** (-1 point.)

18. **Avoid logic symbols (implication arrows, quantifiers) in math papers (unless it is a paper about logic!)** (-1 point).

19. **Be precise. Define all the symbols that appear in your paper.** (-1 point)

20. **Minor typos** (0 or -1).

21. **Avoid contractions (let's, it's, didn't, don't) in formal writing** (0 or -1 points).

22. **Begin a proof indicating your method of proof (e.g., contradiction, induction, etc.)** (-1 point).

23. **The background material in your paper is superficial.** Try including more references, more names and dates when results were proved, go deeper into the topic (-1 to -5 points, depending on the topic).

24. **Your paper does not meet the requirements of the assignment**. This can be related to the required topic, content, or total length of the paper (paper is not accepted if some conditions are not met, e.g., length requirement).

25. **Inaccurate mathematics** (-2 points).

26. **Use examples to illustrate your definitions, and theorems!**

27. **Do not include definitions within statements of theorems, or within proofs** (-1 point).

28. **Spacing issues**. This includes too much space between lines (should be single-spaced, the LaTeX default), margins are too wide or too narrow, spacing within the main text, etc. (-1 point).

29. **Include source information about images in the caption.** All images need to be sourced and the author needs to be acknowledged (e.g., "Source: Wikimedia Commons."). If you created the images, consider adding a note about how the images where created.