

Hello, This my first L<sup>A</sup>T<sub>E</sub>X document!  
 The rectangle is of length  $(x + 2)$  and  $(x + 3)$ . The Equation

$$A(x) = x^2 + 4x + 3$$

gives the area of rectangle

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## Common mathematical Notation

SuperScript

$$2x^3$$

$$2x^{34}$$

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

$$2x^{3x^{54}}$$

SubScripts

$$x_1$$

$$x_{12}$$

$$x_{1_{2_{3_4}}}$$

$$a_1, a_2, \dots a_{100}$$

Greek Letters

$$\pi$$

$$\Pi$$

$$\alpha$$

$$\aleph$$

$$A = \pi r^2$$

Trigonometry Function

$$y = \sin x$$

$$y = \cos x$$

$$y = \csc \theta$$

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

$$y = \arcsin x$$

Log Function

$$y = \log x$$

$$y = \log_5 x$$

$$y = \ln x$$

Roots

$$\sqrt{2}$$
$$\sqrt[3]{2}$$
$$\sqrt{x^2+y^2}$$
$$\sqrt{1+\sqrt{x}}$$

Fraction

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

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$$\frac{\sqrt{x+1}}{\sqrt{x+2}}$$
$$\frac{1}{1+\frac{1}{4}}$$

Brackets

States that  $a(b+c)=ab+ac$ , for all  $a,b,c\in\mathbb{R}$

Square  $a$  ,  $[a]$

Curly Bracket  $A$  ,  $\{working\}$

Doller Sign  $\text{\$}$

$$2\left(\frac{2}{1^{2-1}}\right)$$
$$2\left[\frac{2}{1^{2-1}}\right]$$
$$2\left\{\frac{2}{1^{2-1}}\right\}$$
$$2\left\langle\frac{2}{1^{2-1}}\right\rangle$$

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

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

$$\left(\frac{1}{1+\left(\frac{1}{1+x}\right)}\right)$$

Tables

$x$	1	2	3	4	5
$f(x)$	10	11	12	14	15

$x$	1	2	3	4	5
$f(x)$	$\frac{1}{2}$	11	12	14	15

Table 1: these value  $f(x)$

Arrays

$$5x^2-9=x+3 \tag{1}$$

$$5x^2-9=x+3 \tag{2}$$

$$5x^2-9=x+3$$

$$5x^2-9=x+3$$

$$5x^2-9=x+3 \tag{3}$$

$$5x^2-9=x+3 \tag{4}$$