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# Writing Mathematic Fomulars in Markdown

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Markdown latex mathematic

Linux Latex Markdown

In this post, I am gonna show you how to write Mathematic symbols in markdown. since I am writing blog post that hosted by Github with Editor Atom, and use plugin markdown-preview-plus and mathjax-wrapper, and use mathjax Javascript display the math symbols on the web page.

I am not gonna to tell you how to make all these things work together, if you want to do what I am do, please take a little time and search around.

Most import, this post is showing you the basics about math symbols in Latex.

This what wikipedia said about Latex:

> One of the greatest motivating forces for Donald Knuth when he began developing the original TeX system was to create something that allowed simple construction of mathematical formulas, while looking professional when printed.

Here are some symbols I typed during the learning.

## Greek Letters

| Symbol | Script |
|---|---|
| $\alpha$ | \alpha |
| $A$ | A |
| $\beta$ | \beta |
| $B$ | B |
| $\gamma$ | \gammma |
| $\Gamma$ | \Gamma |
| $\pi$ | \pi |
| $\Pi$ | \Pi |

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| Symbol | Script |
|---|---|
| $\phi$ | \phi |
| $\Phi$ | \Phi |
| $\varphi$ | \varphi |
| $\theta$ | \theta |

### Operators

| Symbol | Script |
|---|---|
| $\cos$ | \cos |
| $\sin$ | \sin |
| $\lim$ | \lim |
| $\exp$ | \exp |
| $\to$ | \to |
| $\infty$ | \infty |
| $\equiv$ | \equiv |
| $\bmod$ | \bmod |
| $\times$ | \times |

### Power and Indices

| Symbol | Script |
|---|---|
| $k_{n+1}$ | k_{n+1} |
| $n^2$ | n^2 |
| $k_n^2$ | k_n^2 |

### Fractions and Binomials

| Symbol | Script |
|---|---|
| $\frac{n!}{k!(n-k)!}$ | \frac{n!}{k!(n-k)!} |
| $\binom{n}{k}$ | \binom{n}{k} |
| $\frac{\frac{x}{1}}{x-y}$ | \frac{\frac{x}{1}}{x - y} |
| $^3/_7$ | ^3/_7 |

### Roots

| Symbol | Script |
|---|---|
| $\sqrt{k}$ | \sqrt{k} |

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| Symbol | Script |
|---|---|
| $\sqrt[n]{k}$ | \sqrt[n]{k} |

### Sums and Integrals

| Symbol | Script |
|---|---|
| $\sum_{i=1}^{10} t_i$ | \sum_{i=1}^{10} t_i |
| $\int_0^\infty \mathrm{e}^{-x}\,\mathrm{d}x$ | \int_0^\infty \mathrm{e}^{-x}\,\mathrm{d}x |
| $\sum$ | \sum |
| $\prod$ | \prod |
| $\coprod$ | \coprod |
| $\bigoplus$ | \bigoplus |
| $\bigotimes$ | \bigotimes |
| $\bigodot$ | \bigodot |
| $\bigcup$ | \bigcup |
| $\bigcap$ | \bigcap |
| $\biguplus$ | \biguplus |
| $\bigsqcup$ | \bigsqcup |
| $\bigvee$ | \bigvee |
| $\bigwedge$ | \bigwedge |
| $\int$ | \int |
| $\oint$ | \oint |
| $\iint$ | \iint |
| $\iiint$ | \iiint |
| $\int \cdots \int$ | \idotsint |
| $\sum_{0<i<m\0<j<n} P(i,j)$ | \sum_{\substack{0<i<m\0<j<n}} P(i, j) |
| $\int_a^b$ | \int\limits_a^b |

| Symbol | Script |
|---|---|
| $a' \; a'$ | a` a^{\prime} |
| $a''$ | a'' |
| $\hat{a}$ | hat{a} |
| $\bar{a}$ | \bar{a} |

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| Symbol | Script |
|---|---|
| $\grave{a}$ | \grave{a} |
| $\acute{a}$ | \acute{a} |
| $\dot{a} | \dot{a} |
| $\ddot{a}$ | \ddot{a} |
| $\not{a}$ | \not{a} |
| $\mathring{a}$ | \mathring{a} |
| $\overrightarrow{AB}$ | \overrightarrow{AB} |
| $\overleftarrow{AB}$ | \overleftarrow{AB} |
| $a'''$ | a''' |
| $\overline{aaa}$ | \overline{aaa} |
| $\check{a}$ | \check{a} |
| $\vec{a}$ | \vec{a} |
| $\underline{a}$ | \underline{a} |
| $\color{red}x$ | \color{red}x |
| $\pm$ | \pm |
| $\mp$ | \mp |
| $\int y\mathrm{d}x$ | \int y \mathrm{d}x |
| | \, |
| | \: |
| | \; |
| ! | ! |
| $\int y\,\mathrm{d}x$ | \int y\, \mathrm{d}x |
| $\dots$ | \dots |
| $\ldots$ | \ldots |
| $\cdots$ | \cdots |
| $\vdots$ | \vdots |
| $\ddots$ | \ddots |

### Brackets etc

| Symbol | Script |
|---|---|
| $(a)$ | (a) |
| $[a]$ | [a] |

| Symbol | Script |
| --- | --- |
| $a$ | {a} |
| $\langle f \rangle$ | \langle f \rangle |
| $\lfloor f \rfloor$ | \lfloor f \rfloor |
| $\lceil f \rceil$ | \lceil f \rceil |
| $\ulcorner f \urcorner$ | \ulcorner f \urcorner |

### Reference

Atom - Atom editor for hackers

markdown-preview-plus - preview your markdown in atom

mathjax-wrapper - display math symbols in atom

mathjax - Javascript lib for browsers

Latex - Latex Homepage

Wiki Latex Mathematics - introduction to math symbols in latex

Github tables - Github Flavored Markdown

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