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

$$2x^3$$

$$2x^{34}$$

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

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

 ${
m subscripts}$

$$x_1$$

$$x_{12}$$

$$x_{1_{2}}$$

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

greek letters

$$\pi$$

Π

 α

$$A=\pi r^2$$

 ${
m trig}$ 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

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

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

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

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.

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

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

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

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

$$\frac{dy}{dx}\Big|_{x=1}$$