INTRODUCTION TO LaTeX AND BEAMER BOOTCAMP

PENN SUMMER PREP PROGRAM
EXPLORATIONS IN MATHEMATICAL INQUIRY

MATT DECROSS

Modern mathematics research is shared between mathematicians using papers written using LaTeX, a formal typesetting language, and presentations prepared in Beamer, LaTeX's presentation document class. Although LaTeX may present more of a learning curve compared to standard word processors, it offers numerous advantages such as ease of standardizing document formatting, clean and exact math formula/symbol presentation, and general aesthetic superiority. This assignment is intended to jumpstart you into practicing some of the basics of both LaTeX and Beamer.

There are several ways of looking up commands and symbols in LaTeX that may be useful to you here. The first is a website called Detexify, `http://detexify.kirelabs.org/classify.html`, which allows you to draw the symbol you want and returns a list of possible commands. Secondly, the LaTeX startup guide at `http://artofproblemsolving.com/wiki/index.php?title=LaTeX` includes a list of most common math symbols (under the "Symbols" tab) and is generally a good all-around resource. Thirdly, a general Google search often yields a document or StackExchange question asking how to render the command/symbol you want. When all else fails, the comprehensive LaTeX symbol list at `http://tug.ctan.org/info/symbols/comprehensive/symbols-a4.pdf` should have what you're looking for - although you may need to install a font or package.

The assignment: first, typeset your three favorite equations (in any math or science field) using the "amsart" document class and below each explain in a sentence or two why it is one of your favorites. Make sure you include a title for the document, and your name as the author.

Second, please make a short (3 slide) presentation in Beamer, which consists of a title slide, a slide with an image (using a Figure environment) illustrating the prettiest math concept you can find, and a third slide consisting of an equation and a couple bullet points of information relevant to the image (as if you were giving a presentation about it). Be sure to cite your image source.

Due Wednesday by email (PDF file sufficient).