

A Minimal Template: Demonstration of LaTeX Environments

Pinzhong Zheng*

May 28, 2025

Abstract

This is a sample abstract.

1 Introduction

Lorem ipsum dolor sit amet, consectetur adipiscing elit [1].

1.1 Sample Equation

Consider the following equation:

$$\int_{\Omega} u(x) \, dx = 0. \tag{1}$$

2 Mathematical Environments

Theorem 2.1 (Sample Theorem). *Let $x \in \mathbb{R}$. Then for all x , we have $|x| \geq 0$.*

Proof. Trivially, by the definition of absolute value. □

Lemma 2.2 (Sample Lemma). *For any $a, b \in \mathbb{R}$, $|a + b| \leq |a| + |b|$.*

Proposition 2.3 (Sample Proposition). *If $x > 1$, then $x^2 > 1$.*

Corollary 2.4 (Sample Corollary). *If $x > 1$, then $x^4 > 1$.*

Definition 2.5 (Sample Definition). A set S is *bounded* if there exists $M > 0$ such that $|x| < M$ for all $x \in S$.

Remark 2.6. *This is a remark. Lorem ipsum dolor sit amet, consectetur adipiscing elit.*

*The Hong Kong Polytechnic University, pinzhong.zheng@connect.polyu.hk

3 Figures and Tables

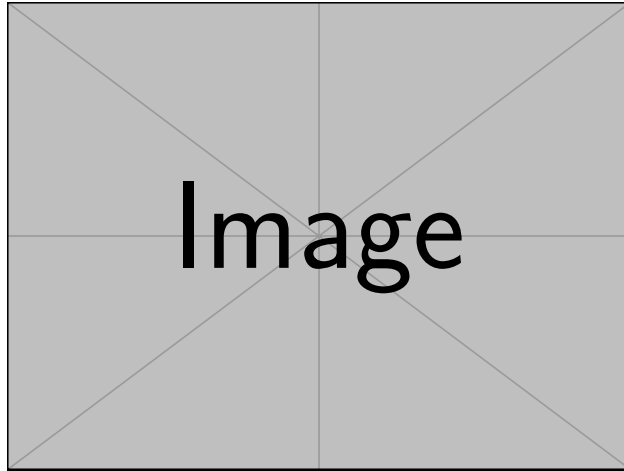


Figure 1: A sample figure using the default image.

Method	Accuracy	Time (s)
A	95%	1.23
B	93%	0.98

Table 1: Sample comparison table.

4 Citation Example

As shown in Theorem 2.1, the absolute value is always non-negative.

5 Conclusion

Lorem ipsum dolor sit amet. Suspendisse nec luctus dui.

References

- [1] Qiang Du, Lili Ju, Xiao Li, and Zhonghua Qiao. Maximum bound principles for a class of semi-linear parabolic equations and exponential time-differencing schemes. *SIAM Rev.*, 63(2):317–359, 2021.