LaTeX 数学符号表

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表格

1	数学模式重音符号	2
2	希腊字母	2
3	二元关系 (在相关的命令上加 \not 命令, 可以得到其否定形式)	3
4	二元运算符	3
5	"大"运算符	3
6	箭头	4
7	定界符	4
8	大定界符	4
9	其他符号	5
10	非数学符号 (可以在文本模式中使用)	5
11	AMS 定界符	5
12	AMS 希腊和希伯来字母	5
13	AMS 二元关系	6
14	AMS 箭头	7
15	AMS 二元否定关系符和箭头	7
16	AMS 二元运算符	8
17	AMS 其他符号	8
18	数学字母	8

1 数学符号介绍

本文中使用表格的方式列出了数学模式中常用的符号,对于表 11-15,需要在导言 区先载人 amssymb 宏包而且系统中安装了 AMS 数学字体。本文中一共用到了下列的 宏包:

```
\usepackage{amsmath}
\usepackage{latexsym}
\usepackage{amssymb}
\usepackage{mathrsfs}
```

在这个文档中还存在一些问题,表8中多数符号显示有问题,目前不知道是缺失对应宏包所导致的还是由于其他的一些原因所导致。

	表	1:	数学模式重	音名	夺号
\hat{a}	\hat{a}	\check{a}	\check{a}	\tilde{a}	$ ag{tilde{a}}$
à	$\texttt{\grave{a}}$	\dot{a}	$\det\{a\}$	\ddot{a}	\dot{a}
\bar{a}	$\text{bar}\{a\}$	\vec{a}	\vec{a}	\widehat{A}	$\widehat\{A\}$
\acute{a}	\acute{a}	$reve{a}$	\brue{a}	\widetilde{A}	\widetilde{A}

表 2: 希腊字母							
α	α	θ	ackslashtheta	0	0	v	\upsilon
β	ackslashbeta	ϑ	$\backslash \mathtt{vartheta}$	π	\pi	ϕ	ϕ
γ	$\backslash \mathtt{gamma}$	ι	ackslashiota	ϖ	ϖ	φ	$\backslash \mathtt{varphi}$
δ	$ackslash ext{delta}$	κ	\setminus kappa	ρ	$\backslash { t rho}$	χ	$\backslash \mathtt{chi}$
ϵ	ackslashepsilon	λ	$\backslash \mathtt{lambda}$	ϱ	$\backslash {\tt varrho}$	ψ	$ackslash \mathtt{psi}$
ε	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	μ	$\backslash mu$	σ	$\backslash \mathtt{sigma}$	ω	$\backslash \mathtt{omega}$
ζ	\zeta	ν	\nu	ς	$\backslash \mathtt{varsigma}$		
η	\eta	ξ	\xi	au	\tau		
Γ	$\backslash \mathtt{Gamma}$	Λ	$\backslash \mathtt{Lambda}$	\sum	$\backslash \mathtt{Sigma}$	Ψ	$\backslash \mathtt{Psi}$
Δ	$ackslash exttt{Delta}$	Ξ	\Xi	Υ	$ackslash ext{Upsilon}$	Ω	$\backslash \mathtt{Omega}$
Θ	$ackslash exttt{Theta}$	П	\Pi	Φ	\Phi		

1

表 3: 二元关系 (在相关的命令上加 \not 命令, 可以得到其否定形式)

```
\leq \leq or \le
                                                                                                       \geq
                                                                                                                       \geq or \ge

  \equiv
≪ \11
                                                                                                                        \gg
                                                                                                                                                                                                                     \doteq \doteq
                                                                                                      \gg
< \prec
                                                                                                                        \succ
                                                                                                                                                                                                                     \sim \ \backslash \text{sim}
\leq \preceq
                                                                                                       \simeq \simeq
\setminus \mathtt{supset}
                                                                                                                                                                                                                    \approx \approx
\subseteq
                     \subseteq
                                                                                                       \supseteq \supseteq
                                                                                                                                                                                                                  \cong \setminus \mathsf{cong}
\bowtie \Join
\sqrubseteq \supseteq \sqrubseteq
                                                                                                                                                                                                                   ⋈ \bowtie
 \in
                                                                                                                        \ni or \owns \propto \propto
                     \in
                     \backslash vdash
                                                                                                        \dashv
                                                                                                                        \backslash \mathtt{dashv}
                                                                                                                                                                                                                     \models \models
                     \backslash \mathtt{mid}
                                                                                                                             \parallel
                                                                                                                                                                                                                     \perp \perp
                      \backslash \mathtt{smile}
                                                                                                                               \frown
                                                                                                                                                                                                                                           \agnumber \agn
                                                                                                                                                                                                                     \asymp
                                                                                                         ∉
                                                                                                                               \setminusnotin
                                                                                                                                                                                                                     \neq \neq or \ne
```

表 4: 二元运算符

+	+	_	-		
\pm	\pm	Ŧ	mp	◁	$ackslash ag{triangleleft}$
	$\backslash \mathtt{cdot}$	÷	$\backslash \mathtt{div}$	\triangleright	$ackslash ag{triangleright}$
×	ackslashtimes	\	\setminus setminus	*	\star
\cup	\cup	\cap	$\backslash \mathtt{cap}$	*	\setminus ast
\sqcup	\sqcup	П	\sqcap	0	\circ
\vee	\ve or $\lower \$	\land	$\backslash \mathtt{wedge}$ or $\backslash \mathtt{land}$	•	$ackslash ext{bullet}$
\oplus	ackslashoplus	\ominus	$\backslash \mathtt{ominus}$	\Diamond	$\backslash \mathtt{diamond}$
\odot	$\setminus \mathtt{odot}$	\oslash	ackslash	\forall	\setminus uplus
\otimes	$\backslash \mathtt{otimes}$	\bigcirc	ackslashbigcirc	П	$\backslash \mathtt{amalg}$
\triangle	$ackslash ext{bigtriangleup}$	∇	$ackslash ext{bigtriangledown}$	†	$\backslash \mathtt{dagger}$
\triangleleft	$\backslash exttt{lhd}$	\triangleright	$ackslash{ ext{rhd}}$	‡	$\backslash \mathtt{ddagger}$
\leq	\setminus unlhd	\trianglerighteq	$\backslash \mathtt{unrhd}$?	\wr

表 5: "大"运算符

	•			•	
\sum	$\setminus \mathtt{sum}$	\bigcup	$ackslash ext{bigcup}$	\vee	ackslashbigvee
\prod	$\operatorname{\backslash}\mathtt{prod}$	\cap	$ackslash ext{bigcap}$	\wedge	$\backslash \texttt{bigwedge}$
\coprod	$\backslash { t coprod}$	\sqcup	$ackslash ext{bigsqcup}$	+	$ackslash ext{biguplus}$
\int	$\setminus \mathtt{int}$	∮	$\setminus \texttt{oint}$	\odot	$\backslash {\tt bigodot}$
\oplus	$\backslash {\tt bigoplus}$	\otimes	$\backslash \mathtt{bigotimes}$		

表 6: 箭头

\leftarrow	\leftarrow or \gets		\longleftarrow
_			\longleftarrow
\rightarrow	\rightarrow or \to	\longrightarrow	ackslashlongrightarrow
\leftrightarrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\longleftrightarrow	$\verb \longleftrightarrow \\$
\Leftarrow	$ackslash ext{Leftarrow}$	\iff	$ackslash ext{Longleftarrow}$
\Rightarrow	$ackslash ext{Rightarrow}$	\Longrightarrow	$ackslash ext{Longrightarrow}$
\Leftrightarrow	$ackslash ext{Leftrightarrow}$	\iff	\Longleftrightarrow
\mapsto	$\mbox{\tt mapsto}$	\longmapsto	$\label{longmapsto} \$
\leftarrow	$ackslash ext{hookleftarrow}$	\hookrightarrow	\hgapha hookrightarrow
	$\label{leftharpoonup}$		\rightharpoonup
$\overline{}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\rightarrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
\rightleftharpoons	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\iff	\iff
\uparrow	\uparrow	\downarrow	$\backslash { t downarrow}$
\updownarrow	\undergoons updownarrow	\uparrow	\Uparrow
\Downarrow	$\backslash { t Downarrow}$	\updownarrow	$ackslash ext{Updownarrow}$
7	\nearrow	\searrow	\searrow
_	\swarrow		\nwarrow
\sim	$\label{leadsto}$		

表 7: 定界符

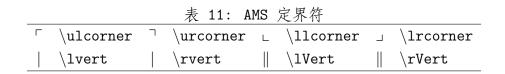
```
\uparrow
     [ or \lbrack
                                                                                                                                                                                                                                                                                                                                                                                                 ] or \rbrack
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \backslash downarrow
\ or \rbrace \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \updownarrow
\ rangle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \mid or \backslashvert
\label{lfloor}
                                                                                                                                                                                                                                                                                                                                                                                              \rdownrfloor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \c 
                                                                                                                                                                                                                                                                                                                                                                                                 \begin{tabular}{ll} \beg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \underline{\normalfootnotemark} \underline{\normalfootnotema
                                                                                                                                                                                                                                                                                                                                                                                                 \backslash {\tt Downarrow}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \backslash \mathtt{Uparrow}
\c
```

表 8: 大定界符

ι	\lgroup	J	\rgroup	_	\lmoustache
	$\backslash { t arrowvert}$		$\backslash \texttt{Arrowvert}$		$\backslash \mathtt{bracevert}$
_	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $				

			表 9: 其位	也符	号		
	$\backslash \mathtt{dots}$		$\backslash \mathtt{cdots}$:	$\backslash exttt{vdots}$	٠	$\backslash \mathtt{ddots}$
\hbar	$ackslash ext{hbar}$	\imath	\setminus imath	J	$\setminus \mathtt{jmath}$	ℓ	ackslashell
\Re	\Re	\Im	$\backslash \mathtt{Im}$	×	α	\wp	\wp
\forall	$\backslash \texttt{forall}$	\exists	\setminus exists	Ω	$\backslash \mathtt{mho}$	∂	$ackslash ext{partial}$
′	1	1	$\operatorname{\backslash}\mathtt{prime}$	Ø	$\backslash \mathtt{emptyset}$	∞	$\setminus \mathtt{infty}$
∇	\n	\triangle	$ackslash ext{triangle}$		$\backslash \mathtt{Box}$	\Diamond	$\backslash \mathtt{Diamond}$
\perp	\bot	Т	ackslashtop	_	$\setminus \mathtt{angle}$	$\sqrt{}$	\surd
\Diamond	$\backslash {\tt diamondsuit}$	\Diamond	$ackslash ext{heartsuit}$	•	\club{suit}	\spadesuit	$ackslash ext{spadesuit}$
\neg	$\neg or \neg$	b	$ackslash extsf{flat}$	Ц	\setminus natural	#	ackslashsharp

表	10:	非数	文学	符号 (可以在)	文本	模式中使用)
† \dag	; §	$\setminus \mathtt{S}$	©	ackslash copyright	®	ackslashtextregistered
	ıg ¶	\P	£	\setminus pounds	%	\%





丰	12.	٨мс	二元关系
衣	13:	AMP	一儿大糸

	•				
<	\lessdot	>	\gtrdot	÷	\doteqdot
\leq	ackslashleqslant	\geqslant	\geqslant	≓	$\$ risingdotseq
<	ackslasheqslantless	\geqslant	$ ext{ ext{ ext{ ext{ ext{ ext{ ext{ ext$	$\ \ \dot{=}$	$\fill \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
\leq	\leqq	\geq	\geqq	<u> </u>	$\setminus ext{eqcirc}$
///	\label{lilear}	>>>	\ggg	<u>•</u>	\circeq
\lesssim	ackslashlesssim	\gtrsim	\gtrsim	\triangleq	$ackslash ext{triangleq}$
\lessapprox	ackslashlessapprox	\gtrapprox	$\gray gtrapprox$	<u>~</u>	$\backslash \mathtt{bumpeq}$
\leq	ackslashlessgtr		\gtrless	≎	$\backslash \mathtt{Bumpeq}$
\leq	ackslashlesseqgtr	\geq	$\gray gtreqless$	~	ackslashthicksim
₩ VIINVIIN W	ackslashlesseqqgtr	/\	$\backslash { t gtreqqless}$	\approx	ackslashthickapprox
\preccurlyeq	$ackslash ext{preccurlyeq}$	×	\slash succcurlyeq	\approxeq	\arrowvert approxeq
\curlyeqprec	$\c curly eqprec$	\succcurlyeq	$\c varly eqsucc$	\sim	acksim
$\stackrel{\textstyle \sim}{\sim}$	$\backslash \mathtt{precsim}$	\succeq	$\setminus \mathtt{succsim}$	\geq	acksimeq
\lessapprox	\precapprox	$\stackrel{\textstyle \star}{\approx}$	$\setminus \mathtt{succapprox}$	F	ackslash
\subseteq	$ackslash ext{subseteqq}$	\supseteq	\slash supseteqq	⊩	ackslash
П	ackslashshortparallel	\supset	$\setminus \mathtt{Supset}$	$\parallel \vdash$	ackslash
⋖	$ackslash ext{blacktriangleleft}$		$\setminus \mathtt{sqsupset}$	Э	ackbrackepsilon
\triangleright	$ackslash ext{vartriangleright}$	•:	ackslashbecause	\propto	ackslash varpropto
>	ackslash black triangle right	©	$\backslash { t Subset}$	Ŏ	ackslashbetween
\trianglerighteq	$ackslash ext{trianglerighteq}$	$\overline{}$	\slash smallfrown	ф	$ackslash exttt{pitchfork}$
\triangleleft	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	1	$\backslash \mathtt{shortmid}$	\smile	$\backslash \mathtt{smallsmile}$
\subseteq	\trianglelefteq		ackslashtherefore		\sqsubset

表 14: AMS 箭头

	· · · · · · · · · · · · · · · · · · ·		
←	ackslashleftarrow	>	ackslashdashrightarrow
otin	ackslashleftleftarrows	\Rightarrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
$\stackrel{\longleftarrow}{\longrightarrow}$	$\backslash { t leftrightarrows}$	$\stackrel{\longrightarrow}{\longleftrightarrow}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
\Leftarrow	$ackslash ext{Lleftarrow}$	\Rightarrow	$\backslash ext{Rrightarrow}$
~	$ackslash ag{twoheadleftarrow}$	\longrightarrow	ackslash an two headright arrow
\longleftrightarrow	ackslashleftarrowtail	\longrightarrow	\rightarrow tail
$\stackrel{\longleftarrow}{\Longrightarrow}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\rightleftharpoons	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
$ \uparrow $	ackslashLsh	ightharpoons	ackslashRsh
\leftarrow	ackslashlooparrowleft	\hookrightarrow	ackslashlooparrowright
$ \leftarrow $	$\c \c \$	\bigcirc	$\c \c \$
Q	$ackslash ext{circlearrowleft}$	\bigcirc	$ackslash ext{circlearrowright}$
<u> </u>	$\backslash \mathtt{multimap}$	$\uparrow\uparrow$	ackslash upuparrows
$\downarrow\downarrow$	$\backslash {\tt downdownarrows}$	1	\upharpoonleft
_	\upharpoonright		$\dot{downharpoonright}$
~ →	\rightsquigarrow	~~ →	$\label{leftrightsquigarrow} $$ \end{substruction} $$ substr$

表 15: AMS 二元否定关系符和箭头

*	\nless	*	\ngtr	¥	\varsubsetneqq
\leq	\label{lneq}	\geq	\gneq	\supseteq	$ackslash ext{varsupsetneqq}$
≰	\nleq	$\not\geq$	$\backslash \mathtt{ngeq}$	$\not\sqsubseteq$	$ackslash ext{nsubseteqq}$
\nleq	\nleqslant	$\not\geq$	\ngeqslant	$\not\supseteq$	\nsupseteqq
$\not\leq$	\label{lneqq}	\geq	$\gray gneqq$	1	$\backslash \mathtt{nmid}$
\leqq	$lem:lemma_lemma$	\geqq	$\gray gray gray gray gray gray gray gray $	#	nparallel
≰	\nleqq	$\not \geq$	\ngeqq	ł	$\backslash \mathtt{nshortmid}$
\lesssim	\label{lnsim}	\gtrsim	$\backslash \mathtt{gnsim}$	Ħ	ackslash nshortparallel
≨	lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	⋧	$\gray gnapprox$	~	$\backslash \mathtt{nsim}$
$ \prec$	\n	$\not\succ$	$\backslash \mathtt{nsucc}$	\ncong	$\backslash \texttt{ncong}$
$\not\preceq$	\n	$\not\succeq$	$\backslash \mathtt{nsucceq}$	$\not\vdash$	$\backslash \mathtt{nvdash}$
$\not \cong$	$\backslash \mathtt{precneqq}$	$\not\succeq$	$\setminus \mathtt{succneqq}$	¥	\nvDash
\precsim	$\backslash \mathtt{precnsim}$	\searrow	$\setminus \mathtt{succnsim}$	\mathbb{H}	\nVdash
⋨	$\backslash \texttt{precnapprox}$	≿ ≋	$\setminus \mathtt{succnapprox}$	$\not\Vdash$	\nVDash
\subsetneq	$\setminus \mathtt{subsetneq}$	\supseteq	$\setminus \mathtt{supsetneq}$		$ackslash ext{ntriangleleft}$
$\not\subseteq$	$\backslash {\tt varsubsetneq}$	\supseteq	$\backslash {\tt varsupsetneq}$	$\not\!$	$ackslash ext{ntriangleright}$
$\not\sqsubseteq$	$ackslash ext{nsubseteq}$	$ ot \geq$	$ackslash ext{nsupseteq}$	$\not riangle$	\n ntrianglelefteq
\subseteq	$\setminus \mathtt{subsetneqq}$	\supseteq	$\setminus \mathtt{supsetneqq}$	$\not\trianglerighteq$	\ntrianglerighteq
$\leftarrow\!$	\nleftarrow	$\rightarrow \rightarrow$	\nrightarrow	$\leftrightarrow \rightarrow$	\nleftrightarrow
#	\n	#	\n Rightarrow	₩	\n Leftrightarrow

表 16: AMS 二元运算符

		· / L	/ -	\sim γ_1	11
÷	$\setminus \mathtt{dotplus}$		$\backslash { t center dot}$		
\bowtie	$\backslash exttt{ltimes}$	\rtimes	$\backslash \mathtt{rtimes}$	*	$\backslash \mathtt{divideontimes}$
$\displaystyle \bigcup$	$\backslash \mathtt{doublecup}$	\bigcap	$ackslash ext{doublecap}$	\	$\backslash \mathtt{smallsetminus}$
$\underline{\vee}$	$ackslash ext{veebar}$	$\overline{\wedge}$	ackslash barwedge	$\bar{\wedge}$	$\backslash \mathtt{doublebarwedge}$
\blacksquare	ackslashboxplus		ackslashboxminus	\bigcirc	ackslash
\boxtimes	ackslashboxtimes	$\overline{\cdot}$	ackslash boxdot	0	$\backslash ext{circledcirc}$
Т	\setminus intercal	*	$\backslash \texttt{circledast}$	\angle	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
Υ	$\c varly vee$	人	$\c urly wedge$	\nearrow	$\label{leftthreetimes}$

表 17: AMS 其他符号

		. , -	/ \ \ \ \ \		
\hbar	\hbar	\hbar	\hslash	k	\Bbbk
	\square		acksquare	\odot	$\backslash \texttt{circledS}$
Δ	$\setminus ext{vartriangle}$	A	ackslashblacktriangle	C	$\setminus \texttt{complement}$
∇	$ackslash ext{triangledown}$	\blacksquare	$\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$	G	$\backslash \mathtt{Game}$
\Diamond	\setminus lozenge	♦	$ackbox{blacklozenge}$	*	$ackslash ext{bigstar}$
_	$\setminus \mathtt{angle}$	4	$\mbox{\tt measured}$ angle		
/	$\backslash exttt{diagup}$		$\backslash \mathtt{diagdown}$	1	$\backslash \mathtt{backprime}$
∄	ackslash nexists	Ь	$\backslash \texttt{Finv}$	Ø	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
\eth	ackslasheth	∢	\slash sphericalangle	Ω	$\backslash \mathtt{mho}$

表 18: 数学字母

示例	命令	所需宏包
ABCDEabcde1234	\mathrm{ABCDE abcde 1234}	
ABCDEabcde 1234	\mathit{ABCDE abcde 1234}	
ABCDEabcde1234	\mathnormal{ABCDE abcde 1234}	
$\mathcal{ABCDE} \dashv \text{lin} \infty \in \ni \triangle$	\mathcal{ABCDE abcde 1234}	
\mathcal{ABCDE}	\mathscr{ABCDE abcde 1234}	mathrsfs
ABCD Eabede1234	\mathfrak{ABCDE abcde 1234}	amsfonts or amssymb
ABCDED####	\mathbb{ABCDE abcde 1234}	amsfonts or amssymb