A Note Template for Mathematics

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Abstract

Insert abstract

1 Section 1

The first paragraph is not indented by default. Use \usepackage{indentfirst} to intent first paragraphs.

In ordinary text, we can write $\boldsymbol{a} \in \mathbb{R}$, compared with $\mathbf{a} \in \mathbb{R}$.

Definition 1.1. *[1] is an in-text citation.*

Concept 1.1. *Concept is supplementary to definitions*

Text following theorem denotation is italic by default.

Use \rm to obtain ordinary texts with default indent.

Ordinary text without indent. Hyperlink is available.

Referring to Section 2 and equation 2.1. More details can be found here.

Theorem 1.1. *Let K be a compact set in a metric space (X, d). Suppose $\mathcal{F} = \{U_\alpha\}_{\alpha \in A}$ is an open cover of K, then there exists a positive number λ so that for every $p \in K$ the open ball $B(p, \lambda)$ is contained in one of the open sets of $\mathcal{F}$.*

Proof. Since $K \subset \bigcup_{\alpha \in A} U_\alpha$, for each point p in K there is a positive number $2\varepsilon(p)$ so that the ball $B(p, 2\varepsilon(p))$ is contained in one of the open sets of $\mathcal{F}$. Clearly $\{B(p, 2\varepsilon(p)\}_{p \in K}$ forms an open cover of K, and so by compactness this admits a finite refinement.

□

2 Section 2

2.1 Euler equation

$$e^{ix} = \cos x + i \sin x \tag{2.1}$$

Equation 2.1 is the renowned Euler equation.

References

[1] Albert Einstein. Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]. *Annalen der Physik*, 322(10):891–921, 1905.