My first LaTeX article

WP

February 13, 2018

This is my first LaTeX article!
hello world!!
ConTeXt,
METAFONT,METAFONT, ,METAPOST

1 First Section

this is the first section

1.1 First Subsection

I like the first subsection

1.2 Second Subsection

I don't like the second subsection

1.2.1 First Subsubsection

1st paragraph this is the first paragraph

1st Subparagraph this is the first subparagraph

2nd subparagraph this the second subparagraph

2 Second Section

1+1=2, $1 + 1 = 2$, I know 1+1=2, *I really know*$1 + 1 = 2$ this is in text mode, *thisisinmathmode*, *this is in math in mode*.

I know that you know $1 + 1 = 2$, but I know $2 - 1 = 1$, which you don't know. Now look at it

$$2 - 1 = 1$$

I do know more than you.
$\frac{2011}{2012}, x_1, x_2, \ldots, x_n, a^2 + b^2 = c^2, x_1^2 + x_2^2 + \cdots + x_n^2 = r^{100}, \sqrt{x+1}, \sqrt[3]{x^2+1}$

$$\frac{2011}{2012}, x_1, x_2, \ldots, x_n, a^2 + b^2 = c^2, x_1^2 + x_2^2 + \cdots + x_n^2 = r^{100}, \sqrt{x+1}, \sqrt[3]{x^2+1}$$

$\sin x, sinx, \sinh x, \max x, \log x, \log_2 x.$
$a \in A, A \subset B, A \cap B, A \cup B, +\infty, \forall, \exists, f'(x), f''(x).$
$\lim_{n\to\infty} a_n = 1, \sum_{n=1}^{\infty} n = 5050, \int_a^b f(x)\mathrm{d}x = I$

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$$\lim_{n\to\infty} (n + \frac{1}{n})^n = e, \int_{-\infty}^{+\infty} \frac{\sin x}{x}\mathrm{d}x = I$$

$a \times b, c \div d, a < b, b = c, c \neq d, d > e, e \geq f, f \leq g, g \geqslant h, h \leqslant i$
$\alpha, \beta, \gamma, \delta, \epsilon\varepsilon, \xi, \pi, \rho, \sigma, \eta, \theta, \phi, \varphi, \omega\ \Gamma, \Delta, \Sigma, \Phi$
$|A|, \|A\|, \vec{a}, \overrightarrow{AB}, \tilde{x}, \widetilde{xyz}, \sin, \mathbb{RCZQ}, \mathbf{ABCD}$

$$\begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} \tag{1}$$

$$\lim_{n\to\infty} \left(1 + \frac{1}{n}\right)^n = e \tag{2}$$

$$\left\{ \begin{array}{c|c||c} a_{11} & a_{12} & \\ \hline a_{21} & & a_{23} \\ \hline & a_{32} & a_{33} \end{array} \right) \tag{3}$$

$$\chi_A(x) = \begin{cases} 1, & x \in A \\ 0, & x \notin A \end{cases} \tag{4}$$

3 Third Section

4 section using amsthm

Definition 1. *Definition is a environment for typing definition in LaTeX.*

Definition 2 (Theorem)**.** *A sentence is called a Theorem if and only if it satisfies ....*

Thm. *this is a theorem without any numbers.*

Lemma 4.1. *this is a lemma.*

Theorem!!! 4.2. *this is the first theorem with automatic number.*

Proposition 4.1. *this is a proposition.*

Proof. this is a brief proof. □

Theorem!!! 4.3 (second one)**.** *this is the second theorem with automatic numbers.*

Corollary 4.3.1. *this is a corollary.*

My own proof. this is my own proof for the corollary. □

Corollary 4.3.2. *this is also a corollary.*

5 Section Inserting Figure

6 Section Inserting Table

Name	Score
You	100
Me	59

Figure 1: Elon Musk

7 Section Cross-reference

equitation (4) is my favorite.