LaTeX 数学符号表

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表格

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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,需要在导言区先载入 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	音符	号
\hat{a}	\hat{a}	\check{a}	\check{a}	\tilde{a}	$ ag{tilde{a}}$
\grave{a}	\grave{a}	\dot{a}	$\det\{a\}$	\ddot{a}	\dot{a}
\bar{a}	$\begin{tabular}{l} \begin{tabular}{l} tabu$	\vec{a}	\vec{a}	\widehat{A}	\widehat{A}
\acute{a}	\acute{a}	$reve{a}$	\brue{a}	\widetilde{A}	$\verb \widetilde{A} $

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

表 3: 希腊字母 (在相关的命令上加 \not 命令, 可以得到其否定形式)

```
<
                       >
<
    \leq \ \geq \ \leq \
\leq

  \equiv
                                       \doteq \doteq
\ll 11
                   \gg
                       \gg
< \prec
                       \succ
                   \succ
                                       \sim \sim
\preceq \preceq
                   \simeq \simeq
   \setminussubset
                   ⊃ \supset
\subset
                                       \approx \approx
\subseteq
   \subseteq
                   \supseteq \supseteq
                                       \cong \setminus \mathsf{cong}
\sqsubset
                   \bowtie \Join
\setminussqsubseteq \supseteq
                      \sqsupseteq
                                       \bowtie \bowtie
                       \ni or \owns \propto \propto
\in
    \in
                   \ni
                                       \dashv
    \vdash
                       \dashv
    \mid
                   \parallel
                                       \perp \perp
                                           \aggreenasymp
    \smile
                       \frown
                                       \simeq
                                           \neq or \ne
                   ∉
                       \setminusnotin
                                       \neq
```

表 4: 二元运算符

+	+	_	-		
\pm	\pm	干	mp	◁	\triangleleft
•	$\backslash \mathtt{cdot}$	÷	\div	\triangleright	\triangleright
×	ackslashtimes	\	\setminus setminus	*	\star
\bigcup	\cup	\cap	\cap	*	\setminus ast
Ц	\sqcup	П	\sqcap	0	\circ
\vee	\ve or $\label{lorentz}$	\wedge	\wedge or \land	•	ackslashbullet
\oplus	\setminus oplus	\ominus	$\backslash \mathtt{ominus}$	\Diamond	$\backslash \mathtt{diamond}$
\odot	$\setminus { t odot}$	\oslash	ackslash	\forall	\setminus uplus
\otimes	$\backslash \mathtt{otimes}$	\bigcirc	\bigcirc	П	$\backslash \mathtt{amalg}$
\triangle	$\$ bigtriangleup	∇	$\$ bigtriangledown	†	$ackslash ext{dagger}$
\triangleleft	$\backslash exttt{lhd}$	\triangleright	\rho	‡	$\backslash \mathtt{ddagger}$
\leq	\setminus unlhd	\trianglerighteq	$\under unrhd$	}	\wr

表 5: "大"运算符 $\setminus \mathtt{sum}$ \\ \bigvee \prod \prod $ackslash ext{bigcap}$ \bigwedge \bigwedge \bigcap $\backslash \texttt{coprod}$ ackslash bigsqcup+ \biguplus \int ∮ $\setminus \mathtt{oint}$ ○ \bigodot $\setminus \mathtt{int}$ ackslashbigotimes \bigoplus $\backslash \text{bigoplus} \ igotimes$

表 6: 箭头

\leftarrow	\leftarrow or \gets	\leftarrow	ackslash longleftarrow		
\rightarrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\longrightarrow	ackslashlongrightarrow		
\leftrightarrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\longleftrightarrow	$\label{longleftrightarrow} \$		
\Leftarrow	$ackslash ext{Leftarrow}$	\leftarrow	$ackslash ext{Longleftarrow}$		
\Rightarrow	$ackslash ext{Rightarrow}$	\Longrightarrow	$ackslash ext{Longrightarrow}$		
\Leftrightarrow	ackslash Leftrightarrow	\iff	$ackslash ext{Longleftrightarrow}$		
\mapsto	$\mbox{\tt mapsto}$	\longmapsto	$\label{longmapsto} \$		
\leftarrow	$\backslash \texttt{hookleftarrow}$	\hookrightarrow	$ackslash ext{hookrightarrow}$		
	ackslashleftharpoonup	\rightarrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $		
$\overline{}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$\overline{}$	$ackslash ext{rightharpoondown}$		
\rightleftharpoons	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\iff	\iff		
\uparrow	\uparrow	\downarrow	$\backslash { t downarrow}$		
\updownarrow	\updownarrow	\uparrow	\Uparrow		
\Downarrow	$\backslash { t Downarrow}$	\updownarrow	$ackslash ext{Updownarrow}$		
7	\nearrow	\searrow	\searrow		
/	\swarrow		\nwarrow		
\sim	ackslashleadsto				

```
\uparrow
            (
            [ or \lbrack
                                  ] or \rbrack
                                                        \downarrow
            \{ or \lbrace
                                  \} or \rbrace
                                                        \updownarrow
                                                        | or \vert
            \langle
                                  \rangle
            \lfloor
                                  \rfloor
                                                        \lceil
                                                        \updownarrow
                                  \backslash
                                                        \| or \Vert
                                  \Downarrow
            \Uparrow
            \rceil
                                表 8: 大定界符
                                                       \lmoustache
                \lgroup
                                    \rgroup
                \arrowvert
                                    \Arrowvert
                                                       \bracevert
                ackslash{	ext{rmoustache}}
                                表 9: 其他符号
     \dots
                       . . .
                             \cdots
                                            :
                                               \vdots
                                                                    \ddots
\hbar
     \hbar
                             \imath
                                               \jmath
                                                             \ell
                                                                    \ell
                       \imath
                                           J
\Re
     \Re
                       \Im
                                           X
                                               \aleph
                             \backslash Im
                                                             Q
                                                                    \wp
\forall
                                           75
                                                             \partial
                                                                    \partial
     \forall
                       \exists
                             \exists
                                               \backslashmho
                       /
                             \prime
                                               \emptyset
                                                                    \infty
                                                             \infty
\nabla
                             \triangle
                                               \backslash Box
                                                             \Diamond
                                                                    \Diamond
     \nabla
                       \triangle
                                           \bot
                       \top
                                                                    \surd
\perp
                             \top
                                               \angle
     \diamondsuit
                       \bigcirc
\Diamond
                             \heartsuit
                                               \clubsuit
                                                                    \spadesuit
     \neg or \lnot
                             \flat
                                                \natural
                                                                    \sharp
                   表 10: 非数学符号 (可以在文本模式中使用)
                                 \copyright ® \textregistered
             \dag
                         \S ©
                                                   \%
             \ddag
                         \P
                             £
                                 \pounds
                               表 11: AMS 定界符
           \ulcorner
                            ackslash urcorner lackslash
                                            \llcorner
                                                             \lrcorner
                                            \lVert
                                                             \rVert
           ackslash lvert
                            \rvert
```

表 7: 定界符

表 12: AMS 希腊和希伯来字母

F \digamma \(\times \) \varkappa \(\] \\ \beth \(\] \\ \gimel \(\]	<pre>7 \daleth</pre>
--	----------------------

	表	13:	AMS 二元关系		
<	ackslashlessdot	>	\gtrdot	÷	$\backslash { t doteq} { t dot}$
\leq	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\geqslant	geqslant	≓	$ackslash ext{risingdotseq}$
<	$ ext{ ext{ ext{ ext{ ext{ ext{ ext{ ext$	\geqslant	$ ext{ ext{ ext{ ext{ ext{ ext{ ext{ ext$	≒	$\backslash { t falling dots eq}$
\leq	\leqq	\geq	\geqq		$\backslash ext{eqcirc}$
///	\label{liles}	>>>	\ggg	<u>•</u>	$\backslash ext{circeq}$
\lesssim	$\backslash \mathtt{lesssim}$	\gtrsim	$\backslash \mathtt{gtrsim}$	$\stackrel{\triangle}{=}$	$ackslash ext{triangleq}$
\lessapprox	ackslashlessapprox	\gtrsim	$\gray gtrapprox$	<u>~</u>	$\backslash \mathtt{bumpeq}$
	\lessgtr	\geq	\gtrless	\$	$\backslash \mathtt{Bumpeq}$
\leq	ackslashlesseqgtr	\geq	$\setminus \mathtt{gtreqless}$	\sim	ackslashthicksim
	ackslashlesseqqgtr		ackslash gtreqqless	\approx	ackslashthickapprox
\preccurlyeq	\preccurlyeq	\succcurlyeq	$\setminus \mathtt{succcurlyeq}$	\approx	$\backslash { t approxeq}$
\curlyeqprec	\curlyeqprec	\succcurlyeq	$\c curly eqsucc$	\sim	acksim
\lesssim	$\backslash \mathtt{precsim}$	\succeq	$\setminus exttt{succsim}$	\geq	acksimeq
\approx	$\prescript{precapprox}$	$\gtrsim \approx$	$\setminus \mathtt{succapprox}$	F	ackslash
\subseteq	$\setminus \mathtt{subseteqq}$	\supseteq	$\setminus \mathtt{supseteqq}$	\vdash	ackslash
П	ackslashshortparallel	\ni	$\setminus \mathtt{Supset}$	$II\vdash$	ackslash
◄	$\begin{tabular}{ll} \verb& blacktriangleleft \\ \end{tabular}$		\setminus sqsupset	Э	ackbracebackepsilon
\triangleright	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	•••	ackslashbecause	\propto	ackslash varpropto
>	$\begin{tabular}{ll} \verb&\blacktriangleright \\ \end{tabular}$	\subseteq	$ackslash ext{Subset}$	Ŏ	ackslashbetween
\geq	\trianglerighteq	\frown	$\backslash \mathtt{smallfrown}$	ф	$ackslash ext{pitchfork}$
\triangleleft	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	1	$\backslash \mathtt{shortmid}$	\smile	$\backslash \mathtt{smallsmile}$
\leq	\trianglelefteq	<i>:</i> .	ackslashtherefore		\setminus sqsubset

表 14: AMS 箭头

	次 14.	AMS	肌
←	ackslashleftarrow	>	$\backslash \mathtt{dashrightarrow}$
$ \leftarrow $	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\Rightarrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
$\stackrel{\longleftarrow}{\longrightarrow}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$\stackrel{\longrightarrow}{\longleftrightarrow}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
\Leftarrow	$ackslash ext{Lleftarrow}$	\Rightarrow	$ackslash ext{Rrightarrow}$
~~	$ackslash ag{twoheadleftarrow}$	$\longrightarrow\!$	\t twoheadrightarrow
\longleftrightarrow	$\backslash ext{leftarrowtail}$	\rightarrowtail	$\$ rightarrowtail
	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$\overline{}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
$ \uparrow $	ackslashLsh	ightharpoons	ackslashRsh
\leftarrow P	$\label{looparrowleft} \$	$ \hookrightarrow $	ackslashlooparrowright
$ \leftarrow $	$\c \c \$	\curvearrowright	$\c \c \$
O	$\c circlearrowleft$	\bigcirc	$ackslash ext{circlearrowright}$
<u> </u>	$\mbox{\tt multimap}$	$\qquad \qquad $	\upuparrows
$\downarrow \downarrow$	$\backslash { t downdownarrows}$	1	\upharpoonleft
1	\upharpoonright		$\dot downharpoonright$
<i>~</i> →	\rightsquigarrow	< ~~→	\leftrightsquigarrow

表 15: AMS 二元否定关系符和箭头

		10.		1 11 14	
$\not<$	\nless	\nearrow	\n	$\not\subseteq$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
\leq	\label{lneq}	\geq	$\gray gneq$	$\not\supseteq$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
$\not\leq$		$\not\geq$	$\backslash \mathtt{ngeq}$	$\not\sqsubseteq$	\nsubseteqq
\nleq	\nleqslant	$\not\geq$	\ngeqslant	$\not\supseteq$	\nsupseteqq
\leq	\label{lneqq}	\supsetneqq	$\gray gneqq$	†	\n
$\stackrel{ ext{ ext{ ext{\left}}}}{=}$	$lem:lemma_lemma$	\geq	$\gray gray gray gray gray gray gray gray $	#	
\nleq		$\not \geq$	\ngeqq	ł	\n nshortmid
\lesssim	\label{lnsim}	\gtrsim	$\backslash \mathtt{gnsim}$	Ħ	\n nshortparallel
≨	lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	≽	$\gray gnapprox$	∞	$\backslash \mathtt{nsim}$
\neq	\nprec	$\not\succ$	$\backslash \mathtt{nsucc}$	\ncong	$ \setminus ncong $
\npreceq	\n	$\not\succeq$	$\backslash \mathtt{nsucceq}$	$\not\vdash$	\nvdash
$\not\supseteq$	\precneqq	$\not\succeq$	$\setminus \mathtt{succneqq}$	$\not\models$	\nvDash
$\stackrel{\prec}{\sim}$	\precnsim	\searrow	$\setminus \mathtt{succnsim}$	\mathbb{H}	\nVdash
$\not \gg$	\precnapprox	≿	$\setminus \mathtt{succnapprox}$	$\not\Vdash$	\nVDash
\subsetneq	\setminus subsetneq	\supseteq	$\setminus \mathtt{supsetneq}$	$ ot \Delta$	\ntriangleleft
\subsetneq	$\backslash {\tt varsubsetneq}$	\supseteq	$\backslash {\tt varsupsetneq}$	$\not\triangleright$	\ntriangleright
$\not\subseteq$	\nsubseteq	$\not\supseteq$	\nsupseteq	$\not riangle$	\ntrianglelefteq
\subseteq	$\$ subsetneqq	\supseteq	$\setminus \mathtt{supsetneqq}$	$\not\trianglerighteq$	\n ntrianglerighteq
//	\nleftarrow	$\rightarrow \rightarrow$	$\backslash \mathtt{nrightarrow}$	$\leftrightarrow \rightarrow$	\nleftrightarrow
#	\n	\Rightarrow	\n Rightarrow	#	\n

表 16: AMS 二元运算符

$\dot{+}$	$\backslash \mathtt{dotplus}$		\setminus centerdot		
×	$\backslash exttt{ltimes}$	\bowtie	$\backslash \mathtt{rtimes}$	*	$\backslash \mathtt{divideontimes}$
\bigcup	$ackslash ext{doublecup}$	\bigcap	$\backslash { t doublecap}$	\	\slash smallsetminus
$\underline{\vee}$	ackslash veebar	$\overline{\wedge}$	ackslashbarwedge	\equiv	\dot{double} barwedge
\blacksquare	ackslashboxplus		ackslashboxminus	\bigcirc	$\backslash ext{circleddash}$
\boxtimes	ackslash boxtimes	lacksquare	$\backslash { t boxdot}$	0	$\backslash \texttt{circledcirc}$
Т	\setminus intercal	*	$\backslash \texttt{circledast}$	\angle	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
Υ	$\c urly vee$	人	$\c curly wedge$	\searrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $

表 17: AMS 其他符号

			人 11. 11110 天 1017 7		
\hbar	$ackslash ext{hbar}$	\hbar	ackslash	\Bbbk	\Bbbk
	\setminus square		acksquare	\bigcirc	$\backslash \texttt{circledS}$
Δ	$ackslash ext{vartriangle}$	A	ackslashblacktriangle	C	$\setminus {\tt complement}$
∇	$ackslash ag{triangledown}$	▼	$\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$	G	$\backslash { t Game}$
\Diamond	\setminus lozenge	♦	$ackbox{blacklozenge}$	*	$ackslash ext{bigstar}$
_	\setminus angle	4	$\mbox{\tt measured}$ angle		
/	$ackslash ext{diagup}$	\	$\backslash \mathtt{diagdown}$	1	ackslashbackprime
∄	\nexists	Ь	$\backslash \texttt{Finv}$	Ø	\setminus varnothing
\eth	ackslasheth	\triangleleft	\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 Eabede 1234	\mathfrak{ABCDE abcde 1234}	amsfonts or amssymb
ABCDEJKKKÞ	\mathbb{ABCDE abcde 1234}	amsfonts or amssymb