



Senior Thesis in Mathematics

---

# Absolutely Fascinating Thesis Title

---

*Author:*  
Firstname Lastname

*Advisor:*  
Dr. Firstname Lastname

Submitted to Pomona College in Partial Fulfillment  
of the Degree of Bachelor of Arts

January 20, 2015

## **Abstract**

In this paper we don't really do much. However, there are a lot of *real* theorems that still need to be proved. That is what you will probably do in your thesis.

# Contents

<b>1</b>	<b>Boring Title for the First Chapter</b>	<b>1</b>
1.1	A delightful new section . . . . .	1
<b>2</b>	<b>Cooler Title for the Second Chapter</b>	<b>3</b>
2.1	Another fascinating section . . . . .	3
2.1.1	And sometimes you will need subsections... . . . . .	3

# Chapter 1

## Boring Title for the First Chapter

Let us do some math:

$$(h) = h_{(1)} \quad h_{(2)}$$

$$(h) = h_{(1)} \quad h_{(2)}$$

$$(h) = h_{(1)} \quad h_{(2)}$$

Here is how you declare a theorem:

**Theorem 1.1** *A Big Fat Theorem. We assert that the following is true:*

$$(x = 1; y = 1) \quad x + y = 2 \tag{1.1}$$

Let us first consider:

**Lemma 1.2** *A Small but Important Lemma. If  $x = a$ , and  $y = b$ , then  $x + y = a + b$ .*

We can then see that Lemma 1.2 implies Theorem 1.1 by letting  $a = 1$  and  $b = 1$  in Equation (1.1). See how we refer to a previously labeled item in the text?

### 1.1 A delightful new section

Some text for the section should go here. And let us look at footnotes.<sup>1 2</sup>

---

<sup>1</sup>This is one way to use a footnote.

<sup>2</sup>Here is a second way to introduce a footnote

**Theorem 1.3** *hmmm*

Here is how you call the proof environment:

**Proof** hmmm



# Chapter 2

## Cooler Title for the Second Chapter

As we saw in Chapter 1, everything can be made to be complicated. (See, for example, Figure 2.1.) This is usually not a good idea unless you want to lose your audience.

Most importantly, **NEVER DIVIDE BY ZERO** unless, of course, you are wearing your protective divide-by-zero suit (See [Abe, 1980] for the terrible consequences which might result. And this is how you cite multiple references: [Abe, 1980, Blohmann et al., 2007, Böhm, 2005a]. And if you wanted to, you could refer to specific pages: [Böhm, 2005b, pages 567{569}).

### 2.1 Another fascinating section

Some text needs to go here.

#### 2.1.1 And sometimes you will need subsections...

More text goes here.

Figure 2.1: Graphics can really snaz it up!

# Bibliography

- [Abe, 1980] Abe, E. (1980). *Hopf Algebras*, volume 74 of *Cambridge Tracts in Mathematics*. Cambridge University Press, Cambridge-New York.
- [Blohmann et al., 2007] Blohmann, C., Tang, X., and Weinstein, A. (2007). Hop sh structures and modules over irrational rotation algebras.
- [Böhm, 2005a] Böhm, G. (2005a). An alternative notion of hopf algebroid. In *Hopf algebras in noncommutative geometry and physics, Lecture Notes in Pure and Appl. Math.*, volume 239, pages 31{53. Dekker, New York.
- [Böhm, 2005b] Böhm, G. (2005b). Integral theory for hopf algebroids. *Algebr. Represent. Theory*, 8(4):563{599.