LᴬTEX mathmode for linguists (and others)

GREEK LETTERS

character	code	character	code
A	A	α	α
B	B	β	β
Γ	Γ	γ	Γ
Δ	Δ	δ	δ
E	E	ϵ	ϵ
		ε	ε
Z	Z	ζ	ζ
H	H	η	η
Θ	Θ	θ	θ
		ϑ	ϑ
I	I	ι	ι
K	K	κ	κ
Λ	Λ	λ	λ
M	M	μ	μ
N	N	ν	ν
Ξ	Ξ	ξ	ξ
O	O	o	o
Π	Π	π	π
		ϖ	ϖ
P	P	ρ	ρ
		ϱ	ϱ
Σ	Σ	σ	σ
		ς	ς
T	T	τ	τ
Υ	Υ	υ	υ
Φ	Φ	ϕ	ϕ
		φ	φ
X	X	χ	χ
Ψ	Ψ	ψ	ψ
Ω	Ω	ω	ω

MATHACCENTS

character	code	character	code
$\acute{a}$	$\acute{a}$	$\underline{a}$	$\underline{a}$
$\grave{a}$	$\grave{a}$	$\overline{a}$	$\overline{a}$
$\ddot{a}$	$\ddot{a}$	$\bar{a}$	$\bar{a}$
$\dot{a}$	$\dot{a}$	$\vec{a}$	$\vec{a}$
$\check{a}$	$\check{a}$	$\tilde{a}$	$\tilde{a}$
$\hat{a}$	$\hat{a}$	$\breve{a}$	$\breve{a}$
$\overleftarrow{a}$	$\overleftarrow{a}$	$\overrightarrow{a}$	$\overrightarrow{a}$

NUMBER SETS

character	meaning	code
$\mathbb{N}$	natural numbers	\mathbb{N}[1]
$\mathbb{Z}$	integers	\mathbb{Z}[1]
$\mathbb{Q}$	rational numbers	\mathbb{Q}[1]
$\mathbb{R}$	real numbers	\mathbb{R}[1]

ARITHMETIC OPERATORS

character	meaning	code
$a+b$	addition	$a+b$
$a-b$	subtraction	$-$
$a:b$	division	$a:b$
a/b	(mostly fractions)	a/b
$a \div b$		$a\div b$
$\frac{a}{b}$		$\frac{a}{b}$
$a \bmod b$	modulo	$a \textrm{mod}\ b$
$a \cdot b$	multiplication	$a\cdot b$
$a \times b$	(mostly no symbol)	$a\times b$
$a \pm b$	plus-minus character	$a\pm b$
$a \oplus b$	direct sum	$a\oplus b$
$a \otimes b$	tensor product	$a\otimes b$

EQUATION CHARACTERS

character	meaning	code
$a=b$	equation	$a=b$
$a \neq b$	inequation	$a\neq b$
$a \equiv b$	identity	$a\equiv b$
$a \approx b$	approximation	$a\approx b$
$a \sim b$	proportionality, equivalence	$a\sim b$
$a\widehat{=}b$	corresponds to	$a\widehat{=}b$
$A:B$	A defined by B	$A:B$
$A:=B$	A identical by definition B	$A:=B$

COMPARISON

character	meaning	code
$a<b$	less than	$a<b$
$a>b$	more than	$a>b$
$a \leq b$	less or equal	$a\leq b$
$a \geq b$	more or equal	$a\geq b$
$a \ll b$	much less than	$a\ll b$
$a \gg b$	much more than	$a\gg b$

RELATIONS AND FUNCTIONS

character	meaning	code
$|a|$	absolute value	$|a|$
$\sqrt{a}$	root	$\sqrt{a}$
$\sqrt[n]{a}$	n-th root	$\sqrt[n]{a}$
$a\%$	percent	$a\%$
$\sum_{i=1}^{n} x_i$	sum	$\sum\limits_{i=1}^{n}$ x_i
$\prod_{i=1}^{n} x_i$	product	$\prod\limits_{i=1}^{n}$ x_i
$a_n \to a$	limit, mapping (sets)	$a_n\to a$
$f:x \mapsto y$	mapping (elements)	$f: x\mapsto y$
∞	infinity	∞
$f \circ g$	chain of functions	$f\circ g$
f^{-1}	inverse function	f^{-1}
$a \prec b$	predecessor	$a\prec b$
$a \succ b$	successor	$a\succ b$
R^+	transitive closure	R^{+}
R^*	reflexive transitive closure	R^{*}
$n!$	factorial	$n!$
$\binom{n}{k}$	binomial coefficient	$\binom{n}{k}$[2]

BRACKETS

character	meaning	code	character	meaning	code	character	meaning	code
(a)	round	(a)	$[a]$	square (*features*)	$[a]$	$\{a\}$	curly (*sets*)	$\{a\}$
$\langle a\rangle$	angle	$\langle a\rangle$	$⟦a⟧$	double square (*denotation*)	$\llbracket a\rrbracket$[3]	$\begin{smallmatrix}a&b\\c&d\end{smallmatrix}$	big brackets	$\left[...\right]$

ARROWS

char.	code	char.	code	char.	code	char.	code
→	$\rightarrow$	←	$\leftarrow$	↔	$\leftrightarrow$	↦	$\mapsto$
⟶	$\longrightarrow$	⟵	$\longleftarrow$	⟷	$\longleftrightarrow$	⟼	$\longmapsto$
⇒	$\Rightarrow$	⇐	$\Leftarrow$	⇔	$\Leftrightarrow$	⇆	$\leftrightarrows$[1]
⟹	$\Longrightarrow$	⟸	$\Longleftarrow$	⟺	$\Longleftrightarrow$	⇝	$\leadsto$[4]
↛	$\nrightarrow$[1]	↚	$\nleftarrow$[1]	↮	$\nleftrightarrow$[1]	↶	$\curvearrowleft$[1]
⇏	$\nRightarrow$[1]	⇍	$\nLeftarrow$[1]	⇎	$\nLeftrightarrow$[1]	↷	$\curvearrowright$[1]
↑	$\uparrow$	↓	$\downarrow$	↕	$\updownarrow$	↺	$\circlearrowleft$[1]
⇑	$\Uparrow$	⇓	$\Downarrow$	⇕	$\Updownarrow$	↻	$\circlearrowright$[1]
↗	$\nearrow$	↖	$\nwarrow$	↩	$\hookleftarrow$	⇜	$\rightsquigarrow$[1]
↘	$\searrow$	↙	$\swarrow$	↪	$\hookrightarrow$	↭	$\leftrightsquigarrow$[1]
⇢	$\dashrightarrow$[1]	⇠	$\dashleftarrow$[1]				

MATRICES

character	code
$(v_1, \ldots, v_n)$	$(v_1, \dots, v_n)$
$\begin{pmatrix}v_1\\\vdots\\v_m\end{pmatrix}$	$\left(\begin{matrix}$ v_1\\ \vdots\\ v_m \end{matrix}\right)$
$\begin{pmatrix}v_{11}&\cdots&v_{1n}\\\vdots&\ddots&\vdots\\v_{m1}&\cdots&v_{mn}\end{pmatrix}$	$\left(\begin{matrix}$ v_{11} & \dots & v_{1n}\\ \vdots & \ddots & \vdots\\ v_{m1} & \dots & v_{mn} \end{matrix}\right)$

SETS

character	meaning	code
$\emptyset$	empty set	$\emptyset$
$\{a,b,c,...\}$	list notation set	$\{a,b,c,...\}$
$\{a\mid T(a)\}, \{a:T(a)\}$	property notation set	$\{a\mid T(a)\}$, $\{a: T(a)\}$
$A \cup B$	union	$A\cup B$
$\bigcup_{i=1}^{n} M_i$		$$\bigcup\limits_{i=1}^n M_i$$
$A \cap B$	intersection	$A\cap B$
$\bigcap_{i=1}^{n} M_i$	intersection	$\bigcap\limits_{i=1}^n M_i$
$A \setminus B$	difference	$A\setminus B$
$A \times B$	Cartesian product	$A\times B$
$\bar{A}$	complement	$\bar{A}$
$\mathcal{P}(A)$	power set	$\mathcal{P}(A)$
$a \in A, a \notin A$	(not) in	$a\in A$, $a\not\in A$
$A \ni a, A \not\ni a$	(does not) contain	$A\ni a$, $A\not\ni a$
$A \subset B, A \not\subset B$	(no) true subset of	$A\subset B$, $A\not\subset B$
$A \supset B, A \not\supset B$	(no) true superset of	$A\supset B$, $A\not\supset B$
$A \subseteq B, A \not\subseteq B$	(no) subset of	$A\subseteq B$, $A\not\subseteq B$
$A \supseteq B, A \not\supseteq B$	(no) superset of	$A\supseteq B$, $A\not\supseteq B$

LOGICS

character	meaning	code
$\emptyset$	empty set	$\emptyset$
$A \land B$	conjunction	$A\land B$
$A \lor B$	disjunction	$A\lor B$
$A \leftrightarrow B$	log. equivalence	$A\leftrightarrow B$
$A \rightarrow B$	implication	$A\rightarrow B$
$\neg A$	negation	$\lnot A$
$\forall x$	universal quantifier	$\forall x$
$\exists x$	existential quantifier	$\exists x$
$A \vdash B$	derivability relation	$A\vdash B$
$A \models B$	illation	$A\models B$
$A\top$	tautology	$A\top$
$A\bot$	contradiction	$A\bot$
$A \therefore B$	deduction (A therefore B)	$A\therefore B$[1]
$A \because B$	deduction (A because B)	$A\because B$[1]
■, □	q.e.d.	$\blacksquare$[1], $\Box$
$\Diamond A$	possibly	$\lozenge$[2]
$\Box A$	necessarily	$\square$[2]

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[1] Requires package `amssymb`.
[2] Requires package `amsmath`.
[3] Requires package `stmaryrd`.
[4] Requires package `latexsym`.