A Sample Thesis in Mathematics

BY

YOUR NAME AS IT APPEARS ON YOUR EXAM REPORT
BS, University of Wisconsin, 2005
Another Prior degree, if Appropriate

THESIS [PhD candidates may use DISSERTATION here instead]

Submitted as partial fulfillment of the requirements
for the degree of DEGREE in OFFICIAL PROGRAM NAME
in the Graduate College of the
University of Illinois Chicago, YEAR

Chicago, Illinois

Defense Committee:
Name, Chair, Advisor
Name
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Name, Outside Members Need Affiliation Here

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Dedication

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Acknowledgements

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Preface

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Summary

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CHAPTER 1

Introduction

This is the introduction chapter. We cite some classic works [**1, 2**].

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THEOREM 1.1. *This is a theorem*

We reference Theorem 1.1.

University of Illinois Chicago.

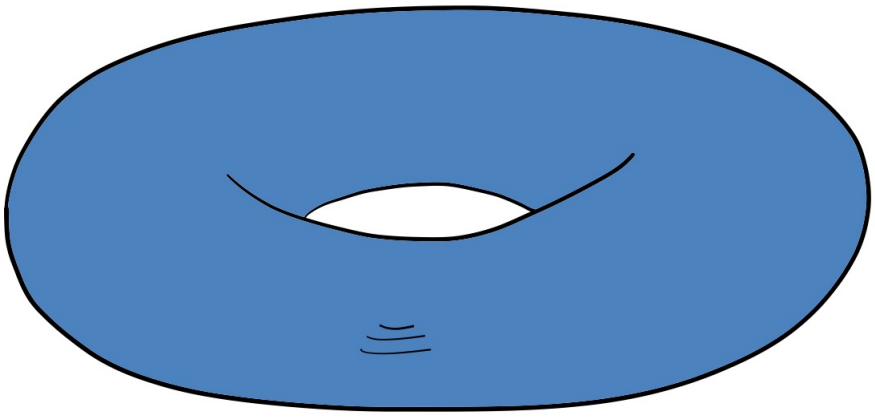


FIGURE 1. This is a torus

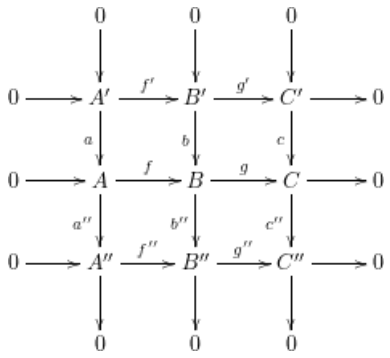


FIGURE 2. The Snake Lemma

1. Motivation

1.1. Historical context. A brief overview of how the problem developed.

$$\int_0^1 f(x)dx = 2 \tag{1}$$

How to solve (1)

1.2. Open questions. Some questions remain open for future work.

Note: I have not tested the accessibility of this table.

Monkeys	Lions
100	200

TABLE 1. Example Table

CHAPTER 2

Background

This chapter gives necessary background.

1. Group theory

DEFINITION 2.1. A group is a set G with a binary operation satisfying closure, associativity, identity, and inverses.

THEOREM 2.2. *Every finite subgroup of the multiplicative group of a field is cyclic.*

PROOF. This is a standard result from algebra. □

CHAPTER 3

Main Results

Here we present the main contributions of the thesis.

1. A computer simulation

```
def factorial(n):
    """Compute the factorial of n recursively."""
    if n == 0:
        return 1
    else:
        return n * factorial(n - 1)

print(f"5! = {factorial(5)}")
```

2. Second main result

Another significant theorem.

APPENDIX A

Technical Lemmas

Here we collect some supporting lemmas.

Bibliography

[1] R. Hartshorne, *Algebraic Geometry*, Springer-Verlag, New York, 1977.

[2] D. Mumford, *Abelian Varieties*, Oxford University Press, 1970.

[3] J. Draisma, E. Horobet, G. Ottaviani, B. Sturmfels, and R. R. Thomas, "The Euclidean distance degree of an algebraic variety," *arXiv:1309.0049* (2013). Available at: https://arxiv.org/abs/1309.0049

Vitae

For UIC this can be a full CV or a short version (e.g. half a page) with previoius degrees, work experience and publications.