

Learning L^AT_EX

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1 Preparation

1.1 Hello, Beijing

北京 is the capital of China.

1.1.1 Hello Dongcheng District

Tian'anmen Square is in the center of Beijing.

Chairman Mao is in the center of 天安门广场。

1.2 Hello 江苏

南京大学 is one of the best university in 江苏。

2 Formula

2.1 difference between some method to create Formula

Einstein's $E = mc^2$.

$$E = mc^2.$$

$$E = mc^2 \tag{1}$$

2.2 make several continuous character to be a superscript or a subscript

$$z = r \cdot e^{2\pi i}.$$

2.3 square-root and fraction

$$\sqrt{x}, \frac{1}{2}.$$

$$\sqrt{x},$$

$$\sqrt[2]{3}$$

$$\sqrt[4]{3}$$

$$\frac{1}{2}.$$

2.4 other operators

$$\pm \times \div \cdot \cap \cup \wedge \vee \geq \leq \neq \approx \equiv$$

$$\int \iint \iiint \iiiii \int \cdots \int$$

$$\oint \oiint \oiiint$$

$$\odot \otimes \oplus \bigodot \bigotimes \bigoplus$$

$$\oiint_{\Sigma} f(x,y) \mathrm{d}x \mathrm{d}y$$

$$\oiint_{\Sigma} f(x,y) \mathrm{d}x \mathrm{d}y$$

$$(f * g) = \int_{-\infty}^{\infty} f(\tau) g(t - \tau) \mathrm{d}\tau$$

$$(f * g) = \int\limits_{-\infty}^{\infty} f(\tau)g(t - \tau)\mathrm{d}\tau$$

$$\hat{x}, \tilde{x}, \bar{x}, \overbrace{abcdefg}, \underbrace{abcdefg}, \vec{x}, \overrightarrow{AB}, \underline{ABCD},$$

$$2NaHCO_3 \triangleq Na_2CO_3 + CO_2 \uparrow + H_2O \uparrow$$

$$NaHCO_3 \xrightarrow{\text{高温}} Na_2CO_3 + CO_2 \uparrow + H_2O \uparrow$$

$$\binom{n}{k}$$

$$\angle, \triangle$$

2.5 long-formula

$$x=a+b+c+$$

$$d+e+f+g \quad (2)$$

$$x=a+b+c+$$

$$d+e+f+g$$

$$a=b+c+d \tag{3}$$

$$x=y+z \tag{4}$$

$$a=b+c+d \tag{5}$$

$$x=y+z \tag{6}$$

2.6 piecewise-function

$$y=\begin{cases} -x, & x\leq 0 \\ x, & x>0 \end{cases}$$

3 Graphics and Tables

3.1 Graphic

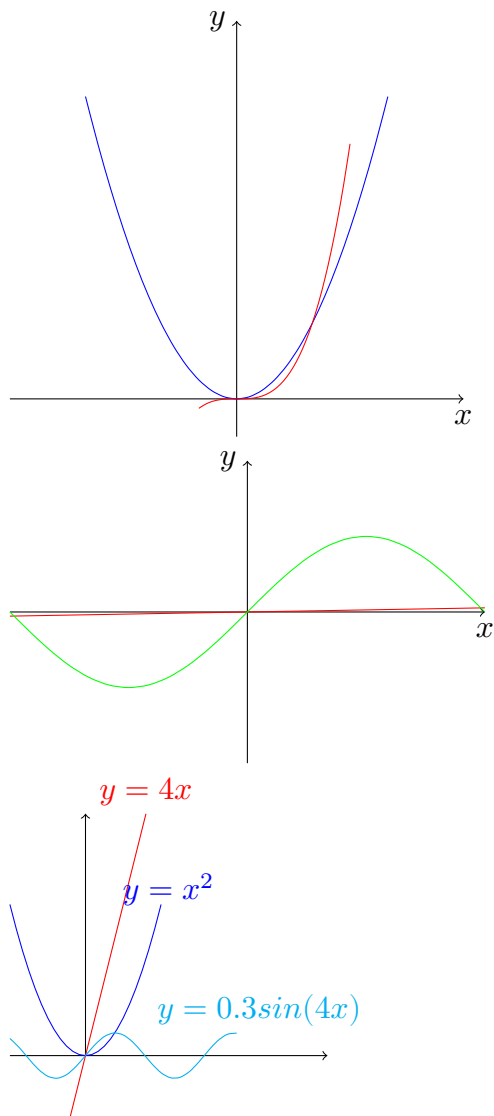
3.1.1 Include a graph

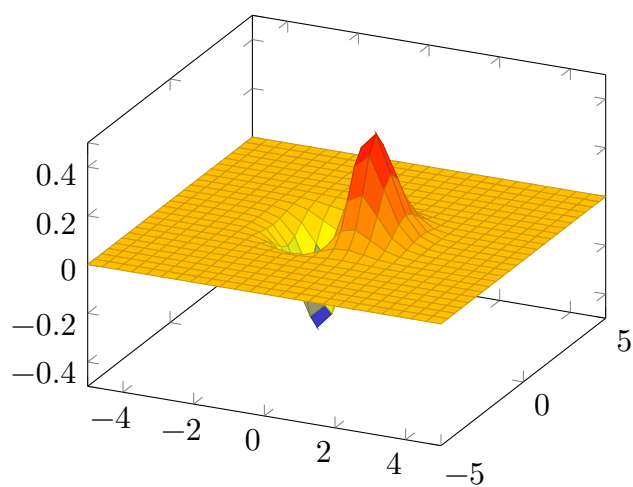
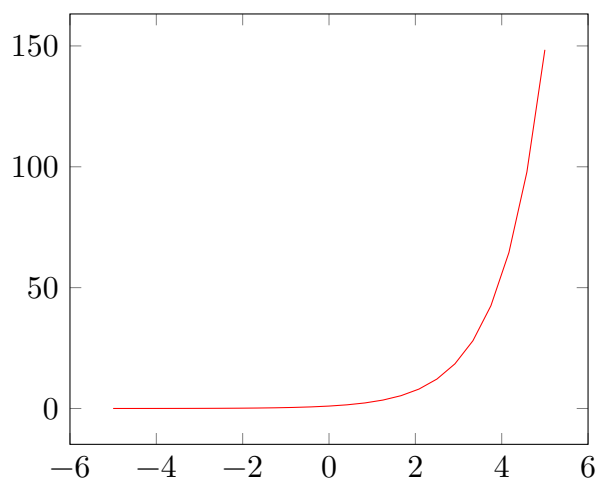
| 操作系统 | 发行版 | 编辑器 |
|------------|----------|-----------|
| Windows | MikTeX | TexMakerX |
| Unix/Linux | teTeX | Kile |
| Mac OS | MacTeX | TeXShop |
| 通用 | TeX Live | TeXworks |

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图 1: here is a graph

3.1.2 Draw a graph





3.2 Table

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| Mac OS | MacTeX | TeXworks |

4 Citation

Here is an example of how to cite someone's article: cite author_year ^[1]
change a line failed.
change a line sucessed.

参考文献

- [1] A. Author. The title of the article. *The name of the journal*, 1(2):3–4, 2021.