数学符号表

以下表格列出了数学模式中的所有常用符号。

要使用表3.11-3.15。必须在导言区先载入amssymb 宏包而且系统中安装了AMS 数学字体。表3.1- 数学模式重音符号。

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

表3.2 - 希腊字母。

	•						
α	\alpha	θ	\theta	0	О	υ	\upsilon
β	\beta	ϑ	\vartheta	π	\pi	φ	\phi
γ	\gamma	ı	\iota	σ	\varpi	ϕ	\varphi
δ	\delta	К	\kappa	ρ	\rho	X	\chi
ε	\epsilon	λ	\lambda	Q	\varrho	ψ	\psi
ε	\varepsilon	μ	\mu	σ	\sigma	ω	\omega
ζ	\zeta	V	\nu	5	\varsigma		
η	\eta	ξ	\xi	τ	\tau		
Γ	\Gamma	Λ	\Lambda	Σ	\Sigma	Ψ	\Psi
Δ	\Delta	[1]	\Xi	Υ	\Upsilon	Ω	\Omega
Θ	\Theta	П	\Pi	Φ	\Phi		

表 3.3 – 二元关系。

你可以在下列符号的相应命令前加上\not 命令,而得到其否定形式。

<	<	>	>	=	=
\leq	$\leq or \leq o$	\geq	\geq or \ge	\equiv	\equiv
\ll	\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	\d ashv	F	$\mbox{\mbox{$\backslash$}models}$
	\mid		\parallel	\perp	\perp
$\overline{}$	\smile	$\overline{}$	\frown	\simeq	\asymp
:	:	∉	\n	\neq	\neq or \ne

^a 使用 latexsym 宏包才能得到这个符号

表 3.4 - 二元运算符。

+	+	_	_				
\pm	\pm	干	\mp			◁	\triangleleft
	\cdot	÷	\div			\triangleright	\triangleright
×	\times	\	\setm:	inus		*	\star
\cup	\cup	\cap	\cap			*	\ast
\sqcup	\sqcup	П	\sqca _]	Р		0	\circ
\vee	\vee ,\lor	\wedge	_	e,\lan	ıd	•	\bullet
\oplus	\oplus	\ominus	\omin			\Diamond	\diamond
\odot	\odot	0	\osla:			\forall	\uplus
\otimes	\otimes	\bigcirc	\bigc:			П	\amalg
\triangle	\bigtriangleup	\triangle		riangle	edown	†	\dagger
◁	\lhd a	\triangleright	\rhd a			‡	\ddagger
\leq	\unlhd ^a	\geq	\unrho	d "		}	\wr
		表 3	5-"大	"运算	7符。		
\sum	\sum	U '	\bigcup)	\	/	\bigvee
$\overline{\prod}$	\prod	-	.bigcar		,	Ň	\bigwedge
Ϊ	\coprod	ii \	bigsqo∖			<u>+</u>)	\biguplus
ſ	\int	_	oint	•			\bigodot
\bigoplus	\bigoplus		8		\bigo		-
Ψ	. 01			たコ	. 0		
		オ	₹ 3.6 – 🛊	打头。			
\leftarrow	\leftarrow	or \g	ets	\leftarrow	\lor	ngle	ftarrow
\rightarrow	\rightarrow	or \.	to	\longrightarrow	\lor	ngri	ghtarrow
\longleftrightarrow	\leftrighta	arrow		\longleftrightarrow	\lor	ngle	ftrightarrow
\leftarrow	\Leftarrow			\Leftarrow	\Lor	ngle	ftarrow
\Rightarrow	\Rightarrow	J		\Longrightarrow	\Lo1	ngri	ghtarrow
\Leftrightarrow	\Leftrighta	arrow		\iff	\Lo1	ngle	ftrightarrow
\mapsto	\mapsto			\longmapsto		ngmap	
	•			\hookrightarrow	\hoo	kri	ghtarrow
	\leftharpoo	onup					arpoonup
_	\leftharpoo			\rightarrow	•		${\tt arpoondown}$
$\stackrel{\longleftarrow}{\longrightarrow}$	\rightlefth	narpo	ons	\iff		-	ger spaces)
1	\uparrow			\downarrow	\dot	marı	COW
\uparrow	\updownarro	WC		\uparrow	\Upa	arro	J.
\Downarrow	\Downarrow			1	\Upo	lowna	arrow
/	\nearrow			\	\sea	arro	Į.
/	\swarrow				\nwa	arro	Į.
\sim	$ackslash$ \leadsto a						

a使用 latexsym 宏包才能得到这个符号

```
表 3.7 - 定界符。
    (
                         )
                                             \uparrow
    [ or \lbrack
                         ] or \rbrack
                                             \downarrow
                                             \updownarrow
     \{ or \lbrace
                         \} or \rbrace
                                             | or \vert
     \langle
                         \rangle
    \lfloor
                         \rfloor
                                             \lceil
                                         ↑ \Updownarrow
                         \backslash
     \Uparrow
                         \Downarrow
                                             \| or \Vert
 \uparrow
     \rceil
                   表 3.8 - 大定界符。
     \lgroup
                                                  \lmoustache
                            \Arrowvert
     \arrowvert
                                                  \bracevert
     \rmoustache
                       表 3.9 - 其他符号。
                                   : \vdots
                                                  ·. \ddots
    \dots
                     \cdots
. . .
                                   j \jmath
                                                  \ell \quad \backslash \mathtt{ell}
 \hbar
    \hbar
                   i \imath
\Re
                   3 \Im
                                   \Re

⟨ \wp | 
    \forall
                   ∃ \exists
                                  \mho \mho ^a
                                                  \partial \partial
                      \prime
                                   \emptyset \emptyset
                                                  \infty \infty
                                   \square \Box ^a
                                                  \Diamond \Diamond ^a
\nabla
    \n
                   \triangle \triangle
                   \top
 \perp
    \bot
                       \top
                                   _
                                       \angle
                                                      \surd
    \diamondsuit
                                       \clubsuit
                                                      \spadesuit
                       \heartsuit
    \neg or \lnot
                       \flat
                                      \n
                                                      \sharp
                  <sup>a</sup>使用 latexsym 宏包才能得到这个符号
                        表 3.10 - 非数学符号。
也可以在文本模式中使用这些符号。
     † \dag
                    \S
                          © \copyright
                                            (R) \textregistered
                              \pounds
     ‡ \ddag
                 \P \setminus P
                          £
                                            %
                                                \%
                    表 3.11 - AMS 定界符。
   \ulcorner
                    \urcorner
                                     \llcorner
```

\lvert

\digamma

\rvert

arkappa \varkappa

表 3.12 - AMS 希腊和希伯来字母。

\lVert

☐ \beth ☐ \gimel

\rVert

¬ \daleth

表 3.13 – AMS 二元关系。

<	\lessdot		\		\ da+aada+
		>	\gtrdot	÷	\doteqdot
\leq	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\geqslant	\geqslant	≓	\rightarrow risingdotseq
\leq	$ ext{ ext{ ext{ ext{ ext{ ext{ ext{ ext$	\geqslant	$ ext{ ext{ ext{ ext{ ext{ ext{ ext{ ext$	=	\fallingdotseq
\leq	\leqq	\geq	\geqq		\eqcirc
///	\lll or \llless	>>>	\ggg		\circeq
\lesssim	\lesssim	\gtrsim	\gtrsim	\triangleq	$\$ triangleq
\lessapprox	$\label{lessapprox}$		\gtrapprox		\bumpeq
\leq	\lessgtr	\geq	\gtrless	≎	\Bumpeq
\leq	$\label{lesseqgtr}$	\geq	\gtreqless	\sim	$\$ thicksim
VIIVVIV W	$\label{lesseqqgtr}$	^8 /\/ ∧!\/\!I\	\gtreqqless	\approx	$\$ thickapprox
$\stackrel{-}{\preccurlyeq}$	\preccurlyeq	È	\succcurlyeq	\cong	\approxeq
\Rightarrow	\curlyeqprec	$\not\simeq$	\curlyeqsucc	\sim	$\begin{tabular}{ll} \begin{tabular}{ll} \beg$
\preceq	\precsim	\succeq	\succsim	\geq	$\begin{tabular}{l} \begin{tabular}{l} tabu$
Y≋∪II	\precapprox	⊩∪≋Y	\succapprox	⊨	\vDash
\subseteq	\subseteqq	\supseteq	\supseteqq	⊩	\Vdash
П	\shortparallel	\supset	\Supset	II⊢	\Vvdash
⋖	$\blue{blacktriangleleft}$	\supset	\sqsupset	Э	$\$ backepsilon
\triangleright	$\$ vartriangleright	·.·	\because	\propto	\varpropto
•	$\$ blacktriangleright	€	\Subset	Ŏ	\between
\trianglerighteq	$\$ trianglerighteq	$\overline{}$	\slash smallfrown	\forall	$\protect\$
\triangleleft	$\$ vartriangleleft	1	$\sl_shortmid$	\smile	$\sl_{smallsmile}$
\leq	\trianglelefteq	∴.	\therefore		\sqsubset

表 3.14 - AMS 箭头。

←	$\delta rrow$	>	\dashrightarrow
otin oti	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\Rightarrow	\rightrightarrows
$\stackrel{\longleftarrow}{\longrightarrow}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$\stackrel{\longleftarrow}{\longleftrightarrow}$	\rightleftarrows
\Leftarrow	\Lleftarrow	\Rightarrow	\Rrightarrow
₩-	\t twoheadleftarrow	\longrightarrow	\t twoheadrightarrow
\leftarrow	$\$ leftarrowtail	\rightarrowtail	\rightarrowtail
$\stackrel{\longleftarrow}{\Longrightarrow}$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\rightleftharpoons	\rightleftharpoons
$\overleftarrow{1}$	\Lsh	ightharpoons	\Rsh
\leftarrow	\looparrowleft	\hookrightarrow	\looparrowright
$ \leftarrow $	$\c vear rowleft$	\curvearrowright	\curvearrowright
Q	\circlearrowleft	\bigcirc	\circlearrowright
<u></u>	$\mbox{\mbox{\tt multimap}}$	$\uparrow\uparrow$	\upuparrows
$\downarrow\downarrow$	\downdownarrows	1	\upharpoonleft
1	\upharpoonright	ļ	\downharpoonright
\rightsquigarrow	\rightsquigarrow	< ∼~→	\leftrightsquigarrow

表 3.15 - AMS 二元否定关系符和箭头。

*	\nless	\neq	\ngtr	≨	\varsubsetneqq
\leq	\label{lneq}	\geq	\gneq	$\not\equiv$	\varsupsetneqq
≰		$\not\geq$	\ngeq	$\not\sqsubseteq$	\nsubseteqq
≰	\nleqslant	$\not\geq$	\ngeqslant	≨	\nsupseteqq
≨	\label{lneqq}	≩	\gneqq	1	\nmid
≨	$lem:lemma_lemma$	≩	\gvertneqq	#	\nparallel
≰		≱	\ngeqq	ł	\nshortmid
V# V# V# V% V%	\label{lnsim}	<u> </u>	\gnsim	Ħ	\nshortparallel
≨	$\label{lnapprox}$	æ	\gnapprox	\sim	\nsim
X	\nprec	X	\nsucc	\ncong	\ncong
\npreceq	\npreceq	$\not\succeq$	\nsucceq	$\not\vdash$	\nvdash
$\not\supseteq$	\precneqq	≠	\succneqq	¥	\nvDash
$\stackrel{\sim}{\sim}$	\precnsim	≿	\succnsim	\mathbb{H}	\nVdash
1≈	\precnapprox	, , , ,	\succnapprox	¥	\nVDash
\subsetneq	$\sl_subsetneq$	\supseteq	\supsetneq	$ ot \triangle$	\ntriangleleft
\subsetneq	$\$ varsubsetneq	\supseteq	\varsupsetneq	$\not\vdash$	\ntriangleright
⊈	\nsubseteq	$\not\supseteq$	\nsupseteq	≰	\ntrianglelefteq
$\not\sqsubseteq \subseteq \not$	$\sl_subsetneqq$	⊉	\supsetneqq	⊭	\ntrianglerighteq
\leftarrow	\nleftarrow	$\rightarrow \rightarrow$	\nrightarrow	$\leftrightarrow \rightarrow$	\nleftrightarrow
#	\n Leftarrow	\Rightarrow	\nRightarrow	#	\n

表 3.16 – AMS 二元运算符。

\dotplus	\dotplus		\c enterdot		
\bowtie	\ltimes	\rtimes	\rtimes	*	\divideontimes
$ \ \ \bigcup$	\doublecup	$ \ \ \bigcap$	\doublecap	\	\slash smallsetminus
$\underline{\vee}$	\veebar	$\overline{\wedge}$	\barwedge	$\overline{\wedge}$	\doublebarwedge
\blacksquare	\boxplus		\boxminus	\bigcirc	\circleddash
\boxtimes	\boxtimes	lacksquare	\boxdot	0	\circledcirc
Т	\intercal	*	\circledast	\angle	\rightthreetimes
Υ	\curlyvee	人	\curlywedge	\rightarrow	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $

表 3.17 – AMS 其他符号。

\hbar	\hbar	\hbar	\hslash	k	\Bbbk
	\square		\blacksquare	\odot	\circledS
\triangle	$\$ vartriangle	A	$\$ blacktriangle	С	\complement
∇	\triangledown	\blacksquare	$\$ blacktriangledown	G	\Game
\Diamond	\lozenge	♦	$\$ blacklozenge	*	\bigstar
\angle	\angle	4	$\mbox{\tt measured}$ angle		
/	\diagup		\diagdown	1	$\begin{tabular}{l} \begin{tabular}{l} tabu$
∄	\nexists	Ь	\Finv	Ø	$\vert varnothing$
9	\eth	\triangleleft	\sphericalangle	Ω	$\mbox{\ensuremath{nho}}$

表 3.18 - 数学字母。

实例	命令	所需宏包
ABCDEabcde1234	\mathrm{ABCDE abcde 1234}	
ABCDEabcde1234	\mathit{ABCDE abcde 1234}	
ABCDEabcde1234	\mathnormal{ABCDE abcde 1234}	
ABCDE	\mathcal{ABCDE abcde 1234}	
$\mathscr{A}\mathscr{B}\mathscr{C}\mathscr{D}\mathscr{E}$	\mathscr{ABCDE abcde 1234}	mathrsfs
ABCD Eabede 1234	\mathfrak{ABCDE abcde 1234}	amsfonts or amssymb
ABCDEJKKKÞ	\mathbb{ABCDE abcde 1234}	amsfonts or amssymb