# SunQuarTeX-enpre Test

### Subtitle Here

sun123zxy

SunQuarTeX

2024-02-22[1]

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[1]Last modified on 2024-02-22.

## Texts

long long long long long *long long long* long long long long long long long long long long long long long long long long long long long sentence.
long long long long long long long long long long long long long long long long long long long long long long long long long paragraph.

- left bar.
- narrow narrow narrow narrow narrow narrow narrow narrow narrow narrow narrow narrow left bar.

- right bar.
- wide wide wide wide wide wide wide wide wide wide wide wide wide wide wide wide wide right bar.

# Lists

- This is a list.
- A compact list.

Wow.

- This is a list.
- A sparse list.

A definition list below.

Reflexivity  $a \sim a$

Antisymmetry  $a \le b \wedge b \le a \implies a = b$

Transitivity  $a \le b \wedge b \le c \implies a \le c$

# Citations

Blah [Tai+, 1, chapter 3, sec. 2, theorem 3]. Blah blah [Tai+; TP]. Blah blah blah[2].

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[2]This is a footnote

# Code

```cpp
#include<bits/stdc++.h>
using namespace std;

int main(){
    return 0;
}
```

| $L_i \times C_j$ | 2 | $\mathbb{N}$ | $\mathbb{R}$ |
|:---:|:---:|:---:|:---:|
| 2 | 4 | $\mathbb{N}$ | $\mathbb{R}$ |
| $\mathbb{N}$ | $\mathbb{N}$ | $\mathbb{N}$ | ? |
| $\mathbb{R}$ | $\mathbb{R}$ | ? | $\mathbb{R}$ |

(a) Products

| $L_i^{C_j}$ | 2 | $\mathbb{N}$ | $\mathbb{R}$ |
|:---:|:---:|:---:|:---:|
| 2 | 4 | $\mathbb{R}$ | $2^{\mathbb{R}}$ |
| $\mathbb{N}$ | $\mathbb{N}$ | ? | ? |
| $\mathbb{R}$ | $\mathbb{R}$ | ? | ? |

(b) Powers

Table 1: Several results on cardinality

Referable Table 1a.

# Figures



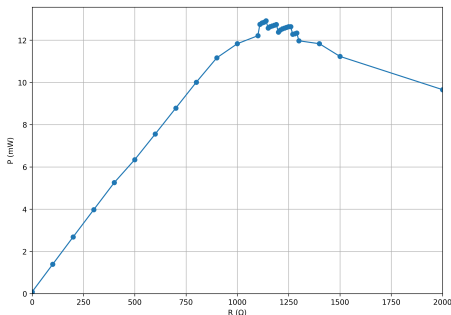Figure 1: This is a figure

Referable Figure 1.

# Computations

Complex side by side. (Figure 2, Figure 2a, Figure 2b)



(a) I-U



(b) P-R

Figure 2: solar panel

# Theorems I

## Theorem 2.1 (Test)

*This is a theorem.*

$$\sum_{d|n} \varphi(d) = n$$

## Proof.

This is a proof ended with a display math.

$$\sum_{d|n} \mu(d) = [n = 1]$$

$\square$

# Theorems II

**Proof.**

This is a really really really really really really really really really really really really really really really really really really really really long proof. □

**Definition 2.1**

*This is a definition.*

**Example 2.1 (An example)**

This is an example.

**Solution**

This is the solution to the example.

# Theorems III

## Exercise 2.1

This is an exercise.

## Remark

This is a remark of Exercise 2.1.

## Lemma 2.1

*This is a lemma.*

## Corollary 2.1

*This is a corollary of Theorem 2.1.*

# Theorems IV

## Proposition 2.1

*This is a proposition.*

## Conjecture 2.1

*This is a conjecture.*

[Tai+]   Y Taigman et al. "Closing the gap to human-level performance in face verification. deepface". In: *Proceedings of the IEEE Computer Vision and Pattern Recognition (CVPR)*. Vol. 5, p. 6.

[TP]     M. Turk and A. Pentland. "Eigenfaces for Recognition". In: *Journal of Cognitive Neuroscience* 3.1 (), pp. 71–86.