

# 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 aequi doleamus animo, cum corpore dolemus, fieri.

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

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.

**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.