## Theorems!

## 1. Introduction

Lemma 1.1 (Pythagoras): In a right angled triangle,

$$a^2 + b^2 = c^2.$$

The above theorem is 1.1

**Theorem 1.2** (WLLN): Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat.

*Proof*: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim aeque doleamus animo, cum corpore dolemus, fieri.

$$\int_{-\infty}^{\infty} \frac{\sin(x)}{x} \, \mathrm{d}x = \pi$$

Lorem ipsum dolor sit amet.

**Corollary 1.2.1**: Lorem ipsum dolor sit.

Corollary 1.2.2: This corollary will be referenced later, in Lemma 2.1.

Example: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

Lemma 1.3: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

 $\label{eq:Notation I} \textbf{Notation I}: \ Lorem \ ipsum \ dolor \ sit \ amet.$ 

## 1.1. Sub-Heading

**Definition 1.1.1**: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et.

Notation II: Lorem ipsum dolor sit amet, consectetur adipiscing.

Example (Lorem ipsum dolor.): Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

Remark: Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Theorem 1.4: Lorem ipsum dolor sit amet, consectetur.

Proof 1.4.1: Lorem ipsum dolor sit.

*Proof 1.4.2*: Lorem ipsum dolor sit amet. □

## 2. Heading

**Lemma 2.1**: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut. Refer to Corollary 1.2.2.

Remark: Lorem ipsum dolor sit amet, consectetur adipiscing elit.

**Corollary 2.1.1** (Lorem ipsum dolor sit.): Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor.

*Example 2.1.1.a*: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat.

Example 2.1.1.b: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

Notation III: Lorem ipsum dolor sit amet.