MathJax symbol reference

References for MathJax usage in Markdown sintax

Mathjax plugin for math formula insertion has an extensive documentation.

In Mathjax quick sintax reference tutorial and reference are available.

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Symbols

Inline formulas enclose \ (... \ )

Displayed formulas \ [... \ ]

Curly braces {} to group pieces of formulas

Superscripts (^) and subscripts (_) : $x_1{}^e$

Fractions:

$\frac{a}{b}$ \frac {a} {b}

$\frac{x}{y}$ {x} \over {y} }

Parentheses

Unscaled parentheses

Symbol	Code
$(\dots)$	(...)
$[\dots]$	[...]
$\{\dots\}$	{ ... }

$\vert \dots \vert$	\vert ... \vert
$\Vert \dots \Vert$	\Vert ... \Vert
$\langle \dots \rangle$	\langle ... \rangle
$\lceil \dots \rceil$	\lceil ... \rceil
$\lfloor \dots \rfloor$	\lfloor ... \rfloor

Scaled parentheses

Symbol	Code
$(\dots)$	\left(... \right)
$[\dots]$	\left[... \right]
$\{ \dots \}$	\left[... \right]
$\vert \dots \vert$	\left\vert ... \right\vert
$\Vert \dots \Vert$	\left\Vert ... \right\Vert
$\langle \dots \rangle$	\left\langle ... \right\rangle
$\lceil \dots \rceil$	\left\lceil ... \right\rceil
$\lfloor \dots \rfloor$	\left\lfloor ... \right\rfloor

Hidden parentheses

Symbol	Code
$\{ \dots$	\left{ ... \right.
$\dots]$	\left. ... \right]

- manual adjustment: $\Big(\bigg(\Big(\big((x)\big)\Big)\bigg)\Big)$

  \Biggl(\biggl(\Bigl(\bigl((x)\bigr)\Bigr)\biggr)\Biggr)

Symbol	Code
$<$	\lt
$>$	\gt
$\leq$	\le
$\leq$	\leq
$\leqq$	\leqq
$\leqslant$	\leqslant
$\geq$	\ge
$\geq$	\geq
$\geqq$	\geqq
$\geqslant$	\geqslant
$\neq$	\neq
$\land$	\land
$\lor$	\lor
$\neg$	\lnot
$\forall$	\forall
$\exists$	\exists
$\nexists$	\nexists
$\top$	\top
$\bot$	\bot
$\vdash$	\vdash
$\models$	\vDash

≈	\approx
∼	\sim
≃	\simeq
≅	\cong
≡	\equiv
≺	\prec
◁	\lhd
∴	\therefore

Operators

Symbol	Code
×	\times
÷	\div
±	\pm
∓	\mp
·	\cdot
⋆	\star
∗	\ast
⊕	\oplus
∘	\circ
•	\bullet

Symbol	Code
$\cup$	\cup
$\cap$	\cap
$\setminus$	\setminus
$\subset$	\subset
$\subseteq$	\subseteq
$\subsetneq$	\subsetneq
$\supset$	\supset
$\in$	\in
$\notin$	\notin
$\emptyset$	\emptyset
$\varnothing$	\varnothing

Arrows

Symbol	Code
$\to$	\to
$\rightarrow$	\rightarrow
$\leftarrow$	\leftarrow
$\Rightarrow$	\Rightarrow
$\Leftarrow$	\Leftarrow
$\Leftrightarrow$	\Leftrightarrow

$\mapsto$	\mapsto

Special symbols

Symbol	Code
∞	\infty
∇	\nabla
∂	\partial
$\Im$	\Im
$\Re$	\Re
$\ldots$	\ldots
$\cdots$	\cdots
ℓ	\ell

Trigonometry

Symbol	Code
$\sin x$	\sin x
$\cos x$	\cos x
$\tan x$	\tan x
$\cot x$	\cot x
$\sec x$	\sec x
$\csc x$	\csc x

$\arcsin x$	\arcsin x
$\arccos x$	\arccos x
$\arctan x$	\arctan x

Functional symbols

Symbol	Code
$\sqrt{x^3}$	\sqrt{x^3}
$\sqrt[3]{\frac{x}{y}}$	\sqrt[3]{\frac xy}
$\ln(x)$	\ln(x)
$\log_2(x)$	\log_{2}(x)
$\sum_{n=1}^{N} n$	\sum_{n=1} ^{N} n
$\prod_{n=1}^{N} n$	\prod_{n=1} ^{N} n
$\int_0^{\infty} x dx$	\int_{0} ^{\infty} x dx
$\iint_0^{\infty} x dx$	\iint_{0} ^{\infty} x dx
$\iiint_0^{\infty} x dx$	\iiint_{0} ^{\infty} x dx
$\lim_{x \to \infty} \frac{1}{x}$	\lim_{x \to \infty} {1 \over x }
$\max(1, 2, 3)$	\max(1,2,3)
$\min(3, 4, 5)$	\min(3,4,5)
$\binom{n+1}{2k}$	{n+1 \choose 2k}
$\binom{n+1}{2k}(n + 12k)$	\binom{n+1}{2k} (n+12k)

Greek letters

Symbol	Code
α	\alpha
β	\beta
γ	\gamma
δ	\delta
ϵ	\epsilon
ε	\varepsilon
ζ	\zeta
η	\eta
θ	\theta
ϑ	\vartheta
ι	\iota
κ	\kappa
λ	\lambda
μ	\mu
ν	\nu
ξ	\xi
o	\omicron
π	\pi
ϖ	\varpi
ρ	\rho
ϱ	\varrho

σ	\sigma
ς	\varsigma
τ	\tau
υ	\upsilon
ϕ	\phi
φ	\varphi
χ	\chi
ψ	\psi
ω	\omega

Uppercase

Symbol	Code
Γ	\Gamma
Δ	\Delta
Θ	\Theta
Λ	\Lambda
Ξ	\Xi
Π	\Pi
Σ	\Sigma
Υ	\Upsilon
Ψ	\Psi
Ω	\Omega

Note: other greek uppercase lettere are the same as Roman letter.

Symbol	Code
$\mathbb{N}$	\mathbb{N}
$\mathbb{Z}$	\mathbb{Z}
$\mathbb{Q}$	\mathbb{Q}
$\mathbb{I}$	\mathbb{I}
$\mathbb{R}$	\mathbb{R}
$\mathbb{C}$	\mathbb{C}
$\text{ is an even number}$	\text{ is an even number}
$\mathbb{blackboardbold}$	\Bbb{blackboard bold}
$\mathbf{boldface}$	\mathbf{boldface}
$\mathit{italics}$	\mathit{italics}
$\boldsymbol{boldfaceditalics}$	\pmb{boldfaced italics}
$\mathtt{fortypewriter}$	\mathtt{ for typewriter}
$\mathrm{romanfont}$	\mathrm{roman font}
$\mathsf{sans-seriffont}$	\mathsf{sans-serif font}
$\mathcal{calligraphicletters}$	\mathcal{calligraphic letters}
$\mathscr{scriptletters}$	\mathscr{script letters}
$\mathfrak{Fraktur(oldGermanstyle)letters}$	\mathfrak{Fraktur (old German style) letters}

Spaces

$Thin\ space$	Thin \ space
$Normal\ space$	Normal \; space
$Big\quad space$	Big \quad space
$Bigger\qquad space$	Bigger \qquad space

Accents and marks

Symbol	Code
$\hat{x}$	\hat{x}
$\overline{xyz}$	\overline{xyz}
$\vec{x}$	\vec{x}
$\widehat{xy}$	\widehat{xy}
$\bar{x}$	\bar{x}
$\overrightarrow{xy}$	\overrightarrow{xy}
$\overleftrightarrow{xy}$	\overleftrightarrow{xy}
$\dot{x}$	\dot{x}
$\ddot{x}$	\ddot{x}

Examples

Plain text: $\{x \in \mathbb{N} \mid x \text{ is an even number}\}$

The Einstein field equations (EFE) may be written in the form: