MATTALX symbol list

v 0.1.1

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Content

Introduction

MatTalX uses, most of the time, the same command as LaTeX. Some important differences are, for instance, $\mathbb{R}$ is \mathbbR in MatTalX, instead of \mathbb{R} in LaTex. The same goes for $\boldsymbol{R}$, which is obtained with \mathbfR instead of \mathbf{R}. The same goes for every other letter. The same difference, but applied somewhere else is \haty instead of \hat{y} for $\hat{y}$.

Another important change from LaTex is that you can't "build" a symbol in MatTalX. As an example, ≝ is simply \def in MatTalX, but \stackrel{\rm def}{=} in LaTex. As a last example, ∛2 is \sqrt3 2 instead of \sqrt[3]{2}.

For fractions, since MatTalX renders symbol in UTF format, it is recommended to represent f(x) divided by g(x) as $f(x)/g(x)$ or $f(x)(g(x))^{-1}$. If it is a simple fraction (like one half), you can use \frac1/2 → ½, but it won't work for every fraction (see page 7). It is however possible to build your own fraction with ^1 / _2 → ½.

If you find a bug or have any suggestion, please tell me via
https://github.com/samueleblanc/MatTalX/issues

Tutorial

It is important to know that every command, in MatTalX, must be separated by a space. For instance: \Pi, \pi → undefined π, but \Pi , \pi → Π, π. The difference is \Pi, and \Pi ,

MatTalX is a simple extension, there are only four buttons.

1. If you press **Convert**, the text written in the first area will be translated and the output will appear in the second area.
2. If you press **Copy text**, the text of the second area will be automatically copied on your clipboard, so that you can paste and send it afterwards.
3. If you press **Clear**, it will erase both areas.
4. If you hover over the question mark ⓘ you will be able to see this document under "Documentation", the code under "Code (GitHub) and you can uncheck "Remove spaces"
    a. With "Remove spaces" checked
    Input: x > y \land y \geq 0 \implies x > 0
    Output: $x>y\land y\geq 0 \implies x>0$
    Input: \Gamma (k) = \sum _k=1 (2k ^2 + 4)
    Output: $\Gamma(k) = \sum_{k=1}(2k^2+4)$
    b. With "Remove spaces" unchecked
    Input: x > y \land y \geq 0 \implies x > 0
    Output: $x > y \land y \geq 0 \implies x > 0$
    Input: \Gamma (k) = \sum _k=1 (2k ^2 + 4)
    Output: $\Gamma (k) = \sum_{k=1} (2k ^2 + 4)$

Mathematics

Unary and binary operators

+, -, \times, /, \div	+, −, ×, ⁄, ÷
#	#
!	!
\neg	¬

\sqrt, \sqrt3, \sqrt4	√, ∛, ∜
\prod, \sum	∏, ∑
\cdot	·
\ast, \star, \circ, \diamond	∗, ⋆, ∘, ◊
\pm, \mp	±, ∓

\wr	≀

\bowtie	⋈

\sin, \cos, \tan	sin, cos, tan
\arcsin, \arccos, \arctan	arcsin, arccos, arctan
\cot, \csc, \sec	cot, csc, sec
\arccot, \arccsc, \arcsec	arccot, arcsc, arcsec

\ln, \log	ln, log

\det	det

\cup, \cap	∪ , ∩
\sqcup, \sqcap	⊔, ⊓
\Cup, \Cap	⋓, ⋒
\sqCup, \sqCap	⩊, ⩎
\cupplus	⊎
\setminus	∖
\amalg	⨿

\oplus, \ominus	⊕, ⊖
\otimes, \odot, \oslash	⊗, ⊙, ⊘
\boxplus, \boxminus	⊞, ⊟
\boxtimes, \boxdot	⊠, ⊡

Calculus

Integrals, sum, derivatives

\int, \iint \iiint, \iiiint	∫, ∬ , ∭, ⨌
\oint, \oiint, \oiiint	∮ , ∯, ∰
\intclockwise	∱
\ointclockwise, \ointctrclockwise	∲, ∳
\sqint, \timesint	⨖, ⨘
\cupint, \capint	⨋, ⨍
\fint	⨏
\overbarint, \underbarint	⨐, ⨑

\sum	∑

‘, “, \tprime	′, ″, ‴

\partial	∂
\nabla	∇

\lim	$\lim$

Relation

= , \neq	$=, \neq$
\equiv	$\equiv$
\cong, \ncong	$\cong, \ncong$
\approx	$\approx$
\sim, \nsim, \simeq	$\sim, \nsim, \simeq$
\doteq, \def, \equest	$\doteq, \stackrel{\text{def}}{=}, \stackrel{?}{=}$
\triangleq, \mquest	$\triangleq, \stackrel{\text{m}}{=}$
<, >	$<, >$
\nless, \ngtr	$\nless, \ngtr$
\ll, \gg, \lll, \ggg	$\ll, \gg, \lll, \ggg$
\lquest, \rquest	$\stackrel{?}{<}, \stackrel{?}{>}$
\leq, \geq, \leqslant, \geqslant	$\leq, \geq, \leqslant, \geqslant$
\lnsim, \gnsim	$\lnsim, \gnsim$
\lnapprox, \gnapprox	$\lnapprox, \gnapprox$
\lneq, \gneq, \lneqq, \gneqq	$\lneq, \gneq, \lneqq, \gneqq$
\propto	$\propto$

\prec, \succ, \nprec, \nsucc	$\prec, \succ, \nprec, \nsucc$
\preceq, \succeq	$\preceq, \succeq$
\precneqq, \succneqq	$\precneqq, \succneqq$
\precnsim, \succnsim	$\precnsim, \succnsim$

\precnapprox, \succnapprox	⪹, ⪺

\in, \ni, \notin	∈, ∋, ∉
\subset, \supset	⊂, ⊃
\nsubset, \nsupset	⊄, ⊅
\subseteq, \supseteq	⊆, ⊇
\nsubseteq, \nsupseteq	⊈, ⊉
\Subset, \Supset	⋐, ⋑
\sqsubset, \sqsupset	⊏, ⊐
\sqsubseteq, \sqsupseteq	⊑, ⊒
\subsetplus, \supsetplus	⊊, ⊋

\triangleleft, \triangleright	◁, ▷
\ntriangleleft, \ntriangleright	⋪, ⋫
\ntrianglelefteq, \ntrianglerighteq	⋬, ⋭

|, \nmid	∣, ∤

\emptyset	∅

Delimiters

(,)	(,)
\llparenthesis, \rrparenthesis	⦇, ⦈
{, }	{, }
\lBrace, \rBrace	⦃, ⦄
[,]	[,]

\llbracket, \rrbracket	⟦, ⟧
|	∣
\langle, \rangle	⟨, ⟩
\lllangle, \rrrangle	⟪, ⟫
\lceil, \rceil, \lfloor, \rfloor	⌈, ⌉, ⌊, ⌋

Logic

\exists, \nexists, \exists !	∃, ∄, ∃!
\land *or* \wedge, \lor *or* \vee	∧, ∨
\doublewedge, \doublevee	⩓, ⩔
\curlywedge, \curlyvee	⋏, ⋎
\forall	∀

\vdash, \dashv, \nvdash	⊣, ⊢, ⊬
\Dashv, \vDash, \nvDash	⫤, ⊨, ⊭
\dashV, \Vdash, \nVdash	⫣, ⊩, ⊮
\DashV, \VDash, \nVDash	⫤, ⊫, ⊯
\top, \bot	⊤, ⊥

\qed	∎

Geometry

\parallel, \nparallel	∥, ∦
\asymp	≍
\perp, \notperp	⊥, ⊥̸
\angle, \rightangle	∠, ⦜

\measuredangle, \sphericalangle	∡, ∢
|, \nmid	∣, ∤
\between	≬

Arrows

\leftarrow, \rightarrow	←, →
\leftrightarrow	↔
\uparrow, \downarrow	↑, ↓
\updownarrow	↕
\nleftarrow, \nrightarrow	↚, ↛
\nleftrightarrow	↮
\Leftarrow, \Rightarrow	⇐, ⇒
\Leftrightarrow, \iff	⇔, ⟺
\Longleftarrow, \implies	⟸, ⟹
\Uparrow, \Downarrow	⇑, ⇓
\Updownarrow	⇕
\nLeftarrow, \nRightarrow	⇍, ⇏
\nLeftrightarrow	⇎
\mapsto	↦

\rightharpoonup, \rightharpoondown	⇀, ⇁
\leftharpoonup, \leftharpoondown	↼, ↽
\leftrightharpoons, \rightleftharpoons	⇋, ⇌
\upharpoonleft, \upharpoonright	↿, ↾
\downharpoonleft, \downharpoonright	⇂, ⇃

\twoheadleftarrow, \twoheadrightarrow	↞, ↠

\twoheaduparrow, \twoheaddownarrow	↟, ↡
\leftleftarrows, \rightrightarrows	⇇, ⇉
\upuparrows, \downdownarrows	⇈, ⇊
\leftrightarrows, \rightleftarrows	⇆, ⇄
\hookleftarrow, \hookrightarrow	↩, ↪
\looparrowleft, \looparrowright	↫,↬
\Lsh, \Rsh	↰, ↱
\nwarrow, \nearrow	↖, ↗
\searrow, \swarrow	↘, ↙
\Lleftarrow, \Rrightarrow	⇚, ⇛
\leftarrowtail, \rightarrowtail	↢, ↣
\leftsquigarrow, \rightsquigarrow	⇜, ⇝
\leftrightsquigarrow	↭
\circlearrowleft, \circlearrowright	↺, ↻
\curvearrowleft, \curvearrowright	↶, ↷

Fractions

\frac1/2	½
\frac1/3, \frac2/3	⅓, ⅔
\frac1/5, \frac2/5, \frac3/5, \frac4/5	⅕, ⅖, ⅗, ⅘
\frac1/6, \frac5/6	⅙, ⅚
\frac1/7	
\frac1/8, \frac3/8, \frac5/8, \frac7/8	⅛, ⅜, ⅝, ⅞
\frac1/9	
\frac1/10	
\fraca/c, \fraca/s, \fracc/o, \fracc/u	ₐ/꜀, ₐ/ₛ, ꜀/₀, ꜀/ᵤ

For any other simple fractions that are not on this list, you can create them with a superscript, a "/" and a subscript (e.g. ^53 / _19 → ⁵³⁄₁₉ *and* ^y / _x → ʸ⁄ₓ*).*

Greek letters

A, \alpha	A, α
B, \beta	B, β
\Gamma, \gamma	Γ, γ
\Delta, \delta	Δ, δ
E, \epsilon, \varepsilon	E, ϵ, ε
Z, \zeta	Z, ζ
H, \eta	H, η
\Theta, \theta, \vartheta	Θ, θ, ϑ
I, \iota	I, ι
K, \kappa, \varkappa	K, κ, $\varkappa$
\Lambda, \lambda	Λ, λ
N, \nu	N, ν
\Xi, \xi	Ξ, ξ
O, o	O, o
\Pi, \pi, \varpi	Π, π, ϖ
P, \rho, \varrho	P, ϱ, ϱ
\Sigma, \sigma, \varsigma	Σ, σ, ς
T, \tau	T, τ
\Upsilon, \upsilon	Υ, υ
\Phi, \phi, \varphi	$\mathbf{\Phi}$, ϕ, φ
X, \chi	X, χ
\Psi, \psi	Ψ, ψ
\Omega, \omega	Ω, ω

Fonts

A, a, … z	A, a, … z
\mathbfA, \mathbfa, … \mathbfz	$\boldsymbol{A}$, $\boldsymbol{a}$, ... $\boldsymbol{z}$
\mathbbA, \mathbba, … \mathbbz	$\mathbb{A}$, $\mathbb{a}$, ... $\mathbb{z}$

0, 1, … 9	0, 1, ... 9
\mathbf0, \mathbf1, … \mathbf9	$\mathbf{0}$, $\mathbf{1}$, ... $\mathbf{9}$
\mathbb0, \mathbb1, … \mathbb9	$\mathbb{0}$, $\mathbb{1}$, ... $\mathbb{9}$

Greek letters

\mathbbPi, \mathbbpi	$\mathbb{\Pi}$, $\mathbb{\pi}$
\mathbbGamma, \mathbbgamma	$\mathbb{\Gamma}$, $\mathbb{\gamma}$
\mathbbSigma	$\mathbb{\Sigma}$

** These are the only one as of v 0.1.1*

\mathbfalpha, … \mathbfomega	$\boldsymbol{\alpha}$, ... $\boldsymbol{\omega}$

Every greek letters that exists in the regular font exists in mathbf

Hat and overline

\hatA, \hata, … \hatz	$\hat{A}$, $\hat{a}$, … $\hat{z}$
\hatalpha, … \hatomega*	$\hat{\alpha}$, ... $\hat{\omega}$
\overlineA, … \overlinez	$\overline{A}$, ... $\overline{z}$
\overlinealpha, … \overlineomega	$\overline{\alpha}$, ... $\overline{\omega}$

** Some are missing due to a bad rendering (e.g. \hatA in the example above. However, the hat will be positioned adequately in some app or software).*

Subscript and superscript

x ^abc123, o ^1+2=3	x^{abc123}, $o^{1+2=3}$
y _ijk456, i _2(3)=6	$y_{i\ \ 456}$, $i_{2(3)=6}$

Some characters are missing because they do not exist in unicode

\^beta, _beta	$^{\beta}$, $_{\beta}$
\^Gamma, \^gamma, _gamma	$^{\Gamma}$, $^{\gamma}$, $_{\gamma}$
\^Delta, \^delta	$^{\Delta}$, $^{\delta}$
\^epsilon	$^{\varepsilon}$
\^Lambda	$^{\Lambda}$
\^Theta	$^{\theta}$
\^iota	$^{\iota}$
\^nu	$^{\upsilon}$
_rho	$_{\rho}$
\^phi, _phi	$^{\varphi}$, $_{\varphi}$
\^chi, _chi	$^{\chi}$, $_{\chi}$

Chess & card games

\wking, \bking	♔, ♚
\wqueen, \bqueen	♕, ♛
\wrook, \brook	♖, ♜
\wbishop, \bbishop	♗, ♝
\wknight, \bknight	♘, ♞
\wpawn, \bpawn	♙, ♟

\wspade, \bspade	♤, ♠
\wheart, \bheart	♡, ♥
\wclub, \bclub	♧, ♣
\wdiamond, \bdiamond	♢, ♦

Money and currency

\dollar, \cent	$, ¢
\euro, \franc, \ruble, \pound, \hryvnia	€, ₣, ₽, £, ₴
\yen, \rupee, \won, \baht	¥, ₹, ₩, ฿
\lira, \tlira	₪, ₩
\peso	₱
\austral	₳
\bitcoin	₿

Other symbols

\infty	∞
\hbar	ℏ
\wp	℘
\ell	ℓ
\dagger, \ddagger	†, ‡
\section, \paragraph, \bullet	§, ¶, •
\copyright, \registered	©, ®
\qc	⚜
\smile, \frown	⌣, ⌢
\ldots, \cdots, \udots, \vdots, \ddots	…, ⋯, ⋰, ⋮, ⋱

Space, line break, tab

Space : “ \: ”
Line break : “ \\ ”
Tab : “ \tab ”

Also note that it’s possible to uncheck “Remove spaces” (more info in “Tutorial”) and to make modifications, including adding or removing spaces, skipping a line, etc., once the converted text is in the second area.