Learning LaTeX

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Abstract

Hello! This is my first LaTeXdocument.

A rectangle has side lengths of $(x + 1)$ and $(x + 3)$. The equation $A(x) = x^2 + 4x + 3$ gives the area of the rectangle.

Contents

1 Math Expressions

1.1 Common Mathematical Notations

Superscripts:

$$2x^2$$

$$2x^n$$

$$69x^{420}$$

Subscripts:

$$\pi_1$$

$$f(1) = 0$$

$$x_1 = 100$$

Trigonometric Functions:

$$\sin x' = \cos x$$

$$\cos x' = -\sin x$$

$$\tan^2 x = \sec^2 x - 1$$

Logarithmic Functions:

$$\log_b x = n$$

$$\ln x' = \frac{1}{x}$$

$$\int \frac{1}{x} = \ln x + C$$

Roots:

$$\sqrt{4} = 2$$
$$\sqrt[3]{27} = 3$$
$$\sqrt[3]{x^2} = x^{\frac{2}{3}}$$
$$\sqrt{\sqrt[3]{x}}$$

Fractions:

About $\frac{2}{3}$ of the cup is full.

About $\dfrac{2}{3}$ of the cup is full.

$$\frac{1}{100}$$

1.2 Brackets, Tables, and Arrays

Brackets:

(Normal parentheses, no need to escape), [Squared brackets, no need to escape], {Curly brackets, you do need to escape}, >You can type pointy brackets like with \textgreater or \textless

Brackets in Math Mode:

You can also write brackets in a more math-like aesthetic manner with functions

$$(\text{parenthesis})$$
$$\left(\frac{99}{100}\right)$$
$$\langle \text{Dynamic pointy bracket} \rangle$$

Tables:

Names	Will	Quandus	Luther
Ham	5	8	69
Cheese	1	2	5

Names	Will	Quandus	Luther
Ham	5	8	69
Cheese	1	2	5

Table 1: People and Food

Names	The names of people participating in this chart	Will	Quandus	Luther
Ham	Ham is very tasty	5	8	69
Cheese	Cheese is very cheesy	1	2	5

Table 2: People, Food, and Descriptions

Arrays:

$$5x^2 \tag{1}$$

$$5x^2 \text{ is an equation} \tag{2}$$

$$5^2 = 25 \tag{3}$$
$$500 = 500 \tag{4}$$

2 Lists

Lists:

1. Item 1
2. Item 2
    (a) Item a
    (b) Item b
        i. Item i

- Item 1
- Item 2
    – Item a
    – Item b
        ∗ Item i

A. Item A

B. Item B

i) Item i

ii) Item ii

3. Item 3
4. Item 4

3 Text Document Formatting

3.1 Text Formatting

- This will produce *italicized* text.
- This will produce **boldfaced** text.
- This will produce emphasized text.
- This will produce SMALL CAPS text.
- This will produce `monospace` text.
- This will produce UPPERCASED text.
- This will produce lowercased text.
- This will produce underlined text.
- This will produce double underlined text.
- This will produce wavy-underlined text.
- This will produce ~~strikethroughed~~ text.
- This will produce hatched text.
- This will produce dash-underlined text.
- This will produce dot-underlined text.
- This will produce a full link: `https://github.com/aier9500/aierFedoraNix`
- This will produce a hyperlink: my Home Manager configs.

Different Sized Texts:

- The quick brown fox jumps over the lazy dog.
- The quick brown fox jumps over the lazy dog.
- The quick brown fox jumps over the lazy dog.

- The quick brown fox jumps over the lazy dog.
- The quick brown fox jumps over the lazy dog.
- The quick brown fox jumps over the lazy dog.
- The quick brown fox jumps over the lazy dog.
- The quick brown fox jumps over the lazy dog.
- The quick brown fox jumps over the lazy dog.
- The quick brown fox jumps over the lazy dog.

Line Alignments:

This line is centered.

This line is flushed left.

This line is flushed right.

3.2 Document Formatting

This is a Section

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor.

This is a Subsection

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor.

This is a SubsubSection

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor.

This is a Paragraph Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor.

This is a subparagraph Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor.

ˆabove is a pagewidth line

ˆabove is a textwidth line

ˆabove is a 3 inch line

ˆabove is a thin (0.4pt) line

ˆabove is a thick(2pt) line