# Tutorial de $\LaTeX$

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### 1 Introdução

Isto é ficheiro em que se realiza o que esta no tutorial que se pode encontrar neste link para o youtube:

https://www.youtube.com/playlist?list=PL1D4EAB31D3EBC449

E um pequeno exemplo:

Suppose we are given a recangle with side lengths x+1 and x+3. Then the equantion

$$A = x^2 + 5x + 3$$

represents the area of the rectangle.

### 2 Notações Comuns de Matemática

superscripts:

$$2x^{34} 2x^{3x+4} 2x^{3x^4+5}$$

subscripts:

$$x_1$$

$$x_{12}$$

$$x_{x_{2}}$$

greek letters:

$$\pi$$

$$\alpha$$

$$A * \pi r^2$$

trig functions:

$$y = \sin x$$
$$y = \cos x$$
$$y = \tan x$$

lag functions:

$$\log_{10} x$$
$$\ln x$$

square roots:

$$\sqrt{2}$$

$$\sqrt[3]{5}$$

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

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

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

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

$$\frac{\sqrt{x+1}}{\sqrt[2]{x-1}}$$

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

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

#### 3 Bracket Tables & Arrays

$$(x+1)$$
 $3[2+(x+1)]$ 
 $\{a,b,c\}$ 
 $\$12.55$ 

$$3\left(\frac{2}{5}\right)$$

$$3\left[\frac{2}{5}\right]$$

$$3\left\{\frac{2}{5}\right\}$$

$$\left|\frac{x+1}{5}\right|$$

$${x+2}$$

Tabular:

<u> </u>					
x	1	2	3	4	5
$\int f(x)$	10	11	12	13	14

# Equation:

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

$$4x^2 = 12 (2)$$

$$x^3 = 3 \tag{3}$$

$$x \approx \pm 1.732 \tag{4}$$

List:

- 1. pencil
- 2. paper