These notes served as course notes for the Spring 2024 Number Theory course at Davidson College. This course can also serve as an introduction to proofs course. In addition to the course notes, worksheet versions of the in class assignments are provided in Appendix B and final project topics are provided in Appendix C.

The official textbook for the course was *Elementary Number Theory* by James K. Strayer [**?**]. Some topics that are not covered in these notes were assigned as reading before class. In order to reference these results in the notes, they are provided in Appendix A. The reading assignments are visible by using the `instructornote` option in the TEX file.

The introduction to proofs used An Introduction to Proof via Inquiry-Based Learning by Dana C. Ernst [**?**], an open source textbook. My best effort has been made to link directly to this resource, although some standard staments and exercies are included in the notes.

Solutions to some problems from Strayer and Ernst are omitted. Solutions to some standard number theory problems from these sources are included.

These notes are also based on my notes teaching the Elementary Number Theory at The Ohio State University. Those courses use *An Introduction to the Theory of Numbers* by Ivan Niven, Herbert S. Zuckerman, and Hugh L. Montgomery [**?**] and *Elementary Number Theory* by Gareth A. Jones and J. Mary Jones [**?**]. These notes were also influenced by *Number Theory: A Lively Introduction with Proofs, Applications, and Stories* by James Pommersheim, Tim Marks, Erica Flapan. I am thankful to Pommersheim and Marks' number theory course at the Johns Hopkins Center for Talented Youth for introducing me to proofs and number theory.

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