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My First LaTeX Document

Your Name

December 26, 2023

Hello! This is my LaTeX document.
A rectangle has side length of $(x + 1)$ and area of $(x + 3)$. The equation $A(x) = x^2 + 2x + 1$ is the area of the rectangle.
superscripts

$$2x^3$$

$$2x^{34}$$

$$2x^{3x+4}$$

$$2x^{3x^4+5}$$

subscripts

$$x_1$$

$$x_{12}$$

$$x_{1_2}$$

$$a_o, a_1, a_2, \ldots, a_{100}$$

greek letters

$$\pi$$

$$\Pi$$

$$\alpha$$

$$A = \pi r^2$$

trig functions

$$y = \sin x$$

$$y = \cos x$$

$$y = \tan x$$

$$y = \csc \theta$$

$$y = \sin^{-1} x$$

$$y = \arcsin x$$

log functions

$$y = \log x$$

$$y = \log_5 x$$

$$y = \ln x$$

roots

$$\sqrt{2}$$

$$\sqrt[3]{2}$$

$$\sqrt{x^2 + y^2}$$

$$\sqrt{1 + \sqrt{x}}$$

fractions

$$\frac{2}{3}$$

$$\frac{x}{x^2 + x + 1}$$

$$\frac{\sqrt{x+1}}{\sqrt{x-1}}$$

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

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

The distributive law

$$a(b + c) = ab + ac$$

for all $a, b, c \in \mathbb{R}$.

The equivalence class of a is $[a]$.

The set A is defined to be $[\{1, 2, 3\}]$

The movie ticker cost $11.50 dollars.

$$2\left(\frac{1}{x^2 - 1}\right)$$

$$2\left[\frac{1}{x^2 - 1}\right]$$

$$2\left\{\frac{1}{x^2-1}\right\}$$

$$2\left\langle\frac{1}{x^2-1}\right\rangle$$

$$\left.\frac{dy}{dx}\right|_{x=1}$$

tables

x	1	2	3	4	5
$f(x)$	2	4	6	8	10

x	1	2	3	4	5
$f(x)$	$frac12$	4	6	8	10

Table 1: A table of values for $f(x) = 2x$

Table 2: The relationship between $f(x)$ and $f'(x)$

$f(x)$	$f'(x)$
$x > 0$	The function $f(x)$ is increasing. The function $f(x)$ is increasing. The function $f(x)$ is increasing. The function $f(x)$ is increasing.

arrays

$$\begin{aligned} 5x^2 - 9 &= x + 3 \,\text{place your words here} && (1)\\ 5x^2 - 9 - x - 3 &= 0 && (2)\\ &= 12 + x - 5x^2 && (3) \end{aligned}$$

$$\begin{aligned} 5x^2 - 9 &= x + 3 \,\text{place your words here}\\ 5x^2 - 9 - x - 3 &= 0\\ &= 12 + x - 5x^2 \end{aligned}$$

lists

1. First item
2. Second item
3. Third item

- First item
    1. First subitem
    2. Second subitem
    3. Third subitem
- Second item
- Third item

A. First item

B. Second item

C. Third item

6. First item
7. Second item
8. Third item

- First item

    First subitem

    a) Second subitem

Third subitem

- First subsubitem
- Second subsubitem
- Third subsubitem

- Second item
- Third item

This is a **bold** word.
This is a *italic* word.
This is a underlined word.
This is a `typewriter` word.
This is a SMALL CAPS word.
This is a ***bold italic*** word.

This is a large word.
This is a Large word.
This is a huge word.
This is a Huge word.
This is a Normal word.
This is a small word.
This is a Script Size word.
This is a tiny word.

This is centered text.

This is left-aligned text.

This is right-aligned text.

Visit `http://www.google.com` for more information.
Visit Google for more information.

1 First Section

1.1 First Subsection

1.1.1 First Subsubsection

1.2 Second Subsubsection

2 Second Section

2.1 First Subsection

First Subsubsection