

# LaTeX Template

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Last Updated: October 5, 2025

Is it that you're being good to-get-her, or that you think  
you're good together?

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Me (inspired by “Good Together” — Shy Martin)

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## §1 `tcolorbox` Environments

This is the color of the default **bold text**.

**Definition 1.1 (Name)**

This is a Definition.

**Theorem 1.2 (Name)**

This is a Theorem.

**Lemma 1.3 (Name)**

This is a Lemma.

**Corollary 1.4 (Name)**

This is a Corollary.

**Proposition 1.5 (Name)**

This is a Proposition.

• **Notation:**

- Notation 1.
- Notation 2.
- Notation 3.

**Question 1.6 (Name).** This is a Question.

**Exercise 1.7 (Name).** This is an Exercise.

**Hint:** 1

**Problem 1.8 (Name).** This is a Problem.

**Hints:** 3 2

**Algorithm 1.9 (Name)**

This is an Algorithm.

**Claim 1.10** (Name) — This is a Claim.

*Proof.* This is a Proof. □

**Example 1.11** (Name)

This is an Example.

*Solution.* This is a Solution. ■

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**Remark 1.12** (Name). This is a Remark.<sup>a</sup>

---

<sup>a</sup> This is footnote for this remark.

## §2 Other Environments

Col1	Col2	Col3
1	2	3

**Table 1:** This is a table

(a) First.

(b) Second.

- First.
- Second.



**Figure 1:** Cool Gojo 4K Wallpaper

## §3 Math Environments

$$\begin{aligned} x^2 &= \frac{2x^2}{2} \\ &= \frac{(x+1)^2 + (x-1)^2 - 2}{2}. \end{aligned}$$

$$f(x) = \begin{cases} 0, & \text{if } x \text{ is rational} \\ 1, & \text{otherwise.} \end{cases}$$

$$g(x) = \begin{cases} 0, & \text{if } x \text{ is irrational} \\ \frac{1}{q}, & \text{if } x = \frac{p}{q} \text{ where } p, q \text{ are integers with } \gcd(p, q) = 1. \end{cases}.$$

sin cos tan cosec sec cot arcsin arccos arctan arccsc arcsec arccot .

$$\nu_p(p^2) = 2 \text{ and Pow} \odot(ABC)(A) = 0 \text{ and } \text{ord}_p((p-1)!) = 2.$$

$$\iint_{x^2+y^2\leq 1} (x+y) \, dx \, dy = 0.$$

$$\int_0^1 \ln(x) = -1.$$

$$\frac{d^n f}{dx^n} \frac{\partial^n f}{\partial x^n}.$$

## §4 CS and ASY Environments

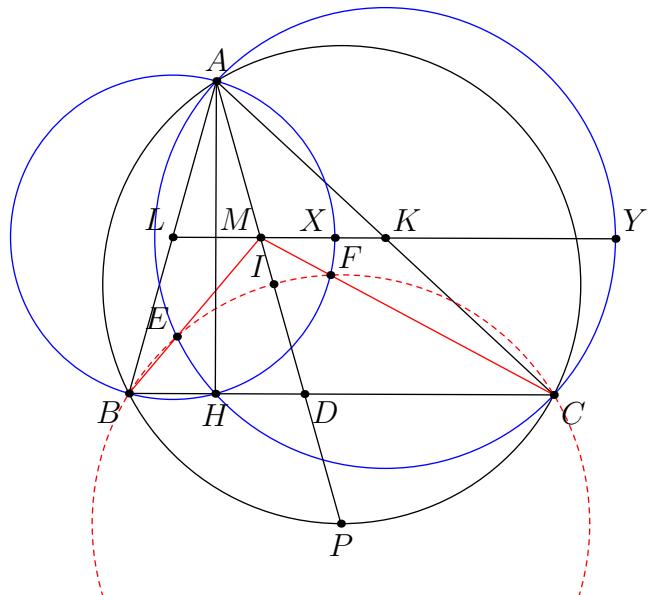


Figure 2: An asy diagram

```

1 import numpy as np
2
3 def incmatrix(genl1,genl2):
4     m = len(genl1)
5     n = len(genl2)
6     M = None #to become the incidence matrix
7     VT = np.zeros((n*m,1), int) #dummy variable
8
9     #compute the bitwise xor matrix
10    M1 = bitxormatrix(genl1)
11    M2 = np.triu(bitxormatrix(genl2),1)
12
13    for i in range(m-1):
14        for j in range(i+1, m):
15            [r,c] = np.where(M2 == M1[i,j])
16            for k in range(len(r)):
17                VT[(i)*n + r[k]] = 1;
18                VT[(i)*n + c[k]] = 1;
19                VT[(j)*n + r[k]] = 1;
20                VT[(j)*n + c[k]] = 1;
21
22            if M is None:
23                M = np.copy(VT)
24            else:
25                M = np.concatenate((M, VT), 1)

```

```
26  
27     VT = np.zeros((n*m,1), int)  
28  
29     return M
```

---

## §5 Hints

1. First hint.
2. Second hint.
3. First hint.

## §6 Bibliography

Random text for citing some document in my L<sup>A</sup>T<sub>E</sub>X file [Knu97].

## References

- [Knu97] DONALD E. KNUTH. *The Art of Computer Programming*. Addison-Wesley, 1997  
(cited p. 9)