Inline math mode befins with $ and ends with $. In such case, equations $kx + b = 0$ are inlined in text. Even if they contains large symbols such as $\sum_{i=0}^{N} a_i < \infty$. LaTex automatically mark up them well.

Display math mode can be realized with several envieroments. Math text should be inside `\[` and `\]` as, for example,

$$kx + b = 0$$

or between $$ and $$ as, for example,

$$kx + b = 0,$$

or inside `\begin{smth}` and `\end{smth}`, where smth may be either

- `align`,
- `equation`,
- `gather`,
- `multline`,

or others. In the last case (where math is inside `\begin{smth}` and `\end{smth}`) each line is numbered by default, with numbers in backets on the left side. Examples:

$$k_1x + b_1 = 0, \tag{1}$$
$$k_2x + b_2 = 0, \tag{2}$$

$$k_3x + b_3 = 0, \tag{3}$$
$$k_4x + b_4 = 0, \tag{4}$$

$$k_5x + b_5 = 0,$$

$$k_6x + b_6 = 0, \tag{5}$$

$$k_7x + b_7 = 0. \tag{6}$$

The line is breacken with use of \\ sign at the end of the line. Only `equation` does not support line breaking.

To avoid numbering add * after `smth`

$$\alpha_1x + \beta_1 = \Delta,$$

$$\alpha_2x + \beta_2 = \Psi,$$

$$\alpha_3x + \beta_3 = \Phi,$$

$$\alpha_4x + \beta_4 = \Omega.$$

Math mode draws spaced italic letters such as *text*. Other font styles are possible:

- `\mathbf{X}` → $\mathbf{X}$,
- `\bm{\chi}` → $\bm{\chi}$,
- `\boldsymbol{\hi}`→ $\boldsymbol{\chi}$,
- `\mathrm{X}`→ X,
- `\mathcal{X}`→ $\mathcal{X}$,
- `\mathbb{X}`→ $\mathbb{X}$,
- `\mathsf{X}`→ X,
- `\mathtt{X}`→ $\mathtt{X}$,
- `\mathit{X}`→ X.

If we want to change type text inside math mode, we should use `\text{ ... }`. Superscripts and subscripts are writen inside {}. Superscripts after ŝign (`$a^{2}$` → a^2) and subscripts after _ sign (`$a_{2}$` → a_2). Math mode has a lot of comands. For example

$$\log x \quad \sin x \qquad\qquad \max x \quad \infty$$
$$\in \quad \cap \qquad\qquad \cdots \quad \neq$$