

LATEX

上下标

a^2, a_1
 x^{y+z}, p_{ij}, p_{ij}
 x_i, x_i
A B, ABAB, ABABe, i

代码块

```
1  a^2,a_1\\
2  x^{y+z},p_{ij},p_{ij}\\
3  x_i,x_{\text i}\\
4  \text{A B},\rm{A B}\\
5  \text A B,\rm A B\\
6  {\rm A} B\\
7  \text{e},\text{i} \ \ \
```

分式与根式

$\frac{1}{2}, \frac{1}{2},$
 $\frac{x+y}{\frac{1}{x}+1}$
 $\sqrt{2}, \sqrt{x+y}, \sqrt[3]{x}$

代码块

```
1  \frac{1}{2},\frac{1}{2},\\
2  \frac{1}{x+y}
```

```
3 \frac {\dfrac 1 x + 1}{y + 1}\\
4 \sqrt 2,\sqrt{x+y},\sqrt[3]x
```

普通运算符

+ −
×, ·, ÷
±, ∓
>, <, ≥, ≤, ≫, ≪, ≠, ≈, ≡, ≇, ≉
∩, ∪, ∈, ∉, ⊆, ⊂, ∅, \, ⊙, ⊗, ∅
∀, ∃, ∄
∴, ∵
 $\mathbb{R}, \mathcal{R}, \mathcal{Q}, \mathbb{N}, \mathbb{Z}_+$
 \mathcal{F}, \mathscr{F}
⋯, ⋮, ⋰

∞, ∂, ∂, ∇, α, °

$\sin x, \sec x, \cosh x$
 $\log_2 x, \ln x, \lg x$
 $\lim_{x \rightarrow 0} \frac{x}{\sin x}$
 $\max x$

$\text{MSE}(x)$
⋈

```
代码块
1 +-\\
2 \times, \cdot, \div\\
3 \pm, \mp\\
4 >, <, \ge, \le, \gg, \ll, \ne, \approx, \equiv, \ngeq, \nleq\\
5 \cap, \cup, \in, \notin, \subseteq, \subsetneq, \varnothing, \setminus, \bigodot, \bigotimes, \emptyset\\
6 \forall, \exists, \nexists\\
7 \because, \therefore
```

```

8 \mathbb R,R,Q,\mathbb N,\mathbb Z_+\backslash
9 \mathcal F,\mathscr F \backslash
10
11 \cdots,\vdots,\ddots
12
13 \infty,\partial,\nabla,\propto,\degree
14
15 \sin x,\sec x,\cosh x\backslash
16 \log_2 x,\ln x,\lg x\backslash
17 \lim\limits_{x\rightarrow 0}\frac{x}{\sin x}\backslash
18 \max x
19
20 \text{MSE}(x) \backslash
21 \bowtie

```

大型运算符

$$\sum, \prod$$

$$\sum_i, \sum_{i=0}^n$$

$$\frac{\sum_{i=1}^n x_i}{\prod_{i=1}^n x_i}$$

$$\int, \iint, \iiint, \oint, \oiint$$

$$\int_{-\infty}^0 f(x) \, dx$$

$$a \, a$$

$$a \, a$$

$$a \quad a$$

$$a \qquad a$$

代码块

```

1 \sum, \prod \backslash
2 \sum_i, \sum_{i=0}^N \backslash

```

```

3 \frac{\sum\limits_{i=1}^n x_i}{\prod\limits_{i=1}^n x_i}
4
5 \int,\iint,\iiint,\oint,\oiint\\
6 \int_{-\infty}^0 f(x)\,,\text{d} x
7
8 a\,, a\\
9 a\ a\\
10 a\quad a\\
11 a\qquad a

```

标注符号

$$\vec{x}, \overrightarrow{AB}$$

$$\bar{x}, \overline{AB}$$

代码块

```

1 \vec{x},\overrightarrow{AB}\\
2 \bar{x},\overline{AB}

```

箭头

$\leftarrow, \Rightarrow, \Leftrightarrow, \longleftarrow, \uparrow, \downarrow, \Uparrow, \Downarrow$

代码块

```

1 \leftarrow,\rightarrow,\Leftrightarrow,\longleftarrow,\uparrow,
2 \downarrow,\Uparrow,\Downarrow

```

括号与定界符

$$\begin{pmatrix} \{\} \\ \lceil, \rceil, \lfloor, \rfloor, \parallel \\ \left(0, \frac{1}{a}\right] \\ \frac{\partial f}{\partial x} \Big|_{x=0} \\ \left(\right) \end{pmatrix}$$

代码块

```

1  ([[])\{ \}\backslash
2  \lceil,\rceil,\lfloor,\rfloor,||\backslash
3  \left(0,\frac{1}{a}\right)\backslash
4  \left.\frac{\partial f}{\partial x}\right|_{x=0}\backslash
5  \bigg(\quad\quad\bigg)

```

多行公式

$$a = b + c + d \tag{1}$$

$$= e + f \quad (2)$$

代码块

```
1 \begin{align}
2
3 a&=b+c+d\\
4 &=e+f
5
6 \end{align}
```

大括号

$$f(x) = \begin{cases} \sin x, & -\pi \leq x \leq \pi \\ 0, & \text{其他} \end{cases}$$

代码块

```
1  f(x)=
2
3  \begin{cases}
4
5  \sin x, & -\pi \leq x \leq \pi \\
6  0, & \text{其他}
7
8  \end{cases}
```

矩阵

$$\begin{matrix} a & b & \cdots & c \\ \vdots & \vdots & \ddots & \vdots \\ e & f & \cdots & g \end{matrix}$$

$$\begin{bmatrix} a & b & \cdots & c \\ \vdots & \vdots & \ddots & \vdots \\ e & f & \cdots & g \end{bmatrix} \begin{pmatrix} a & b & \cdots & c \\ \vdots & \vdots & \ddots & \vdots \\ e & f & \cdots & g \end{pmatrix} \begin{vmatrix} a & b & \cdots & c \\ \vdots & \vdots & \ddots & \vdots \\ e & f & \cdots & g \end{vmatrix}$$

$$\mathbf{A}, \mathbf{B}^T$$

代码块

```
1  \begin{matrix}
2  a & b & \cdots & c \\
3  \vdots & \vdots & \ddots & \vdots \\
4  e & f & \cdots & g
5  \end{matrix}
6
7
8  \begin{bmatrix}
9  a & b & \cdots & c \end{bmatrix}
```

```

10 \vdots& \vdots & \ddots & \vdots \\
11 e & f& \cdots & g
12 \end{bmatrix}
13
14 \begin{pmatrix}
15 a & b & \cdots & c \\
16 \vdots& \vdots & \ddots & \vdots \\
17 e & f& \cdots & g
18 \end{pmatrix}
19
20 \begin{vmatrix}
21 a & b & \cdots & c \\
22 \vdots& \vdots & \ddots & \vdots \\
23 e & f& \cdots & g
24 \end{vmatrix}
25
26
27 \bf A,\bf B^{\rm T}

```

实战演练

$$f(x)=\frac{1}{\sqrt{2\pi}\sigma}\mathrm{e}^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

$$f(x)=\frac{1}{\sqrt{2\pi}\sigma}\exp\left[-\frac{(x-\mu)^2}{2\sigma^2}\right]$$

$$\lim_{N\rightarrow\infty}P\left\{\left|\frac{I(\alpha_i)}{N}-H(s)\right|<\varepsilon\right\}=1$$

$$x(n)=\frac{1}{2\pi}\int_{-\pi}^{\pi}X\left(\mathrm{e}^{\mathrm{j}\omega}\right)\mathrm{e}^{\mathrm{j}\omega n}\,\mathrm{d}\omega$$

$$\vec{B}\left(\vec{r}\right)=\frac{\mu_0}{4\pi}\oint_C\frac{I\,\mathrm{d}\vec{l}\times\vec{R}}{R^3}\tag{3}$$

$$=\frac{\mu_0}{4\pi}\int_V\frac{\vec{J}_V\times\vec{R}}{R^3}\mathrm{d}V'\tag{4}$$

```

代码块
1 f(x) = \frac 1 {\sqrt{2\pi} \sigma} {\rm e} ^ {-\frac {(x-\mu)^2}{2\sigma ^
2 f(x) = \frac 1 {\sqrt{2\pi} \sigma} \exp \left[ {-\frac {(x-\mu)^2}{2\sigma ^
3
4 \lim\limits_{N\to \infty} P \left\{ \left| \frac {I\left( \alpha_i \right)}{N}
- H(s) \right| < \varepsilon \right\} = 1
5
6 x(n) = \frac 1 {2\pi} \int_{-\pi} ^ \pi X\left( {\rm e} ^ {{{\rm j}} \omega }
\right) {\rm e} ^ {{{\rm j}} \omega n} \, , {\rm d}\omega \\
7
8 \begin{align}
9
10 \vec B \left( \vec r \right) &= \frac {\mu_0}{4\pi} \oint_C \frac {I \, , {\rm d}
\vec l \times \vec R}{R^3} \\
11
12 &= \frac {\mu_0}{4\pi} \int_V \frac {\vec J_V \times \vec R}{R^3} \, , {\rm d} V'
13
14 \end{align}

```

补充

$xy,$
紧凑 xy

\vee, \wedge

∞, i, j

$\overbrace{12345}, \underbrace{12345}$

$\vec x \stackrel{\text{def}}{=} x_1, \dots, x_n$

(1)

```

代码块
1 \tag{1}
2 xy ,\quad 紧凑x\!y \\
3 \vee , \wedge \\
4 \infty, \imath, \jmath \\
5 \overbrace{12345}, \underbrace{12345} \\
6 \vec{x} \stackrel{\mathrm{def}}{=} {x_1, \dots, x_n}

```


字母表

$A(\alpha), B(\beta), \Gamma(\gamma), \Delta(\delta), E(\epsilon),$
 $Z(\zeta), H(\eta), \Theta(\theta), I(\iota), K(\kappa),$
 $\Lambda(\lambda), M(\mu), N(\nu), \Xi(\xi), O(o),$
 $\Pi(\pi), P(\rho), \Sigma(\sigma), T(\tau), \Upsilon(v),$
 $\Phi(\phi), X(\chi), \Psi(\psi), \Omega(\omega), \varpi$

代码块

```
1  \Alpha(\alpha),      \Beta(\beta),      \Gamma(\gamma),
   \Delta(\delta),    E(\epsilon),\n
2  Z(\zeta),          H(\eta),          \Theta(\theta),      I(\iota),
   K(\kappa),\n
3  \Lambda(\lambda),  M(\mu),          N(\nu),          \Xi(\xi),
   O(\omicron),\n
4  \Pi(\pi),          P(\rho),          \Sigma(\sigma),      T(\tau),
   \Upsilon(\upsilon),\n
5  \Phi(\phi),        X(\chi),          \Psi(\psi),          \Omega(\omega),
   \varpi\n
```