

HOMEWORK RESOURCES FOR MATH 410

ABSTRACT. As explained in the [syllabus](#), your homework will largely consist in creating *mathematical proofs*, and you will be required to write your homework in LaTeX (pronounced “LAH-teck”). This document outlines some resources to get you started with that process.

1. **Mathematical writing.** A very nice and short introduction to mathematical writing is available [here](#). Note in particular that you should always write in complete sentences with proper grammar, and that you should avoid the use of shorthand (e.g. iff, s.t., \Rightarrow , \forall , etc.).
2. **Writing and compiling LaTeX.** LaTeX code is stored as plain text, and therefore can be written and saved with the filename extension `txt` (e.g. as `my-LaTeX-code.txt`). This raw code can then be *compiled* into a `pdf` file (such as the one you are reading now). You can compile LaTeX code directly on your computer after a somewhat lengthy download/installation process. Alternatively, you can write and compile LaTeX code online through the website [Overleaf](#). I would recommend the latter option, especially if you are having difficulty with the former option (which is somewhat nontrivial).
3. **Getting started with LaTeX.** A template that you can use to get started on your homework is available [here](#); when compiled, that LaTeX code produces [this](#) file. You are also welcome to start from scratch, and to format your LaTeX documents as you wish (as long as they are clear and readable).

Along with occasional online searches, that template should suffice to get you started. However, if you would like a further introduction to LaTeX you can check out some of the instructions provided by Overleaf: [this](#) shorter one or [this](#) longer one.
4. **Other LaTeX resources.** Of course, there are many online LaTeX resources. In particular, there are many “crib sheets”, see e.g. [here](#) and [here](#). Another great resource is [Detexify](#): if you draw a mathematical symbol, it will attempt to suggest how to write it in LaTeX.
5. **Submitting your homework.** Your homework must be turned in by 2pm each Thursday (the beginning of discussion section). In order to turn in homework #N, Tammy Trojan sends an email to the TA with the subject line “math 410 hw N Tammy Trojan” that contains as attachments the files `math 410 hw N Tammy Trojan.tex` and `math 410 hw N Tammy Trojan.pdf` (the latter being the compilation of the former).