3.10 数学符号表

下面的表格中将给出在数学模式中常用的所有符号。使用表 3.12–3.167 所列出的符号,必须事先安装 AMS 数学字库并且在文档的导言区加载宏包: amssymb。如果你的系统中没有安装 AMS 宏包和数学字库,可去下述地址下载:

CTAN:/tex-archive/macros/latex/required/amslatex

表 3.1: 数学模式重音符

\hat{a}	\hat{a}	\check{a}	\check{a}	\tilde{a}	\tilde{a}	\acute{a}	\acute{a}
\grave{a}	\grave{a}	\dot{a}	\dot{a}	\ddot{a}	\ddot{a}	$reve{a}$	\breve{a}
\bar{a}	\bar{a}	\vec{a}	\vec{a}	\widehat{A}	\widehat{A}	\widetilde{A}	\widetilde{A}

表 3.2: 小写希腊字母

α	\alpha	θ	\theta	0	0	v	\upsilon
β	\beta	ϑ	\vartheta	π	\pi	ϕ	\phi
γ	\gamma	ι	\iota	ϖ	\varpi	φ	\varphi
δ	\delta	κ	\kappa	ρ	\rho	χ	\chi
ϵ	\epsilon	λ	\lambda	ϱ	\varrho	ψ	\psi
ε	$\vert varepsilon$	μ	\mu	σ	\sigma	ω	\omega
ζ	\zeta	ν	\nu	ς	\varsigma		
η	\eta	ξ	\xi	au	\tau		

表 3.3: 大写希腊字母

Γ	\Gamma	Λ	\Lambda	\sum	\Sigma	Ψ	\Psi
Δ	\Delta	Ξ	\Xi	Υ	\Upsilon	Ω	\Omega
Θ	\Theta	П	\Pi	Φ	\Phi		

⁷这些表格来自 David Carlisle 的 symbols.tex, 随后根据 Josef Tkadlec 的建议作了较大的改动。

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表 3.4: 二元关系符

你可以在下述命令的前面加上 \not 来得到其否定形式。

<	<	>	>	=	=
\leq	$\leq or \leq o$	\geq	\geq or \ge	\equiv	\equiv
«	\11	\gg	\gg	\doteq	\doteq
\prec	\prec	\succ	\succ	\sim	\sim
\preceq	\preceq	\succeq	\succeq	\simeq	\simeq
\subset	\subset	\supset	\supset	\approx	\approx
\subseteq	\subseteq	\supseteq	\supseteq	\cong	\cong
	\sqsubset a		\sqsupset a	\bowtie	$\$ Join a
	\sqsubseteq	\supseteq	\sqsupseteq	\bowtie	\bowtie
\in	\in	\ni	\ni , \owns	\propto	\propto
\vdash	\vdash	\dashv	\dashv	=	\models
	\mid		\parallel	\perp	\perp
$\overline{}$	\smile	$\overline{}$	\frown	\asymp	\asymp
:	:	∉	\notin	\neq	\neq or \ne

^a使用宏包 latexsym 来得到这个符号

表 3.5: 二元运算符

+	+	_	-		
\pm	\pm	干	\mp	\triangleleft	\triangleleft
	\cdot	÷	\div	\triangleright	\triangleright
×	\times	\	\setminus	*	\star
\cup	\cup	\cap	\cap	*	\ast
\sqcup	\sqcup	П	\sqcap	0	\circ
\vee	\ve , \lor	\wedge	\wedge , \land	•	\bullet
\oplus	\oplus	\ominus	\ominus	\Diamond	\diamond
\odot	\odot	\oslash	\oslash	\forall	\uplus
\otimes	\otimes	\bigcirc	\bigcirc	П	\amalg
\triangle	$\$ bigtriangleup	∇	\bigtriangledown	†	\dagger
\triangleleft	\backslash lhd a	\triangleright	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	‡	\ddagger
\leq	$\$ unlhd a	\trianglerighteq	\unrhd a	}	\wr

表 3.6: 大尺寸运算符

\sum	\sum	\bigcup	\bigcup	\vee	\bigvee	\oplus	\bigoplus
\prod	\prod	\cap	\bigcap	\wedge	\bigwedge	\otimes	\bigotimes
\coprod	\coprod		\bigsqcup			\odot	\bigodot
ſ	\int	∮	\oint			[+]	\biguplus

表 3.7: 箭头

\leftarrow	\leftarrow or \gets		\longleftarrow	\uparrow	\uparrow
\longrightarrow	\rightarrow or \to	\longrightarrow	\longrightarrow	\downarrow	\downarrow
\longleftrightarrow	\leftrightarrow	\longleftrightarrow	$\label{longleftrightarrow}$	\uparrow	\updownarrow
\Leftarrow	\Leftarrow	\longleftarrow	\Longleftarrow	\uparrow	\Uparrow
\Rightarrow	\Rightarrow	\Longrightarrow	\Longrightarrow	\Downarrow	\Downarrow
\Leftrightarrow	\Leftrightarrow	\iff	\Longleftrightarrow	1	\Updownarrow
\mapsto	\mapsto	\longmapsto	\longmapsto	7	\nearrow
\longleftrightarrow	\hookleftarrow	\hookrightarrow	\hookrightarrow	\	\searrow
_	\leftharpoonup	\rightarrow	\rightharpoonup	/	\swarrow
$\overline{}$	\leftharpoondown	\rightarrow	\rightharpoondown	_	\nwarrow
\rightleftharpoons	\rightleftharpoons	\iff	\iff (bigger spaces)	\sim	$\$ leadsto a

^a使用宏包 latexsym 来得到这个符号

表 3.8: 定界符

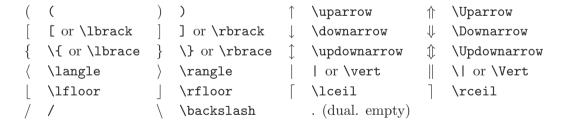


表 3.9: 大尺寸定界符

(\lgroup	\rgroup	\lmoustache	\rmoustache
	\arrowvert	\Arrowvert	\bracevert	

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表 3.10: 其它符号

	\dots		\cdots	:	\vdots	٠	\ddots
\hbar	\hbar	\imath	\imath	J	$\$ jmath	ℓ	\ell
\Re	\Re	\Im	\Im	X	\aleph	\wp	\wp
\forall	\forall	\exists	\exists	Ω	\mho a	∂	\partial
′	,	1	\prime	Ø	\emptyset	∞	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
∇	\nabla	\triangle	\triangle		ackbox^a	\Diamond	$\$ Diamond a
\perp	\bot	T	\top	_	\angle	$\sqrt{}$	\surd
\Diamond	\diamondsuit	\Diamond	\heartsuit	4	\clubsuit	\spadesuit	\spadesuit
\neg	\neg or \lnot	þ	\flat	þ	\natural	#	\sharp
		a. / ± 0		クロスルナ	· ^ ** □		

^a使用宏包 latexsym 来得到这个符号

表 3.11: 非数学符号

这些符号也可以在文本模式中使用。

† \dag \S \S \Cilon \copyright † \dag \P \P \pounds \pounds

表 3.12: AMS 定界符

\ullcorner \ \ullcorner \ \llcorner \ \llcorner \ \ullcorner \ullcorner \ \ullcorner \ullcorner \ \ullcorner \ullcorner

表 3.13: AMS 希腊和希伯来字母

 \digamma \digamma \varkappa \varkappa \beth \beth \gimel \daleth \gimel \gimel

表 3.14: AMS 二元关系符

\lessdot \gtrdot \doteqdot or \Doteq < > ÷ \leq \leqslant \geqslant \geqslant <u>=</u> \risingdotseq \eqslantless > \eqslantgtr =\fallingdotseq \leq \legg \geqq \eqcirc \lll or \llless \ggg or \gggtr **/// >>>** \circeq Y NIIVNIV W SV SV $\sim \sim \approx$ \triangleq \lesssim \gtrsim \triangleq \lessapprox \gtrapprox <u>~</u> \bumpeq \lessgtr \gtrless \Bumpeq ≎ \lesseqgtr \gtreqless \thicksim \lesseqqgtr \gtreqqless \thickapprox \approx \succcurlyeq \preccurlyeq \approxeq \succcurlyeq \approx \curlyeqprec \curlyeqsucc \backsim \sim \\ \\ \\ \\ \\ \succeq \succsim \precsim \backsimeq \geq ⊩∪ ≋Y \succapprox ⊨ \vDash \precapprox \subseteqq \supseteqq |<u>|</u> \Vdash \Supset $\parallel \vdash$ \Vvdash \subseteq \Subset \supseteq \sqsubset \sqsupset \backepsilon \therefore \because \varpropto α \shortmid \shortparallel \between 11 \smallsmile \smallfrown ф \pitchfork \vartriangleleft \vartriangleright \blacktriangleleft \triangleleft \triangleright \triangleleft \trianglelefteq \triangleright \trianglerighteq \blacktriangleright

表 3.15: AMS 箭头

←	\dashleftarrow	>	\dashrightarrow	_0	$\mbox{multimap}$
\rightleftharpoons	\leftleftarrows	\Rightarrow	\rightrightarrows	$\uparrow\uparrow$	\upuparrows
$\stackrel{\longleftarrow}{\Longrightarrow}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\Longrightarrow	\rightleftarrows	$\downarrow\downarrow$	\downdownarrows
\Leftarrow	\Lleftarrow	\Rightarrow	\Rrightarrow	1	\upharpoonleft
~~	\t twoheadleftarrow	\longrightarrow	\twoheadrightarrow		\upharpoonright
\longleftrightarrow	\leftarrowtail	\rightarrowtail	\rightarrowtail	1	\downharpoonleft
\leftrightharpoons	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\rightleftharpoons	\rightleftharpoons		\downharpoonright
\uparrow	\Lsh	d	\Rsh	\rightsquigarrow	\rightsquigarrow
\leftarrow	\looparrowleft	\hookrightarrow	\looparrowright	~~~	\leftrightsquigarrow
$ \leftarrow $	\curvearrowleft	\bigcirc	\curvearrowright		

\circlearrowright

 \bigcirc

\circlearrowleft

3.10 数学符号表 55

表 3.16: AMS 二元否定关系符和箭头

\angle	\nless	\nearrow	\ngtr	$\not\subseteq$	\varsubsetneqq
\leq	\lneq	\geq	\gneq	$ \supseteq $	\varsupsetneqq
\nleq	\nleq	$\not\geq$	\ngeq	$\not\sqsubseteq$	\nsubseteqq
≰	\nleqslant	$\not\geq$	\ngeqslant	$\not\supseteq$	\nsupseteqq
\leq	\lneqq	\geq	\gneqq	1	\nmid
$\stackrel{ ext{ ext{ ext{\left}}}}{=}$	\lvertneqq	\geqq	\gvertneqq	#	\nparallel
\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\nleqq	≱	\ngeqq	ł	\nshortmid
\lesssim	\label{lnsim}	≱	\gnsim	Ħ	\nshortparallel
≨	\lnapprox	⋧	\gnapprox	~	\nsim
\angle	\nprec	$\not\succ$	\nsucc	\ncong	\ncong
$\not\preceq$	\npreceq	$\not\succeq$	\nsucceq	$\not\vdash$	\nvdash
$\not\equiv$	\precneqq	$\not\succeq$	\succneqq	¥	\nvDash
$\stackrel{\sim}{\sim}$	\precnsim	\searrow	\succnsim	\mathbb{H}	\nVdash
∀ ≈	\precnapprox	∠ ≉	\succnapprox	$\not \Vdash$	\nVDash
\subsetneq	\subsetneq	\supseteq	\supsetneq	$\not \Delta$	\ntriangleleft
\subseteq	$\vert var subsetneq$	\supseteq	$\vert var supsetneq$	\not	\ntriangleright
$\not\sqsubseteq$	\nsubseteq	$\not\supseteq$	\nsupseteq	⊉	\n
\subseteq	\subsetneqq	$\displaystyle\mathop{\supseteq}_{\not\equiv}$	\supsetneqq	⊭	\ntrianglerighteq
\leftarrow	\nleftarrow	$\rightarrow \rightarrow$	\nrightarrow	$\leftrightarrow \rightarrow$	\nleftrightarrow
#	\nLeftarrow	\Rightarrow	\nRightarrow	#	\nLeftrightarrow

表 3.17: AMS 二元运算符

$\dot{+}$	\dotplus		\centerdot	Т	\intercal
\bowtie	\ltimes	\rtimes	\rtimes	*	\divideontimes
$\displaystyle \bigcup$	\Cup or \doublecup	$\qquad \qquad \bigcap$	\Cap or \doublecap	\	\smallsetminus
$\underline{\vee}$	\veebar	$\overline{\wedge}$	\barwedge	$\overline{\wedge}$	\doublebarwedge
\blacksquare	\boxplus		\boxminus	\bigcirc	\circleddash
\boxtimes	\boxtimes	$\overline{}$	\boxdot	0	\circledcirc
\geq	\leftthreetimes	\angle	\rightthreetimes	*	\circledast
Υ	\curlvvee	人	\curlywedge		

表 3.18: AMS 其它符号

\hbar	\hbar	\hbar	\hslash	\Bbbk	\Bbbk
	\square		\blacksquare	\odot	\circledS
Δ	\vert vartriangle		\blacktriangle	C	\complement
∇	\triangledown	\blacksquare	\blacktriangledown	G	\Game
\Diamond	\lozenge	•	\blacklozenge	*	\bigstar
_	\angle	4	\measuredangle	\triangleleft	\sphericalangle
/	\diagup		\diagdown	1	\backprime
∄	\nexists	\exists	\Finv	Ø	$\vert varnothing$
\mathfrak{g}	\eth	Ω	\mho		

表 3.19: 数学字母

例子	命令	所需宏包	
ABCdef	\mathrm{ABCdef}		
ABCdef	\mathit{ABCdef}		
ABCdef	\mathnormal{ABCdef}		
\mathcal{ABC}	\mathbb{ABC}		
\mathscr{ABC}	\mathbb{ABC}	mathrsfs	
\mathcal{ABC}	\mathbb{ABC}	eucal with option: mathcal or	
	\mathscr{ABC}	eucal with option: mathscr	
ABCdef	\mathfrak{ABCdef}	eufrak	
\mathbb{ABC}	\mathbb{ABC}	amsfonts or amssymb	