

# 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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## Lecture 1: First Lecture

13 Oct. 08:00

## 1 A Template for you to take note

This is a simple demo for you to take fancy notes in L<sup>A</sup>T<sub>E</sub>X!

### 1.1 Useful Environment

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

**Lemma 1.1 (useful lemma).** Given the axioms, we have

$$0 \neq 1.$$

**Proposition 1.1 (useful proposition).** From [Lemma 1.1](#), we have

$$0 < 1.$$

**Theorem 1.1 (Mass-energy equivalence).** Given [Proposition 1.1](#), we then have

$$E = mc^2.$$

*Proof.* The blank left for me is too small,<sup>1</sup> hence we put the proof in [Appendix A.1](#). ■

**Corollary 1.1 (Riemann hypothesis).** From [Theorem 1.1](#), 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. ■

DIY (Do It Yourself)

**As previously seen.** We see that [Lemma 1.1](#) is really helpful in the proof!

**Remark.** This leads to lots of useful theorem!

**Note.** I hope you learn something while proving this!

**Example.** Here are some applications of [Corollary 1.1](#), see the link.<sup>2</sup>

### 1.1.1 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!

## 1.2 Figures

A simple demo for drawing:

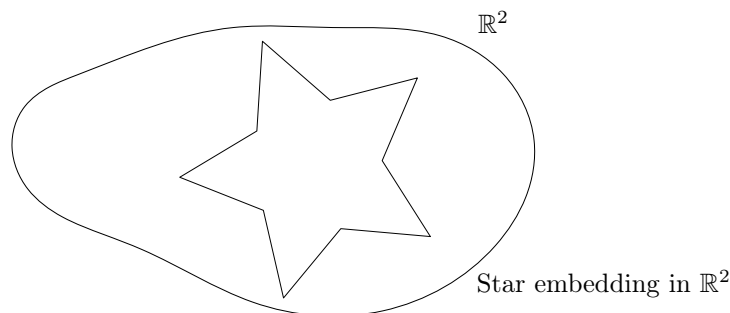


Figure 1: Random Drawing.<sup>3</sup>

<sup>1</sup>[https://en.wikipedia.org/wiki/Richard\\_Feynman](https://en.wikipedia.org/wiki/Richard_Feynman)

<sup>2</sup><https://math.stackexchange.com/questions/404624/what-does-proving-the-riemann-hypothesis-accomplish>

<sup>3</sup>For detailed information, please see <https://github.com/sleepymalc/VSCoDe-LaTeX-Inkscape>.

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# Appendix

## A Additional Proofs

### A.1 Proof of [Theorem 1.1](#)

See [https://en.wikipedia.org/wiki/Mass%E2%80%93energy\\_equivalence](https://en.wikipedia.org/wiki/Mass%E2%80%93energy_equivalence).

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## References

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