

Assignment 3

Math 351

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1 Instructions

There are two exercises (which were typeset using the theorem environment).

Exercise 1. *Recreate this entire document.*¹

Exercise 2. *Create a new document containing a short description of three of your favorite books, papers, or other publications. Be sure to include a bibliography, created using `BIBTEX`.*

An assignment which completes Exercise 2 in an interesting way or makes amusing use of mathematical typesetting will earn the coveted L^AT_EXer of the week distinction.

1.1 When to turn it in

Please upload the `.tex` and `.bib` source files and the `.pdf` output files to your solutions to Assignment 3 on or before Sunday.

2 Euler was excellent

Euler proved many statements, such as

$$\prod_{m=1}^{\infty} (1 - q^m) = \sum_{n=-\infty}^{\infty} (-1)^n q^{(3n^2-n)/2}. \quad (1)$$

where q is an indeterminate. Equation (1) is known as Euler's pentagonal number theorem. Euler also proved theorem 1 below.

¹How meta.