

# A Minimal Template: Demonstration of LaTeX Environments

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## 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.*

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### 3 Figures and Tables

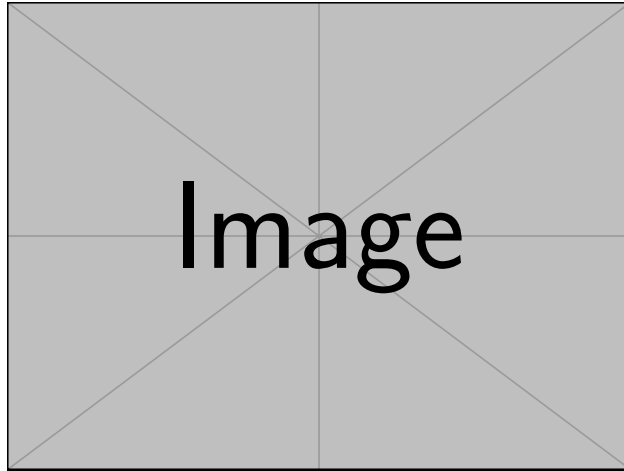


Figure 1: A sample figure using the default image.

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.