Template for the class ``Note for Myself' in sectionlevel=chapter

阿巴!

Contents

1 Section name

1.1 Fonts in math mode

We use unicode-math package to support unicode math symbols, the following is a list of some common math symbols:

- $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega$
- $\mathrm{A}, \mathrm{B}, \Gamma, \Delta, \mathrm{E}, \mathrm{Z}, \mathrm{H}, \Theta, \mathrm{I}, \mathrm{K}, \Lambda, \mathrm{M}, \mathrm{N}, \Xi, \Pi, \mathrm{P}, \Sigma, \mathrm{T}, \Upsilon, \Phi, \mathrm{X}, \Psi, \Omega$
- $\infty, \partial, \nabla, \exists, \forall, \neg, \wedge, \vee, \implies, \iff, \subseteq, \supseteq, \cap, \cup, \setminus, \emptyset$
- $0, 1, 2, 3, 4, 5, 6, 7, 8, 9$
- $+, -, \times, \div, =, <, >, \leq, \geq$
- $a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z$
- $A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z$
- $\mathscr{a}, \mathscr{b}, \mathscr{c}, \mathscr{d}, \mathscr{e}, \mathscr{f}, \mathscr{g}, \mathscr{h}, \mathscr{i}, \mathscr{j}, \mathscr{k}, \mathscr{l}, \mathscr{m}, \mathscr{n}, \mathscr{o}, \mathscr{p}, \mathscr{q}, \mathscr{r}, \mathscr{s}, \mathscr{t}, \mathscr{u}, \mathscr{v}, \mathscr{w}, \mathscr{x}, \mathscr{y}, \mathscr{z}$
- $\mathscr{A}, \mathscr{B}, \mathscr{C}, \mathscr{D}, \mathscr{E}, \mathscr{F}, \mathscr{G}, \mathscr{H}, \mathscr{I}, \mathscr{J}, \mathscr{K}, \mathscr{L}, \mathscr{M}, \mathscr{N}, \mathscr{O}, \mathscr{P}, \mathscr{Q}, \mathscr{R}, \mathscr{S}, \mathscr{T}, \mathscr{U}, \mathscr{V}, \mathscr{W}, \mathscr{X}, \mathscr{Y}, \mathscr{Z}$
- $\mathfrak{a}, \mathfrak{b}, \mathfrak{c}, \mathfrak{d}, \mathfrak{e}, \mathfrak{f}, \mathfrak{g}, \mathfrak{h}, \mathfrak{i}, \mathfrak{j}, \mathfrak{k}, \mathfrak{l}, \mathfrak{m}, \mathfrak{n}, \mathfrak{o}, \mathfrak{p}, \mathfrak{q}, \mathfrak{r}, \mathfrak{s}, \mathfrak{t}, \mathfrak{u}, \mathfrak{v}, \mathfrak{w}, \mathfrak{x}, \mathfrak{y}, \mathfrak{z}$
- $\mathbb{A}, \mathbb{B}, \mathbb{C}, \mathbb{D}, \mathbb{E}, \mathbb{F}, \mathbb{G}, \mathbb{H}, \mathbb{I}, \mathbb{J}, \mathbb{K}, \mathbb{L}, \mathbb{M}, \mathbb{N}, \mathbb{O}, \mathbb{P}, \mathbb{Q}, \mathbb{R}, \mathbb{S}, \mathbb{T}, \mathbb{U}, \mathbb{V}, \mathbb{W}, \mathbb{X}, \mathbb{Y}, \mathbb{Z}$
- $\mathsf{a}, \mathsf{b}, \mathsf{c}, \mathsf{d}, \mathsf{e}, \mathsf{f}, \mathsf{g}, \mathsf{h}, \mathsf{i}, \mathsf{j}, \mathsf{k}, \mathsf{l}, \mathsf{m}, \mathsf{n}, \mathsf{o}, \mathsf{p}, \mathsf{q}, \mathsf{r}, \mathsf{s}, \mathsf{t}, \mathsf{u}, \mathsf{v}, \mathsf{w}, \mathsf{x}, \mathsf{y}, \mathsf{z}$
- $\mathsf{A}, \mathsf{B}, \mathsf{C}, \mathsf{D}, \mathsf{E}, \mathsf{F}, \mathsf{G}, \mathsf{H}, \mathsf{I}, \mathsf{J}, \mathsf{K}, \mathsf{L}, \mathsf{M}, \mathsf{N}, \mathsf{O}, \mathsf{P}, \mathsf{Q}, \mathsf{R}, \mathsf{S}, \mathsf{T}, \mathsf{U}, \mathsf{V}, \mathsf{W}, \mathsf{X}, \mathsf{Y}, \mathsf{Z}$

Date: August 12, 2025, **Author**: Tianle Yang, My Homepage

- a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
- A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
- 𝔞, 𝔟, 𝔠, 𝔡, 𝔢, 𝔣, 𝔤, 𝔥, 𝔦, 𝔧, 𝔨, 𝔩, 𝔪, 𝔫, 𝔬, 𝔭, 𝔮, 𝔯, 𝔰, 𝔱, 𝔲, 𝔳, 𝔴, 𝔵, 𝔶, 𝔷
- 𝔄, 𝔅, ℭ, 𝔇, 𝔈, 𝔉, 𝔊, ℌ, ℑ, 𝔍, 𝔎, 𝔏, 𝔐, 𝔑, 𝔒, 𝔓, 𝔔, ℜ, 𝔖, 𝔗, 𝔘, 𝔙, 𝔚, 𝔛, 𝔜, ℨ
- 𝒜, ℬ, 𝒞, 𝒟, ℰ, ℱ, 𝒢, ℋ, ℐ, 𝒥, 𝒦, ℒ, ℳ, 𝒩, 𝒪, 𝒫, 𝒬, ℛ, 𝒮, 𝒯, 𝒰, 𝒱, 𝒲, 𝒳, 𝒴, 𝒵
- 𝒶, 𝒷, 𝒸, 𝒹, ℯ, 𝒻, ℊ, 𝒽, 𝒾, 𝒿, 𝓀, 𝓁, 𝓂, 𝓃, ℴ, 𝓅, 𝓆, 𝓇, 𝓈, 𝓉, 𝓊, 𝓋, 𝓌, 𝓍, 𝓎, 𝓏
- **A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z**
- **a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z**

1.2 Theorems and definitions

There are two types of theorem environments, one is with background color, the other is without background color. The following is a list of theorem environments supported by this template:

Definition 1.1 (this is a definition)**.** test

Proposition 1.2 (this is a proposition)**.** test

Proof. This is a proof environment, it is used to prove theorems, propositions, lemmas, corollaries, etc. We allow to use step environments inside the proof environment, such as:

Step 1. This is a step environment, it is used to break down the proof into smaller steps.

Step 2. This is another step environment, it is used to break down the proof into smaller steps.

And the step environment should be used inside the proof environment. The proof environment will automatically end with a square box. □

Theorem 1.3 (this is a theorem)**.** test

Proof. This is a proof environment. The step environment is labelled in the proof environment. A new proof environment will refresh the step environment counter.

Step 3. Goal 1.

Proof of Goal 1.

Step 4. Goal 2.

Proof of Goal 2. □

Lemma 1.4 (this is a lemma)**.** test

Corollary 1.5 (this is a corollary)**.** test

Question 1.6 (this is a question)**.** test

Conjecture 1.7 (this is a conjecture)**.** test

Example 1.8 (this is an example)**.** test

Exercise 1.9 (this is an exercise)**.** test

Remark 1.10 (this is a remark)**.** test

this is a proof. test □

1.3 sectionlevel=section

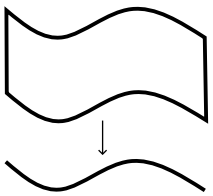
In this mode, the section is the highest level, and usually there are more than one section in the document. This is a title page. All theorem and definition environments are labelled in the form of section.number, such as 1.1, 1.2, etc.

Test references [Har77].

2 Test Section

2.1 Test Subsection

Test plots:



There are some test texts here, and some test equations:

References

[Har77] Robin Hartshorne. *Algebraic geometry*. Vol. No. 52. Graduate Texts in Mathematics. Springer-Verlag, New York-Heidelberg, 1977, pp. xvi+496. ISBN: 0-387-90244-9 (cit. on p. 3).