

1 上下标

Einstein 's $E = mc^2$.

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2 根式与分式

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

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

3 运算符

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

$$\sum_{i=1}^n i \quad \prod_{i=1}^n \sum_{i=1}^n i \quad \prod_{i=1}^n$$

$$\lim_{x \rightarrow 0} x^2 \quad \int_a^b x^2 dx$$

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

4 定界符（括号等）

$$\begin{aligned} & \left(\left(\left(\left(x\right)\right)\right)\right) \\ & \left[\left[\left[\left[x\right]\right]\right]\right] \\ & \left\{\left\{\left\{\left\{x\right\}\right\}\right\}\right\} \\ & \left\langle\left\langle\left\langle\left\langle x\right\rangle\right\rangle\right\rangle\right\rangle \\ & \left|||x|\right| \\ & \left|||x|\right| \\ & \left(x\right) \\ & \left(\left(x\right)\right) \end{aligned}$$

5 省略号

$$x_1,x_2,\ldots,x_n\quad 1,2,\cdots,n\quad \vdots\quad \ddots$$

6 矩阵

$$\begin{pmatrix} a & b \\ c & d \end{pmatrix} \quad \begin{bmatrix} a & b \\ c & d \end{bmatrix} \quad \left\{ \begin{matrix} a & b \\ c & d \end{matrix} \right\} \quad \left| \begin{matrix} a & b \\ c & d \end{matrix} \right| \quad \left\| \begin{matrix} a & b \\ c & d \end{matrix} \right\|$$

Marry has a little matrix $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$.

7 多行公式

7.1 长公式

7.1.1 不对齐

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

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

7.1.2 对齐

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

$$d + e + f + g$$

7.2 公式组

$$a = b + c + d \quad (3)$$

$$x = y + z \quad (4)$$

$$a = b + c + d \quad (5)$$

$$x = y + z \quad (6)$$

7.3 分段函数

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