

Note Template

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Abstract

This is a note template, with all but minimal compilable files provided. Feel free to adjust for your usage.

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Chapter 1

Introduction

Lecture 1: First Lecture

1.1 A Template for you to take note

13 Oct. 08:00

This is a simple demo for you to take fancy notes in L^AT_EX!

1.2 Useful Environment

We now see some common environment you'll need to complete your note.

Definition 1.2.1 (Natural number). We denote the set of *natural numbers* as \mathbb{N} .

Lemma 1.2.1 (Useful lemma). Given the axioms of [natural numbers](#) \mathbb{N} , we have

$$0 \neq 1.$$

An obvious proof. Obvious. ■

Proposition 1.2.1 (Useful proposition). From [Lemma 1.2.1](#), we have

$$0 < 1.$$

Theorem 1.2.1 (Mass-energy equivalence). Given [Proposition 1.2.1](#), we then have

$$E = mc^2.$$

Proof. The blank left for me is too small,^a hence we put the proof in [Appendix A.1](#). ■

^ahttps://en.wikipedia.org/wiki/Richard_Feynman

Corollary 1.2.1 (Riemann hypothesis). From [Theorem 1.2.1](#), we then have the following.

The real part of every nontrivial zero of the Riemann zeta function is $\frac{1}{2}$, where the Riemann zeta function is just

$$\zeta(s) = \sum_{n=1}^{\infty} \frac{1}{n^s} = \frac{1}{1^s} + \frac{1}{2^s} + \frac{1}{3^s} + \cdots.$$

Proof. The proof should be trivial, we left it to you. ■

As previously seen. We see that [Lemma 1.2.1](#) is really helpful in the proof!

DIY (Do
It Your-
self)

Remark. This leads to lots of useful theorem!

Note. I hope you learn something while proving this!

Example. Here are some applications of [Corollary 1.2.1](#), see the link.^a

^a<https://math.stackexchange.com/questions/404624/what-does-proving-the-riemann-hypothesis-accomplish>

Internal Link

You should see all the common usages of internal links. Additionally, we can use citations as [\[New26\]](#), which just link to the reference page!

1.3 Figures

A simple demo for drawing:

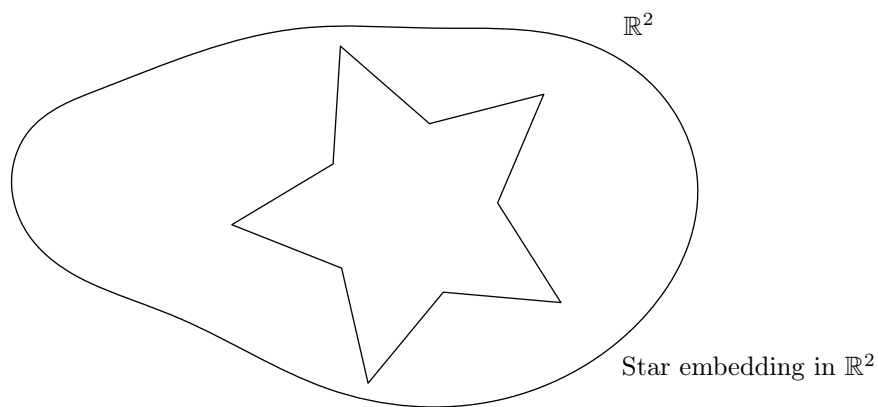


Figure 1.1: Random Drawing.¹

¹For detailed information, please see <https://github.com/sleepymalc/VSCoDe-LaTeX-Inkscape>.

Appendix

Appendix A

Additional Proofs

A.1 Proof of Theorem 1.2.1

We can now prove Theorem 1.2.1.

Proof of Theorem 1.2.1. See https://en.wikipedia.org/wiki/Mass%E2%80%93energy_equivalence. ■

Bibliography

- [New26] I. Newton. *Philosophiae naturalis principia mathematica*. Innys, 1726. URL: <https://books.google.com/books?id=WeZ09rjv-1kC>.