TITLE HERE

YOUR NAME

Math 2710

Date: Date Here.

1. Introduction

In this file, edit the information between `\begin{titlepage}` and `\end{titlepage}`. Do *not* change the typesetting commands such as `\setlength` at the top of the file, which affect the size of the output.

Write your paper between `\section{Introduction}\label{intro}` and `\end{document}`. In this section you should put an introduction. Tell us what your topic is about, roughly, and what you are going to do with it.

If you need any LaTeX command, see if you can find a similar one in one of the LaTeX files you have and then copy, paste and edit. Or ask a math professor (most know LaTeX).

2. The Next Section

The function $\sin x$ can be defined as an infinite series

$$\sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \cdots = \sum_{k\geq 0} \frac{x^{2k+1}}{(2k+1)!}. \tag{2.1}$$

Here is another way to characterize it, using differential equations and initial conditions.

Theorem 2.1. *The function* $\sin x$ *is the unique solution of the differential equation*

$$\frac{d^2y}{dx^2} + y = 0 \tag{2.2}$$

satisfying the initial conditions $y(0) = 0$ *and* $y'(0) = 1$.

Notice in the code for this file that the number for the theorem, **??**, is *not* hard-coded, and that if you need to manually enter parentheses if you want the equation number to appear in text as (**??**).

3. The Section After That

There is nothing here.

Appendix A. Some More Stuff

There are four references below: [**?**], [**?**], [**?**], and [**?**].

References

[1] K. Ireland and M. Rosen, "A Classical Introduction to Modern Number Theory," 2nd ed., Springer-Verlag, New York, 1990.

[2] T. J. Kaczynski, Another proof of Wedderburn's theorem, *Amer. Math. Monthly* **71** (1964), 652–653.

[3] P. Roquette, Class field theory in characteristic p, its origin and development, pp. 549–631 in: "Class field theory – its centenary and prospect," Math. Soc. Japan, Tokyo, 2001.

[4] Wikipedia, http://en.wikipedia.org/wiki/Spectral_theorem.