#### Symbols defined by unicode-math

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#### Modified (df) to show Kpfonts Math symbols

This document uses the file unicode-math-table.tex to print every symbol defined by the unicode-math package. Use this document to find the command name or the Unicode glyph slot for a symbol that you wish to use. The following fonts are shown: (with approximate symbol counts)

- M Latin Modern Math (1602)
- S STIX Two Math (2445)
- E Erewhon Math (1669)
- K KpMath Regular (1610)
- P TeX Gyre Pagella Math (1655)
- L Libertinus Math (1657)
- G Garamond Math (1647)

Symbols defined in Plain T<sub>E</sub>X are indicated with <sup>(p)</sup> after their macro name. L<sup>A</sup>T<sub>E</sub>X follows Plain T<sub>E</sub>X, but defines a handful more, indicated with <sup>(l)</sup>. Symbols defined in amssymb are indicated with <sup>(a)</sup>.

Note that this list of fonts is not intended to be exhaustive but I am happy to add new fonts by request if they are distributed in TeX Live.<sup>1</sup>

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<sup>&</sup>lt;sup>1</sup>Only a single TEX Gyre Math font is shown here by design as they all largely have the same symbol coverage.

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# 1 Opening symbols, \mathopen

USV	M	S	Е	K	Р	L	G	Macro	Description
U+00028	(	(	(	(	(	(	(	\lparen	left parenthesis
u+0005в	[	[	[	[	[	[	[	\lbrack	left square bracket
и+0007в	{	{	{	{	{	{	{	$\label{lbrace} \$	left curly bracket
U+0221A					<b>√</b>		<b>√</b>	$\texttt{\sc sqrt}^{(p)}$	radical
U+0221B		<b>3</b> √				<b>3</b> √		\cuberoot	cube root
U+0 <b>22</b> 1C		<b>4</b> √				<b>4</b> √		\fourthroot	fourth root
U+02308	Γ	ſ	٢	Γ	ſ	ſ	ſ	$\label{lceil} \$	left ceiling
U+0230A	L	l	L	L	L	l	l	$\label{loor} \$	left floor
U+0 <b>2</b> 31C	г	Г	Г	Г	r	г	г	\ulcorner	upper left corner
U+0231E	L	L	L	L	L	L	L	\llcorner	lower left corner
u+023в0		ſ	ſ	ſ		ſ		$\label{lmoustache} $$\lim c = \sum_{p=1}^{p} (p)^p = \sum_{p=1}^{p} (p)^p$	upper left or lower right curly bracket section
u+02772		(						\lbrbrak	light left tortoise shell bracket ornament
u+027C5		l		ζ				\lbag	left s-shaped bag delimiter
U+0 <b>27</b> CC		)						\longdivision	long division
u+027E6			[		I			\1Brack	mathematical left white square bracket
U+027E8	<	(	(	<	<	<	(	$\label{eq:langle} $$ \arrowvert = (p) $$ \arrowvert = (p) $$$	mathematical left angle bracket
u+027EA	<b>«</b>	«	<b>(</b> (	«	<b>((</b>	<b>«</b>	((	\lAngle	mathematical left double angle bracket
U+027EC		(				(		\Lbrbrak	mathematical left white tortoise shell bracket
U+027EE	(	(	(	(	(	(	(	$\verb \lgroup ^{(p)}$	mathematical left flattened parenthesis

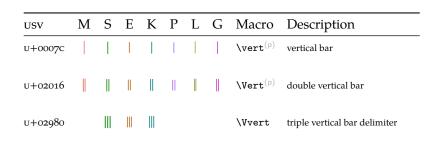
USV	M	S	E	K	P	L	G	Macro	Description
u+02983		{						\lBrace	left white curly bracket
u+02985		(						\1Paren	left white parenthesis
u+02987		1				(		\llparenthesis	z notation left image bracket
u+02989		4						\llangle	z notation left binding bracket
u+0298в		[						\lbrackubar	left square bracket with underbar
u+0298d								\lbrackultick	left square bracket with tick in top corner
u+0298f		[						\lbracklltick	left square bracket with tick in bottom corner
u+02991		<b>&lt;</b>						\langledot	left angle bracket with dot
U+02993		<						\lparenless	left arc less-than bracket
u+02995		*						\Lparengtr	double left arc greater-than bracket
u+02997		(						\lblkbrbrak	left black tortoise shell bracket
U+029D8		}						\lvzigzag	left wiggly fence
u+0 <b>2</b> 9da		***						\Lvzigzag	left double wiggly fence
u+0 <b>2</b> 9FC		<				<		\lcurvyangle	left pointing curved angle bracket

## 2 Closing symbols, \mathclose

USV	M	S	Е	K	P	L	G	Macro	Description
U+00021	!	!	!	!	!	!	!	\mathexclam	exclamation mark
U+000 <b>2</b> 9	)	)	)	)	)	)	)	\rparen	right parenthesis
U+0005D	]	]	]	]	]	]	]	\rbrack	right square bracket
U+0007D	}	}	}	}	}	}	}	$\verb \rbrace ^{(p)}$	right curly bracket
U+02309	7	1	1	1	1	1	1	$\c \c \$	right ceiling
u+0230в		J	J	J	J	J	J	$\verb \rfloor ^{(p)}$	right floor
U+0231D	٦	٦	٦	٦	٦	٦	٦	\urcorner	upper right corner
U+0231F	٦	٦	٦	٦	ú	٦	٦	\lrcorner	lower right corner
U+023B1		J	J	l		}		$\verb \mbox  \verb  tmoustache   $	upper right or lower left curly bracket section
u+02773		)						\rbrbrak	light right tortoise shell bracket ornament
u+027c6		S		S				\rbag	right s-shaped bag delimiter
u+027E7	]	1	]	]	]	]	]	\rBrack	mathematical right white square bracket
u+027E9	>	>	>	>	>	>	>	$\mathbf{\backslash rangle}^{(p)}$	mathematical right angle bracket
u+о <b>2</b> 7ЕВ	<b>»</b>	<b>»</b>	<b>&gt;&gt;</b>	<b>»</b>	<b>&gt;&gt;</b>	<b>&gt;&gt;</b>	<b>)</b>	\rAngle	mathematical right double angle bracket
U+027ED		D				)		\Rbrbrak	mathematical right white tor- toise shell bracket
U+0 <b>27</b> EF	)	)	)	)	)	)	)	$\verb \rgroup ^{(p)}$	mathematical right flattened parenthesis
u+02984		}						\rBrace	right white curly bracket
u+02986		)						\rParen	right white parenthesis
u+02988		D				)		\rrparenthesis	z notation right image bracket

USV	M	S	Е	K	Р	L	G	Macro	Description
u+0298a		<b>&gt;</b>						\rrangle	z notation right binding bracket
u+0 <b>2</b> 98c		]						\rbrackubar	right square bracket with un- derbar
u+0298e		]						\rbracklrtick	right square bracket with tick in bottom corner
u+0 <b>2</b> 990		]						\rbrackurtick	right square bracket with tick in top corner
U+02992		<b>&gt;</b>						\rangledot	right angle bracket with dot
u+0 <b>2</b> 994		>						\rparengtr	right arc greater-than bracket
u+0 <b>2</b> 996		¥						\Rparenless	double right arc less-than bracket
u+02998		)						\rblkbrbrak	right black tortoise shell bracket
U+0 <b>2</b> 9D9		*						\rvzigzag	right wiggly fence
U+029DB		***						\Rvzigzag	right double wiggly fence
u+0 <b>2</b> 9fd		>				>		\rcurvyangle	right pointing curved angle bracket

## 3 Fence symbols, \mathfence



## 4 Punctuation symbols, \mathpunct

USV	M	S	Е	K	Р	L	G	Macro	Description
U+0002C	,	,	,	,	,	,	,	\mathcomma	comma
U+0003A	:	:	:	:	:	:	:	\mathcolon	colon
и+0003в	;	;	;	;	;	;	;	\mathsemicolon	semicolon p:

#### 5 'Over' symbols, \mathover

USV	M	S	Е	K	P	L	G	Macro	Description
U+023B4	$\overline{x+y}$	$\overline{x+y}$	$\overline{x+y}$	$\overline{x+y}$	$\overline{x+y}$	x + y	$\overline{x+y}$	\overbracket	top square bracket
U+023DC	$\widehat{x+y}$	$\widehat{x+y}$	$\widehat{x+y}$	$\widehat{x+y}$	$\widehat{x+y}$	$\widehat{x+y}$	$\widehat{x+y}$	\overparen	top parenthesis (mathematical use)
U+023DE	$\widehat{x+y}$	$\widetilde{x+y}$	$\widehat{x+y}$	$\widehat{x+y}$	$\widehat{x+y}$	$\widetilde{x+y}$	$\widetilde{x+y}$	$\verb \voverbrace ^{(p)}$	top curly bracket (mathematical use)

#### 6 'Under' symbols, \mathunder

USV	M	S	Е	K	P	L	G	Macro	Description
U+023B5	$\underline{x+y}$	$\underline{x+y}$	x + y	$\frac{x+y}{}$	x + y	x + y	x + y	\underbracket	bottom square bracket
U+023DD	$\underbrace{x+y}$	\underparen	bottom parenthesis (mathematical use)						
u+023DF	$\underbrace{x+y}$	$\verb \underbrace ^{(p)}$	bottom curly bracket (mathematical use)						

#### 7 Accents, \mathaccent

Note that accents will only be properly placed if used with an OpenType font with the necessary information.

USV	M	S	Е	K	Р	L	G	Macro	Description
U+00300	à	x	x	à	x	x	à	\grave <sup>(p)</sup>	grave accent
U+00301	ź	ź	ź	ź	ź	ź	ź	$\texttt{\acute}^{(p)}$	acute accent
U+00302	$\hat{x}$	â	â	â	$\hat{x}$	â	$\hat{x}$	$\operatorname{\mathtt{hat}}^{(\operatorname{p})}$	circumflex accent
U+00303	$ ilde{x}$	$\tilde{x}$	$\tilde{x}$	$\tilde{x}$	$\tilde{x}$	$\tilde{x}$	$ ilde{x}$	$ttilde^{(p)}$	tilde
U+00304	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\mathtt{f bar}^{(\mathtt{p})}$	macron
U+00305	$\bar{x}$	$\bar{x}$	$\overline{x}$	$\overline{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	\overbar	overbar embellishment
u+00306	$reve{x}$	x	x	x	$\breve{x}$	x	x	\breve <sup>(p)</sup>	breve
U+00307	$\dot{x}$	$\dot{x}$	$\dot{\mathcal{X}}$	$\dot{X}$	$\dot{\mathcal{X}}$	$\dot{\mathcal{X}}$	$\dot{x}$	$\operatorname{\mathtt{dot}}^{(p)}$	dot above
U+00308	$\ddot{x}$	ÿ	$\ddot{x}$	$\ddot{x}$	$\ddot{x}$	ÿ	$\ddot{x}$	$\backslash \mathtt{ddot}^{(p)}$	dieresis
U+00309	$\dot{x}$	$\vec{X}$	χ̈́	$\mathring{X}$	x	x	$\dot{\vec{\mathcal{X}}}$	\ovhook	combining hook above
U+0030A	$\mathring{x}$	$\mathring{X}$	$\mathring{\mathcal{X}}$	x	$\mathring{\mathcal{X}}$	$\mathring{x}$	$\mathring{\mathcal{X}}$	\ocirc	ring
U+0030C	$\check{x}$	ž	ž	ž	ž	ž	ž	$\c \c \$	caron
U+00310		х̈́		χ̈́		$\dot{\ddot{x}}$		\candra	candrabindu (non-spacing)
U+00312		'n				χ́		\oturnedcomma	combining turned comma above
U+00315		'x				$\dot{\mathcal{X}}$		\ocommatopright	combining comma above right
U+0031A		x				$\vec{x}$		\droang	left angle above (non-spacing)
U+020D0	$\bar{x}$	ź	$\bar{x}$	ź	ź	$\dot{\bar{x}}$	$\dot{\bar{x}}$	\leftharpoonaccent	combining left harpoon above
U+020D1	$\vec{x}$	$\vec{x}$	$\vec{x}$	$\vec{x}$	$\vec{x}$	$\vec{x}$	$\vec{x}$	\rightharpoonaccent	combining right harpoon above
U+020D2	$\dot{x}$	x	k	$\star$	x		x	\vertoverlay	combining long vertical line overlay
U+020D7	$\vec{x}$	$\vec{x}$	$\vec{x}$	$\vec{x}$	$\vec{\chi}$	$\vec{x}$	$\vec{x}$	$\mathbf{vec}^{(p)}$	combining right arrow above

USV	M	S	Е	K	Р	L	G	Macro	Description
U+020DB	$\ddot{x}$	ÿ	$\ddot{x}$	ÿ	ÿ	ÿ	$\ddot{x}$	\dddot	combining three dots above
U+020DC	$\ddot{x}$	ï	$\overline{x}$	$\ddot{x}$	ïx	$\overline{x}$	$\frac{\dots}{x}$	\ddddot	combining four dots above
U+020E7		$\mathbf{x}$						\annuity	combining annuity symbol
U+020E9	$\bar{x}$	$\overline{x}$	$\overline{x}$	$\overline{x}$	$\vec{x}$		$\overline{x}$	\widebridgeabove	combining wide bridge above
U+0 <b>2</b> 0F0	$\mathring{x}$	* <i>x</i>	$\mathring{x}$	$\dot{\tilde{\chi}}$	$\mathring{\mathcal{X}}$		*	\asteraccent	combining asterisk above

#### 8 Accents wide, \mathaccentwide

USV	M	S	Е	K	P	L	G	Macro	Description
U+00302	$\widehat{x+y}$	$\widehat^{(p)}$	circumflex accent						
U+00303	$\widetilde{x+y}$	$\verb \widetilde ^{(p)}$	tilde						
U+00305	$\overline{x+y}$	$\overline{x+y}$	$\overline{x+y}$	$\overline{x+y}$	$\overline{x+y}$	$\overline{x+y}$	$x \neq y$	\wideoverbar	stretchy overbar embellishment
u+00306	$\underbrace{x+y}$	$x \neq y$	$\underbrace{x+y}$	$\underbrace{x+y}$	x + y	$\underbrace{x+y}$	$\underbrace{x+y}$	\widebreve	stretchy breve
u+0030C	$\underbrace{x+y}$	$\widetilde{x+y}$	$\widetilde{x+y}$	$\widetilde{x+y}$	x + y	$\underbrace{x+y}$	$\underbrace{x+y}$	\widecheck	stretchy caron
U+020D0	$\overline{x+y}$	x + y	$\overline{x+y}$	x + y	$\frac{1}{x+y}$	x + y	$\frac{1}{x+y}$	\overleftharpoon	combining left harpoon above
U+020D1	$\overrightarrow{x+y}$	\overrightharpoon	combining right harpoon above						
U+020D6	$\overleftarrow{x+y}$	$\overleftarrow{x+y}$	$\overleftarrow{x+y}$	$\overleftarrow{x+y}$	$\overleftarrow{x+y}$	$\overleftarrow{x+y}$	$\frac{1}{x+y}$	$\verb \overleftarrow ^{(p)}$	combining left arrow above
U+020D7	$\overrightarrow{x+y}$	$\verb \overrightarrow ^{(p)}$	combining left arrow above						
U+020E1	$\overleftarrow{x+y}$	\overleftrightarrow	combining left right arrow above						
									above

#### 9 Bottom accents, \mathbotaccent

usv	M	S	Е	K	Р	L	G	Macro	Description
U+020E8	$\underline{x}$	<u>.x</u>	<u>.x</u>	<u>x</u>	<u>X</u> .		<u>x</u> .	\threeunderdot	combining triple underdot

# 10 Bottom accents wide, \mathbotaccentwide

USV	M	S	Е	K	P	L	G	Macro	Description
U+00330	$\underbrace{x+y}$	$\underbrace{x+y}$	$\underbrace{x+y}$	$\underbrace{x+y}$	x + y	$\underbrace{x+y}$	x + y	\wideutilde	under tilde accent (multiple characters and non-spacing)
U+00332	$\underline{x+y}$	$\frac{x+y}{}$	$\frac{x+y}{}$	$\frac{x+y}{}$	$\frac{x+y}{}$	$\frac{x+y}{}$	<i>x</i> + <i>y</i>	\mathunderbar	combining low line
U+0034D	$\xrightarrow{x+y}$	x + y	$\xrightarrow{x+y}$	$\xrightarrow{x+y}$	$\xrightarrow{x+y}$	x + y	$\xrightarrow{x+y}$	\underleftrightarrow	underleftrightarrow accent
U+020EC	$\xrightarrow{x+y}$	$\xrightarrow{x+y}$	$\frac{x+y}{}$	$\xrightarrow{x+y}$	$\xrightarrow{x+y}$		$\frac{x+y}{}$	\underrightharpoondown	combining rightwards harpoon with barb downwards
U+020ED	$\underbrace{x+y}$	$\underbrace{x+y}$	$\frac{x+y}{}$	x + y	<u>x + y</u>		$\underbrace{x+y}$	\underleftharpoondown	combining leftwards harpoon with barb downwards
U+020EE	$\underbrace{x+y}$	$\underbrace{x+y}$	x + y	$\underbrace{x+y}$	x + y	x + y	x + y	\underleftarrow	combining left arrow below
U+020EF	$\xrightarrow{x+y}$	\underrightarrow	combining right arrow below						

#### 11 Big operators, \mathop

Of the operators shown below, a subset need to be flagged by unicode-math for \nolimits adjustments. The limits behaviour as specified by unicode-math are shown with grey subscripts and superscripts.

USV	M	S	Е	K	P	L	G	Macro	Description
U+0 <b>2</b> 140	1 0	$\sum_{0}^{1}$	\( \sum_{0}^{1} \)	$\sum_{0}^{1}$	$\sum_{0}^{1}$		$\sum_{0}^{1}$	\Bbbsum	double-struck n-ary summation
U+0220F	$\prod_{0}^{1}$	$\prod_{0}^{1}$	$\prod_{0}^{1}$		$\prod_{0}^{1}$	$\prod_{0}^{1}$	$\prod_{0}^{1}$	$\prod(p)$	product operator
U+0 <b>22</b> 10	$\coprod_{0}^{1}$	$\coprod_{0}^{1}$	$\coprod_{0}^{1}$		$\coprod_{0}^{1}$	$\prod_{0}^{1}$	$\coprod_{0}^{1}$	$\backslash \mathtt{coprod}^{(p)}$	coproduct operator
U+0 <b>22</b> 11	$\sum_{0}^{1}$	$\sum_{0}^{1}$	$\sum_{0}^{1}$	$\sum_{0}^{1}$	$\sum_{0}^{1}$	$\sum_{0}^{1}$	$\sum_{0}^{1}$	$\sum_{p} \mathbf{v}(p)$	summation operator
U+0222B	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\setminus \mathtt{int}^{(p)}$	integral operator
U+0 <b>222</b> C	$\int_{0}^{1}$	$\int_{0}^{1}$	$\int_{0}^{1}$	$\int_{0}^{1}$	$\int_{0}^{1}$	$\iint_0^1$	$\int_{0}^{1}$	\iint	double integral operator
U+0222D	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	\iiint	triple integral operator
U+0222E	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\setminus \mathtt{oint}^{(p)}$	contour integral operator
U+0222F	$\oint_0^1$	$\iint_0^1$	${\displaystyle\iint_{0}^{1}}$	$\iint_0^1$	${\displaystyle\iint_{0}^{1}}$	$\iint_0^1$	${\displaystyle\iint_{0}^{1}}$	\oiint	double contour integral operator
U+0 <b>223</b> 0	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	$\iint_0^1$	${\displaystyle\iint_{0}^{1}}$	\oiiint	triple contour integral operator
U+02231	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	\intclockwise	clockwise integral
U+02232	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	\varointclockwise	contour integral, clockwise
U+02233	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	$\oint_0^1$	\ointctrclockwise	contour integral, anticlockwise
U+0 <b>22</b> C0	$\bigwedge_{0}^{1}$	$\bigwedge_{0}^{1}$	$\bigwedge_{0}^{1}$	$\bigwedge_{0}^{1}$	$\bigwedge_{0}^{1}$	$\bigwedge_{0}^{1}$	$\bigwedge_{0}^{1}$	$\verb \bigwedge ^{(p)}$	logical and operator
U+0 <b>22</b> C1	$\bigvee_{0}^{1}$	$\bigvee_{0}^{1}$	$\bigvee_{0}^{1}$	1	$\bigvee_{0}^{1}$	$\bigvee_{0}^{1}$	$\bigvee_{0}^{1}$	\bigvee <sup>(p)</sup>	logical or operator

usv	M	S	Е	K	Р	L	G	Macro	Description
U+022C2	$\bigcap_{0}^{1}$	$\bigcap_{0}^{1}$	$\bigcap_{0}^{1}$		$\bigcap_{0}^{1}$		$\bigcap_{0}^{1}$	$\begin{subarray}{c} \begin{subarray}{c} \beg$	intersection operator
U+022C3	$\bigcup_{0}^{1}$	$\bigcup_{0}^{1}$	$\bigcup_{0}^{1}$		$\bigcup_{0}^{1}$	$\bigcup_{0}^{1}$	$\bigcup_{0}^{1}$	$\mathbf{bigcup}^{(p)}$	union operator
U+027D5		$\bigcup_{0}^{1}$						\leftouterjoin	left outer join
U+027D6		$ \stackrel{1}{\bowtie}_{0} $						\rightouterjoin	right outer join
U+027D7		$\sum_{0}^{1}$						\fullouterjoin	full outer join
U+027D8	1 0	$\int_{0}^{1}$	1	1 	1 0		1 0	\bigbot	large up tack
U+027D9	1 0	$\frac{1}{\int_{0}^{1}}$	1 0	1 0	1 0		1 0	\bigtop	large down tack
u+029F8		1 / 0						\xsol	big solidus
U+029F9		1						\xbsol	big reverse solidus
U+02A00	$\bigcup_{0}^{1}$	$\bigcup_{0}^{1}$	$\bigcup_{0}^{1}$	$\underbrace{\begin{array}{c} 1 \\ \bullet \end{array}}_{0}$	$\bigcup_{0}^{1}$	1	$\bigcup_{0}^{1}$	$\verb \bigodot ^{(p)}$	n-ary circled dot operator
U+0 <b>2</b> A01	$\bigoplus_{0}^{1}$	$\bigoplus_{0}^{1}$	$\bigoplus_{0}^{1}$	$\bigoplus_{0}^{1}$	$\bigoplus_{0}^{1}$	$\bigoplus_{0}^{1}$	$\bigoplus_{0}^{1}$	$\verb \bigoplus ^{(p)}$	n-ary circled plus operator
U+02A02	$\bigotimes_0^1$	$\bigotimes_{0}^{1}$	$\bigotimes_{0}^{1}$	$\bigotimes_{0}^{1}$	$\bigotimes_{0}^{1}$	$\bigotimes_{0}^{1}$	$\bigotimes_{0}^{1}$	$\verb \bigotimes ^{(p)}$	n-ary circled times operator
U+02A03					$\bigcup_{0}^{1}$	1		\bigcupdot	n-ary union operator with dot
U+02A04	1		1	1	1	1	1	$\mathbf{biguplus}^{(p)}$	n-ary union operator with plus
U+02A05					$\bigcap_{0}^{1}$	0		\bigsqcap	n-ary square intersection operator
u+02A06								$\verb \bigsqcup ^{(p)}$	n-ary square union operator
U+02A07								\conjquant	two logical and operator

USV	M	S	Е	K	P	L	G	Macro	Description
U+02A08								\disjquant	two logical or operator
U+02A09	$\underset{0}{\overset{1}{\times}}$	$X_0$	$\underset{0}{\overset{1}{\times}}$	$\sum_{0}^{1}$	$\underset{0}{\overset{1}{\times}}$		$\underset{0}{\overset{1}{\times}}$	\bigtimes	n-ary times operator
U+02A0A		$\sum_{0}^{1}$						\modtwosum	modulo two sum
U+02AOB		$\sum_{i=0}^{1}$						\sumint	summation with integral
U+0 <b>2</b> AOC	$\iiint_0^1$	$\iiint_0^1$	$\iiint_0^1$	$\iiint_0^1$	$\iiint_0^1$	$\iiint_0^1$	$\iiint_0^1$	\iiiint	quadruple integral operator
U+0 <b>2</b> A0D		$\int_0^1$	$\int_0^1$					\intbar	finite part integral
U+02A0E		$\oint_0^1$						\intBar	integral with double stroke
u+o2AOF		$\int_0^1$		$\int_0^1$				\fint	integral average with slash
U+02A10		$\oint_0^1$						\cirfnint	circulation function
U+02A11	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$	$\int_0^1$		$\int_0^1$	\awint	anticlockwise integration
U+02A12		$\int_0^1$						\rppolint	line integration with rectangular path around pole
U+02A13		$\int_0^1$						\scpolint	line integration with semicircu- lar path around pole
U+0 <b>2</b> A14		$\int_0^1$						\npolint	line integration not including the pole
U+0 <b>2</b> A15		${\displaystyle \oint_{0}^{1}}$						\pointint	integral around a point operator
u+02A16		$\int_0^1$		$\int_0^1$				\sqint	quaternion integral operator
U+02A17		$ \oint_{0}^{1} $						\intlarhk	integral with leftwards arrow with hook

USV	M	S	Е	K	P	L	G	Macro	Description
U+02A18		$\int_0^1$						\intx	integral with times sign
U+0 <b>2</b> A19		$\int_0^1$						\intcap	integral with intersection
U+02A1A		$\int_0^1$						\intcup	integral with union
U+02A1B		$\overline{\int}_0^1$						\upint	integral with overbar
U+02A1C		$\underline{\int}_{\Theta}^{1}$						\lowint	integral with underbar
U+02A1D		$\bigvee_{0}^{1}$	1 ⋈ 0	1 × 0				\Join	join
U+02A1E		$\stackrel{1}{\underset{0}{\triangleleft}}$						\bigtriangleleft	large left triangle operator
U+02A1F		1 <b>9</b> 0						\zcmp	z notation schema composition
U+02A20		$\underset{0}{\overset{1}{\Longrightarrow}}$						\zpipe	z notation schema piping
U+02A21		1						\zproject	z notation schema projection
U+02AFC								\biginterleave	large triple vertical bar operator
U+02AFF								\bigtalloblong	n-ary white vertical bar
U+1EEFO		1 0						\arabicmaj	arabic mathematical operator meem with hah with tatweel
U+1EEF1		<u></u>						\arabichad	arabic mathematical operator hah with dal

#### 12 Binary relations, \mathbin

USV	M	S	Е	K	Р	L	G	Macro	Description
U+0002B	+	+	+	+	+	+	+	\mathplus	plus sign b:

USV	M	S	Е	K	Р	L	G	Macro	Description
U+000B1	±	±	±	±	±	±	±	<b>\pm</b> (p)	plus-or-minus sign
и+000в7								$\cdotp^{(p)}$	/centerdot b: middle dot
U+000D7	×	×	×	×	×	×	×	extstyle  ext	multiply sign
U+000F7	÷	÷	÷	÷	÷	÷	÷	$\operatorname{ extbf{/}div}^{(p)}$	divide sign
U+02020	†	†	†	†	†	†	†	$\lceil dagger^{(p)} \rceil$	dagger relation
U+02021	‡	‡	‡	‡	‡	‡	‡	$\verb  \ddagger ^{(p)}$	double dagger relation
U+02022	•	•	•	•	•	•	•	\smblkcircle	/bullet b: round bullet, filled
U+0 <b>2</b> 040				^				\tieconcat	character tie, z notation sequence concatenation
U+02044	/	/	/	/	/	/	/	\fracslash	fraction slash
U+0214B		38	ß	\$			28	\upand	turned ampersand
U+02212	_	_	-	_	-	-	-	\minus	minus sign
U+0 <b>22</b> 13	<b></b>	Ŧ	Ŧ	Ŧ	Ŧ	Ŧ	Ŧ	$\mbox{\em mp}^{(\mbox{\scriptsize p})}$	minus-or-plus sign
U+02214	÷	÷	÷	÷	÷	÷	÷	$\verb \dotplus ^{(a)}$	plus sign, dot above
U+02215	/	/	/	/	/	/	/	\divslash	division slash
U+02216	\	\	\	\	\	\	\	$\verb \smallsetminus ^{(a)}$	small set minus (cf. reverse solidus)
U+02217	*	*	*	*	*	*	*	$ast^{(p)}$	centered asterisk
U+02218	0	0	0	0	0	0	٥	\vysmwhtcircle	composite function (small circle)
U+0 <b>22</b> 19	•	•	•	•	•	•	•	\vysmblkcircle	bullet operator
U+02227	٨	٨	٨	٨	٨	٨	٨	$\mathbf{Wedge}^{(p)}$	/wedge /land b: logical and
U+02228	V	٧	٧	٧	V	٧	٧	$\mathbf{Vee}^{(p)}$	/vee /lor b: logical or
U+02229	$\cap$	$\cap$	$\cap$	$\cap$	$\cap$	Λ	Λ	$ extsf{ extsf{ iny cap}}^{(p)}$	intersection
U+0 <b>222</b> A	U	U	U	U	U	U	U	$\mathbf{cup}^{(p)}$	union or logical sum

USV	M	S	Е	K	P	L	G	Macro	Description
u+02238	·	·	÷	·	-	÷	÷	\dotminus	minus sign, dot above
U+0 <b>22</b> 3E	~	2	$\sim$	2	8	O	~	\invlazys	most positive [inverted lazy s]
U+0 <b>224</b> 0	}	ζ	}	}	?	}	}	$\mathbf{v}^{(p)}$	wreath product
u+0 <b>22</b> 8c	⊌	⊌	⊌	$ \in $	⊌	⊌	⊌	\cupleftarrow	multiset
U+0228D	U	⊍	U	$\cup$	U	⊎	⊌	\cupdot	union, with dot
U+0228E	<del>  </del>	₩	<b>+</b>	<del>  </del>	+	ŧ	₩	$\mathbf{uplus}^{(p)}$	plus sign in union
U+0 <b>22</b> 93	П	П	П	П	П	П	П	$\sqcap^{(p)}$	square intersection
U+0 <b>22</b> 94	Ц	Ц	Ш	Ц	Ш	Ш	Ц	$\sqcup^{(p)}$	square union
U+02295	$\oplus$	$\oplus$	<b>⊕</b>	$\oplus$	<b>⊕</b>	$\oplus$	<b>⊕</b>	$ordownoording^{(p)}$	plus sign in circle
u+02296	$\ominus$	$\Theta$	$\Theta$	$\Theta$	Θ	$\Theta$	$\Theta$	$\mathbf{ordonominus}^{(p)}$	minus sign in circle
u+02297	$\otimes$	$\otimes$	8	$\otimes$	8	$\otimes$	8	ordown(p)	multiply sign in circle
u+02298	0	0	0	0	0	0	0	$\c \c \$	solidus in circle
U+0 <b>22</b> 99	<b>⊙</b>	•	•	<b>⊙</b>	<b>⊙</b>	<b>⊙</b>	·	$\operatorname{Vodot}^{(p)}$	middle dot in circle
U+0229A	0	0	0	0	0	0	0	\circledcirc <sup>(a)</sup>	small circle in circle
U+0229B	*	*	*	*	*	*	*	$\circledast^{(a)}$	asterisk in circle
U+0 <b>229</b> C							$\ominus$	\circledequal	equal in circle
U+0 <b>22</b> 9D	$\ominus$	$\Theta$	Θ	$\Theta$	$\Theta$	$\Theta$	$\Theta$	$\verb \circleddash ^{(a)}$	hyphen in circle
u+0 <b>22</b> 9E	$\blacksquare$	$\blacksquare$	H	H	⊞	$\blacksquare$	⊞	$ackslash boxplus^{(a)}$	plus sign in box
U+0 <b>22</b> 9F			В	В	В	В	В	$ackslash boxminus^{(a)}$	minus sign in box
U+022A0	$\boxtimes$	$\boxtimes$				$\boxtimes$	X	$\verb \boxtimes ^{(a)}$	multiply sign in box
U+022A1	⊡	·	•	•	⊡	⊡	⊡	$\verb+\boxdot+^{(a)}$	/dotsquare /boxdot b: small dot in box
U+022BA	Т	T	Т	Т	Т		Т	$\label{linear} \$	intercal

USV	M	S	Е	K	Р	L	G	Macro	Description
U+022BB	V	V	V	V	V		V	\veebar <sup>(a)</sup>	logical or, bar below (large vee); exclusive disjunction
U+022BC	$\overline{\wedge}$	⊼	⊼	$\overline{\wedge}$	<u></u>		⊼	$\verb \barwedge ^{(a)}$	bar, wedge (large wedge)
U+022BD	$\overline{\vee}$	$\nabla$	$\overline{V}$	$\overline{\lor}$	$\overline{\lor}$		⊽	\barvee	bar, vee (large vee)
U+0 <b>22</b> C4	<b>♦</b>	<b>\$</b>	<b>\$</b>	<b>♦</b>	<b>♦</b>		<b>*</b>	\smwhtdiamond	white diamond
U+022C5	٠	٠			٠		٠	$\cdot^{(p)}$	small middle dot
u+022c6	*	*	*	*	*	*	*	$\operatorname{\mathtt{f star}}^{(p)}$	small star, filled, low
U+022C7	*	*	*	*	*		*	$\verb \divideontimes ^{(a)}$	division on times
U+0 <b>22</b> C9	×	×	×	×	K	×	K	$\label{limes}$	times sign, left closed
U+022CA	×	×	×	×	×	×	м	${\tt \trues}^{(a)}$	times sign, right closed
U+022CB	$\rightarrow$	$\rightarrow$	λ	$\lambda$	λ		λ	$\verb  leftthreetimes ^{(a)}$	left semidirect product
U+0 <b>22</b> CC	~	~	<b>X</b>		*		*	$\verb \rightthreetimes ^{(a)}$	right semidirect product
U+0 <b>22</b> CE	Υ	Υ	Υ	Υ	Υ	٧	Υ	\curlyvee <sup>(a)</sup>	curly logical or
U+022CF	人	٨	٨	٨	Д	٨	Д	$\verb \curlywedge ^{(a)}$	curly logical and
U+022D2	M	⋒	M				M	<b>\Cap</b> (a)	/cap /doublecap b: double intersection
U+022D3	U	W	W	U	U		U	\Cup <sup>(a)</sup>	/cup /doublecup b: double union
U+02305	^	⊼	<u>⊼</u>	<b>⊼</b>	^			\varbarwedge	/barwedge b: logical and, bar above [projective (bar over small wedge)]
u+02306	<u></u>	⊼	⊼	₹	<del>_</del>			\vardoublebarwedge	/doublebarwedge b: logical and, double bar above [per- spective (double bar over small wedge)]
U+0233D		Φ						\obar	circle with vertical bar
u+025B3	$\triangle$	$\triangle$	Δ	Δ	Δ	Δ	Δ	$\verb \bigtriangleup ^{(p)}$	big up triangle, open
u+025B7	$\triangleright$	$\triangleright$	$\triangleright$	$\triangleright$	$\triangleright$	$\triangleright$	$\triangleright$	$\verb \triangleright ^{(p)}$	(large) right triangle, open; z notation range restriction

USV	M	S	Е	K	Р	L	G	Macro	Description
U+025C1	$\triangleleft$	$\triangleleft$	◁	⊲	◁	⊲	⊲	$\verb \triangleleft ^{(p)}$	(large) left triangle, open; z notation domain restriction
U+025CB	0	0	0	0	0	0	0	\mdlgwhtcircle	medium large circle
и+025ев								\boxbar	vertical bar in box
U+027C7		٧						\veedot	or with dot inside
U+027D1		A						\wedgedot	and with dot
U+027E0	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	♦			\lozengeminus	lozenge divided by horizontal rule
U+027E1	<b></b>	<b>\$</b>	<b>♦</b>	<b>♦</b>	<b>\$</b>			\concavediamond	white concave-sided diamond
U+027E2	<b>*</b>	<b>&lt;</b>	<b>♦</b>	<b>♦</b>	<b>*</b>			\concavediamondtickleft	white concave-sided diamond with leftwards tick
U+027E3	<b></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>*</b>			$\verb \concavediamondtickright $	white concave-sided diamond with rightwards tick
u+0 <b>2</b> 7E4								\whitesquaretickleft	white square with leftwards tick
U+027E5		₽						\whitesquaretickright	white square with rightwards tick
U+029B5		$\ominus$						\circlehbar	circle with horizontal bar
и+029в6		Φ						\circledvert	circled vertical bar
U+029B7		(1)						\circledparallel	circled parallel
и+029в8		$\Diamond$		0				\obslash	circled reverse solidus
u+029B9		<b>①</b>						\operp	circled perpendicular
U+0 <b>2</b> 9C0		$\otimes$		0				\olessthan	circled less-than
U+0 <b>2</b> 9C1		⊗		$\bigcirc$				\ogreaterthan	circled greater-than
u+0 <b>2</b> 9C4								\boxdiag	squared rising diagonal slash
u+0 <b>2</b> 9C5								\boxbslash	squared falling diagonal slash
u+029c6		*		*				\boxast	squared asterisk

USV	M	S	Е	K	Р	L	G	Macro	Description
u+029C7		0						\boxcircle	squared small circle
u+029c8								\boxbox	squared square
U+0 <b>2</b> 9CD		$\triangle$						\triangleserifs	triangle with serifs at bottom
u+029D6		X						\hourglass	white hourglass
U+029D7		X						\blackhourglass	black hourglass
u+029E2		ш						\shuffle	shuffle product
и+029ев		•	<b>♦</b>	<b>♦</b>				\mdlgblklozenge	black lozenge
u+029F5		\	\	\		\	\	$\verb \setminus ^{(p)}$	reverse solidus operator
u+029F6		7				7		\dsol	solidus with overbar
U+029F7		+				¥		\rsolbar	reverse solidus with horizontal stroke
u+0 <b>2</b> 9fa		#						\doubleplus	double plus
u+0 <b>2</b> 9ғв		#						\tripleplus	triple plus
u+0 <b>2</b> 9fe		+						\tplus	tiny
u+029ff		-						\tminus	miny
U+02A22		÷						\ringplus	plus sign with small circle above
U+02A23		Î						\plushat	plus sign with circumflex accent above
U+02A24		Ŧ						\simplus	plus sign with tilde above
U+02A25		÷						\plusdot	plus sign with dot below
U+02A26		Ţ						\plussim	plus sign with tilde below
U+02A27		+2						\plussubtwo	plus sign with subscript two
U+02A28		+						\plustrif	plus sign with black triangle
U+02A29		<u>,</u>						\commaminus	minus sign with comma above

USV	M	S	E	K	P	L	G	Macro	Description
U+02A2A		·						\minusdot	minus sign with dot below
U+02A2B		÷						\minusfdots	minus sign with falling dots
U+02A2C		<del>. ·</del>						\minusrdots	minus sign with rising dots
U+02A2D		+						\opluslhrim	plus sign in left half circle
U+02A2E		+)						\oplusrhrim	plus sign in right half circle
U+02A2F	×	×	×	×	×		×	\vectimes	vector or cross product
U+02A30		×						\dottimes	multiplication sign with dot above
U+02A31		×						\timesbar	multiplication sign with underbar
U+02A32		×						\btimes	semidirect product with bottom closed
U+02A33		*						\smashtimes	smash product
U+02A34		(×						\otimeslhrim	multiplication sign in left half circle
U+02A35		×						\otimesrhrim	multiplication sign in right half circle
u+02a36		ŝ				ô		\otimeshat	circled multiplication sign with circumflex accent
U+02A37		<b>®</b>						\Otimes	multiplication sign in double circle
U+02A38		<b>(</b>						\odiv	circled division sign
U+02A39		A						\triangleplus	plus sign in triangle
U+02A3A		Δ						\triangleminus	minus sign in triangle
U+02A3B		$\triangle$						\triangletimes	multiplication sign in triangle
U+02A3C		_						\intprod	interior product
U+02A3D		_						\intprodr	righthand interior product

USV	M	S	Е	K	Р	L	G	Macro	Description
U+02A3E		9				9		\fcmp	z notation relational composition
U+02A3F	П	Ш	Ш	Ц	П	П	П	$\aggreen{array}{c} \aggreen{array}{c} ar$	amalgamation or coproduct
U+02A40		Θ						\capdot	intersection with dot
U+02A41		⊌						\uminus	union with minus sign
U+02A42		Ū						\barcup	union with overbar
U+02A43		Ō						\barcap	intersection with overbar
U+02A44		Ŋ						\capwedge	intersection with logical and
U+02A45		lacksquare						\cupvee	union with logical or
U+02A46		U						\cupovercap	union above intersection
U+02A47		0						\capovercup	intersection above union
U+02A48		Ŏ						\cupbarcap	union above bar above intersection
U+02A49		0						\capbarcup	intersection above bar above union
U+02A4A		ω						\twocups	union beside and joined with union
U+02A4B		$\cap$						\twocaps	intersection beside and joined with intersection
U+02A4C		Ū						\closedvarcup	closed union with serifs
U+02A4D		Ω						\closedvarcap	closed intersection with serifs
U+02A4E		П						\Sqcap	double square intersection
U+02A4F		Ш						\Sqcup	double square union
U+02A50		⊗						\closedvarcupsmashprod	closed union with serifs and smash product
U+02A51		Ķ						\wedgeodot	logical and with dot above
U+02A52		Ÿ						\veeodot	logical or with dot above

USV	M	S	E	K	P	L	G	Macro	Description
U+02A53		<b>A</b>						\Wedge	double logical and
u+02A54		*						\Vee	double logical or
U+02A55		<b>/</b>						\wedgeonwedge	two intersecting logical and
u+02a56		W						\veeonvee	two intersecting logical or
U+02A57		V						\bigslopedvee	sloping large or
u+02a58		1						\bigslopedwedge	sloping large and
U+02A5A		<b>^</b>						\wedgemidvert	logical and with middle stem
U+02A5B		٧						\veemidvert	logical or with middle stem
U+02A5C		A						\midbarwedge	ogical and with horizontal dash
U+02A5D		¥						\midbarvee	logical or with horizontal dash
U+02A5E		⊼	⊼	$\overline{\overline{\wedge}}$				$\verb \doublebarwedge ^{(a)}$	logical and with double overbar
U+02A5F		Δ	Δ	Δ				\wedgebar	logical and with underbar
u+02A60		≙						\wedgedoublebar	logical and with double underbar
u+02a61		¥						\varveebar	small vee with underbar
U+02A62		$\overline{\nabla}$						\doublebarvee	logical or with double overbar
U+02A63		$\underline{\underline{\lor}}$						\veedoublebar	logical or with double underbar
u+02a64		$\triangleleft$						\dsub	z notation domain antirestriction
u+02a65		$\triangleright$						\rsub	z notation range antirestriction
U+02A71		₹						\eqqplus	equals sign above plus sign
U+02A72		±						\pluseqq	plus sign above equals sign
U+02AF4		III						\interleave	triple vertical bar binary relation

USV	M	S	Е	K	P	L	G	Macro	Description
U+02AF5		#						\nhVvert	triple vertical bar with horizon- tal stroke
u+02af6		÷						\threedotcolon	triple colon operator
U+02AFB		///						\trslash	triple solidus binary relation
U+02AFD		//						\sslash	double solidus operator
U+02AFE		0						\talloblong	white vertical bar

## 13 Ordinary symbols, \mathord

USV	M	S	Е	K	P	L	G	Macro	Description
U+00023	#	#	#	#	#	#	#	\mathoctothorpe	number sign
U+00024	\$	\$	\$	\$	\$	\$	\$	\mathdollar	dollar sign
U+000 <b>2</b> 5	%	%	%	%	%	%	%	\mathpercent	percent sign
U+00026	&	&	&	&	&	&	&	\mathampersand	ampersand
U+000 <b>2</b> E								\mathperiod	full stop, period
U+000 <b>2</b> F	/	/	/	/	/	/	/	\mathslash	solidus
U+0003F	?	?	?	?	?	?	;	\mathquestion	question mark
U+00040	0	@	@	@	@	@	@	\mathatsign	commercial at
υ+0005C	\	\	\	\	\	\	\	$\verb \backslash ^{(p)}$	reverse solidus
U+000A3	£	£	£	£	£	£	£	\mathsterling	pound sign
U+000A5	¥	¥	¥	¥	¥	¥	¥	\mathyen	yen sign
U+000A7	8	§	\$	§	§	§	\$	\mathsection	section symbol
U+000AC	$\neg$	¬	¬	¬	$\neg$	7	٦	${\tt \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	/neg /lnot not sign
u+000в6	•	P	¶	${\mathbb P}$	${\mathbb P}$	$\P$	•	\mathparagraph	paragraph symbol
U+001B5		Z	Z	Z		Z		\Zbar	impedance (latin capital letter z with stroke)
u+003F6		Э	Э	Э		Э		\upbackepsilon	greek reversed lunate epsilon symbol
U+02015	_	_	_		_	_	_	\horizbar	horizontal bar
U+02017	=	=	=		=	=	=	\twolowline	double low line (spacing)
U+02025								\enleadertwodots	double baseline dot (en leader)
U+02026								\unicodeellipsis	ellipsis (horizontal)

USV	M	S	Е	K	P	L	G	Macro	Description
U+02032	/	,	/	,	1	,	,	$\operatorname{\mathbb{L}}_{prime}^{(p)}$	prime or minute, not super- scripted
U+02033	"	"			"	"	"	\dprime	double prime or second, not superscripted
U+02034	///	<i>III</i>			///	m	<i>'''</i>	\trprime	triple prime (not superscripted)
U+02035	\	\	١	(	١	`	•	$\verb \backprime ^{(a)}$	reverse prime, not super- scripted
u+02036	**	"			"	"	W	\backdprime	double reverse prime, not su- perscripted
U+02037	***	w			W.	""	m	\backtrprime	triple reverse prime, not super- scripted
U+02038		^						\caretinsert	caret (insertion mark)
U+0203C		!!				!!		\Exclam	double exclamation mark
U+02043		-						\hyphenbullet	rectangle, filled (hyphen bullet)
U+02047		??				??		\Question	double question mark
U+02057	////	m			<i>IIII</i>	m	,,,,	\qprime	quadruple prime, not super- scripted
U+020AC	€	€	€	€	€	€	€	\euro	euro sign
U+020DD	$\bigcirc$	0	0	$\bigcirc$	0		0	\enclosecircle	combining enclosing circle
U+020DE								\enclosesquare	combining enclosing square
U+020DF	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$		$\Diamond$	\enclosediamond	combining enclosing diamond
U+020E4	$\triangle$	$\triangle$	$\triangle$	$\triangle$	$\triangle$		$\triangle$	\enclosetriangle	combining enclosing upward pointing triangle
U+02107	3	3	3	3	3		3	\Eulerconst	euler constant
U+0210E	h	h	h	h	h	h	h	\Planckconst	planck constant
U+02127	Ω	$\mho$	Ω	Ω	Ω	$\Omega$	Ω	\mho	conductance
U+02132		Е	Е	Н				$\verb \Finv ^{(a)}$	turned capital f

USV	M	S	E	K	P	L	G	Macro	Description
U+0213C	π	TC	IT		π		π	\Bbbpi	double-struck small pi
U+02141		Э	Э	G				$\Game^{(a)}$	turned sans-serif capital g
U+02142		٦						\sansLturned	turned sans-serif capital l
U+02143		L						\sansLmirrored	reversed sans-serif capital l
U+0 <b>2</b> 144		Х						\Yup	turned sans-serif capital y
U+02145	D	D	D		$\mathbb{D}$		D	\mitBbbD	double-struck italic capital d
U+02146	d	d	d		đ		d	\mitBbbd	double-struck italic small d
U+02147	e	e	<b>e</b>		e		e	\mitBbbe	double-struck italic small e
u+02148	Î	Ĩ	j		<u>ı</u>		i	\mitBbbi	double-struck italic small i
U+0 <b>2</b> 149	Ĵ	j	j		j		j	\mitBbbj	double-struck italic small j
U+0214A		τ̈́						\PropertyLine	property line
u+021a8		<b>‡</b>				<b>‡</b>	<b>‡</b>	\updownarrowbar	up down arrow with base (perpendicular)
U+021B4	$\rightarrow$	┐	<b>¬</b>	$\supset$	⋾	$\supset$	ļ	\linefeed	rightwards arrow with corner downwards
U+021B5	4	4	4	$\downarrow$	ل	$\downarrow$	←	\carriagereturn	downwards arrow with corner leftward = carriage return
U+021B8		$\overline{\ }$				↸	↸	\barovernorthwestarrow	north west arrow to long bar
U+021B9		⊭				↹	⊭	\barleftarrowrightarrowbar	leftwards arrow to bar over rightwards arrow to bar
U+021BA	Q	Q	Q	O	Q	J	J	\acwopencirclearrow	anticlockwise open circle arrow
U+021BB	Q	Ö	Ö	U	O	U	U	\cwopencirclearrow	clockwise open circle arrow
U+021DE		\$				‡	‡	\nHuparrow	upwards arrow with double stroke
U+021DF		‡				\$	#	\nHdownarrow	downwards arrow with double stroke
U+021E0		<del>&lt;</del>	<b></b>	<b>&lt;</b>		<b>←</b>	<b></b>	\leftdasharrow	leftwards dashed arrow

USV	M	S	E	K	P	L	G	Macro	Description
U+021E1		1	1	1		1	1	\updasharrow	upwards dashed arrow
U+021E2		>	>	>		>	>	\rightdasharrow	rightwards dashed arrow
U+021E3		<b>↓</b>	į	<b>.</b>		↓	<b>↓</b>	\downdasharrow	downwards dashed arrow
U+021E6	<b>\( \rightarrow</b>	<b>\( \rightarrow</b>	<b>\( \pi \)</b>		<b>\( =</b>	<b>⇔</b>	<b></b>	\leftwhitearrow	leftwards white arrow
U+021E7	Û	Û	Û		Î	Û	Î	\upwhitearrow	upwards white arrow
U+021E8	$\Rightarrow$	$\Rightarrow$	⇔		$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	\rightwhitearrow	rightwards white arrow
U+021E9	Û	Û	Û		Û	Û	1	\downwhitearrow	downwards white arrow
U+021EA		슡				Ŷ	Ŷ	\whitearrowupfrombar	upwards white arrow from bar
U+0 <b>22</b> 00	$\forall$	A	A	A	$\forall$	A	A	$\formula formula for$	for all
U+0 <b>22</b> 01	С	С	С	С	С	С	С	$\verb \complement ^{(a)}$	complement sign
U+02203	3	Э	3	Э	3	В	3	$\text{\ensuremath{\mbox{\sf \left}}}$	at least one exists
U+02204	∄	∄	∄	∄	∄	∄	∄	$\nexists^{(a)}$	negated exists
U+02205	Ø	Ø	Ø	Ø	Ø	Ø	Ø	$\verb \varnothing ^{(a)}$	circle, slash
U+02206	Δ	Δ	Δ	Δ	Δ	Δ	Δ	\increment	laplacian (delta; nabla^2)
U+0220E	٠	•	٠				•	\QED	end of proof
U+0221A		$\sqrt{}$		$\checkmark$	<b>√</b>		<b>√</b>	$\mathbf{surd}^{(p)}$	radical
U+0221E	$\infty$	∞	$\infty$	$\infty$	$\infty$	$\infty$	00	$ exttt{\text{infty}}^{(p)}$	infinity
U+0221F	L	L	L	L	L	L	L	\rightangle	right (90 degree) angle
U+02220	_	_	_	۷	_	_	_	$\aggle^{(p)}$	angle
U+02221	4	<u> </u>	<u> </u>	۷	4	4	¥	$\verb \measuredangle ^{(a)}$	angle-measured
U+02222	∢	4	⋖	∢	∢	*	∢	$\verb \sphericalangle ^{(a)}$	angle-spherical
U+02234	A	<i>:</i> .	:.	<i>:</i> .			A	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	therefore

USV	M	S	Е	K	Р	L	G	Macro	Description
U+02235	٧	:	:	::	·	÷	٧	\because <sup>(a)</sup>	because
U+0223F	$\sim$	~	~	~	$\sim$	$\sim$	~	\sinewave	sine wave
U+022A4	Т	Т	Т	Т	Т	Т	Т	$ ag{top}^{(p)}$	top
U+022A5	Τ	Τ	Τ	Τ	Τ	Τ	Τ	$ackslash bot^{(p)}$	bottom
U+022B9	+	+	+		+		÷	\hermitmatrix	hermitian conjugate matrix
U+022BE	4	₽	Ь		4		Ь	\measuredrightangle	right angle-measured [with arc]
U+022BF	Δ	Δ	Δ		⊿		⊿	\varlrtriangle	right triangle
U+022EF								\unicodecdots	three dots, centered
U+02300	Ø	Ø	Ø		Ø	Ø	Ø	\diameter	diameter sign
U+02302		$\triangle$						\house	house
U+0 <b>23</b> 10	_	г	_	_	_	_	_	\invnot	reverse not
U+02311		П						\sqlozenge	square lozenge
U+02312		$\cap$						\profline	profile of a line
U+02313		Δ						\profsurf	profile of a surface
U+02317		#						\viewdata	viewdata square
U+02319	_	L	L	L	_		L	\turnednot	turned not sign
U+02320	ſ	ſ	ſ	ſ	ſ	ſ		\inttop	top half integral
U+02321	J	J	J	J	J	J		\intbottom	bottom half integral
U+0232C		٥						\varhexagonlrbonds	six carbon ring, corner down, double bonds lower right etc
U+02332		⊳						\conictaper	conical taper
U+02336		I						\topbot	top and bottom

USV	M	S	E	K	Р	L	G	Macro	Description
U+02340		+						\APLnotbackslash	apl functional symbol backslash bar
U+02353								\APLboxupcaret	boxed up caret
U+02370		?						\APLboxquestion	boxed question mark
U+0237C		<u></u> ≸_						\rangledownzigzagarrow	right angle with downwards zigzag arrow
U+02394		$\bigcirc$						\hexagon	horizontal benzene ring [hexagon flat open]
	(	(	,		(	(			
u+0239в	I	1		(	1	1	ı	\lparenuend	left parenthesis upper hook
u+0239C	1		1	1	1		1	\lparenextender	left parenthesis extension
U+0 <b>23</b> 9D		(	l	Ţ		(	(	\lparenlend	left parenthesis lower hook
U+0239E	)	)	)	)	)	)		\rparenuend	right parenthesis upper hook
			ı						
U+0239F	I	ı	I	1	1	ı	1	\rparenextender	right parenthesis extension
	J	J	J	J	J	J			
U+023A0	/	)	J	)	/	)	/	\rparenlend	right parenthesis lower hook
U+023A1	ſ	ſ	[	Γ	ſ	ſ		\lbrackuend	left square bracket upper corner
U+023A2	1	ı	ı	i	I	I		\lbrackextender	left square bracket extension
	ı	ı	ı			ı		<b>\</b> 2.	
U+023A3	L	L	L	L	L	L	L	\lbracklend	left square bracket lower corner
u+023A4	]	1	]	1	1	1		\rbrackuend	right square bracket upper corner
U+023A5	1	ı	1	1	ī	I	1	\rbrackextender	right square bracket extension

USV	M	S	Е	K	Р	L	G	Macro	Description
u+023A6		J		J		J		\rbracklend	right square bracket lower corner
u+023A7	ſ	ſ	ſ	(	ſ	(		\lbraceuend	left curly bracket upper hook
u+023A8	{	{	{	{	{	{		\lbracemid	left curly bracket middle piece
U+023A9	ţ	Į	Į	Ţ	ţ	l		\lbracelend	left curly bracket lower hook
U+023AA	I	1		ı	1	I	I	\vbraceextender	curly bracket extension
u+023AB	)	)	)	)	)	)		\rbraceuend	right curly bracket upper hook
U+023AC	}	}	}	}	}	}		\rbracemid	right curly bracket middle piece
U+023AD	J	J	J	J	J	J	J	\rbracelend	right curly bracket lower hook
U+023AE		1	1	ı	1	1		\intextender	integral extension
U+023AF		-	-	-		_		\harrowextender	horizontal line extension (used to extend arrows)
U+023B2	$\nabla$	7	$\nabla$		$\nabla$			\sumtop	summation top
u+023B3	_	L	_		_			\sumbottom	summation bottom
и+023в6		Ħ						\bbrktbrk	bottom square bracket over top square bracket
							ı		
U+023B7	$\backslash$	1	\	1	1	$\bigvee$		\sqrtbottom	radical symbol bottom
u+023B8				1				\lvboxline	left vertical box line
U+023B9								\rvboxline	right vertical box line

USV	M	S	Е	K	P	L	G	Macro	Description
U+023CE		Ą						\varcarriagereturn	return symbol
U+023E0	^				^			\obrbrak	top tortoise shell bracket (mathematical use)
U+023E1	V	)			J		J	\ubrbrak	bottom tortoise shell bracket (mathematical use)
U+023E2								\trapezium	white trapezium
U+023E3		0						\benzenr	benzene ring with circle
U+023E4		_						\strns	straightness
U+023E5								\fltns	flatness
u+023E6		<b>~</b>						\accurrent	ac current
U+023E7		*						\elinters	electrical intersection
U+02422	ъ	ħ	ħ		ъ			\blanksymbol	blank symbol
U+02423	Ш	J	J		u	u		\mathvisiblespace	open box
u+02506								\bdtriplevdash	doubly broken vert
u+02580								\blockuphalf	upper half block
u+02584								\blocklowhalf	lower half block
u+02588	•							\blockfull	full block
U+0258C								\blocklefthalf	left half block
u+0 <b>2</b> 590								\blockrighthalf	right half block
U+0 <b>2</b> 591								\blockqtrshaded	25% shaded block
U+02592								\blockhalfshaded	50% shaded block
u+02593								\blockthreeqtrshaded	75% shaded block
u+025A0	•				•	٠	•	\mdlgblksquare	square, filled
U+025A1								\mdlgwhtsquare	square, open

USV	M	S	Е	K	P	L	G	Macro	Description
U+025A2		0						\squoval	white square with rounded corners
U+025A3								\blackinwhitesquare	white square containing black small square
U+025A4								\squarehfill	square, horizontal rule filled
U+025A5								\squarevfill	square, vertical rule filled
u+025A6								\squarehvfill	square with orthogonal crosshatch fill
U+025A7								\squarenwsefill	square, nw-to-se rule filled
U+025A8								\squareneswfill	square, ne-to-sw rule filled
U+025A9								\squarecrossfill	square with diagonal crosshatch fill
U+025AA	٠	٠	٠	٠	•		٠	\smblksquare	/blacksquare - sq bullet, filled
U+025AB	0		0	0	0		0	\smwhtsquare	white small square
U+025AC	-	-	-	-	-		-	\hrectangleblack	black rectangle
U+025AD					0		_	\hrectangle	horizontal rectangle, open
U+025AE							٠	\vrectangleblack	black vertical rectangle
U+025AF							0	\vrectangle	rectangle, white (vertical)
u+025в0		_						\parallelogramblack	black parallelogram
U+025B1								\parallelogram	parallelogram, open
U+025B2	<b>A</b>		<b>^</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	\bigblacktriangleup	black up-pointing triangle
u+025B4		<b>A</b>	<b>A</b>	<b>A</b>				$\verb \blacktriangle ^{(a)}$	up triangle, filled
u+025в6	•		•	•	•	•	•	$\verb \blacktriangleright ^{(a)}$	(large) right triangle, filled
u+025в8		•	•					\smallblacktriangleright	right triangle, filled
U+025B9		$\triangleright$	$\triangleright$	<b>&gt;</b>				\smalltriangleright	right triangle, open

USV	M	S	E	K	P	L	G	Macro	Description
U+025BA		•						\blackpointerright	black right-pointing pointer
u+025вв		$\triangleright$						\whitepointerright	white right-pointing pointer
U+025BC	•	•	•	•	•	•	•	\bigblacktriangledown	big down triangle, filled
U+025BD	$\nabla$	$\nabla$	$\nabla$	$\nabla$	$\nabla$	$\nabla$	$\nabla$	$\verb \bigtriangledown ^{(p)}$	big down triangle, open
U+025BE		•	•	•				$\verb \blacktriangledown ^{(a)}$	down triangle, filled
U+025BF		$\nabla$	$\nabla$	$\nabla$				$\verb \triangledown ^{(a)}$	down triangle, open
U+0 <b>2</b> 5C0	•	•	•	•	•	4	•	$\verb \blacktriangleleft ^{(a)}$	(large) left triangle, filled
U+025C2		•	•	4				\smallblacktriangleleft	left triangle, filled
U+025C3		◁	⊲	∢				\smalltriangleleft	left triangle, open
u+025C4		•						\blackpointerleft	black left-pointing pointer
U+025C5		⊲						\whitepointerleft	white left-pointing pointer
U+025C6		•	<b>♦</b>	•		•	•	\mdlgblkdiamond	black diamond
U+025C7		$\Diamond$	$\Diamond$	$\Diamond$		$\Diamond$	$\Diamond$	\mdlgwhtdiamond	white diamond; diamond, open
u+025c8		<b></b>					<b>♦</b>	\blackinwhitediamond	white diamond containing black small diamond
U+025C9						•		\fisheye	fisheye
U+025CA	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	<b>♦</b>	$\Diamond$	$\Diamond$	\mdlgwhtlozenge	lozenge or total mark
U+025CC		0						\dottedcircle	dotted circle
U+025CD								\circlevertfill	circle with vertical fill
U+025CE		0				0	0	\bullseye	bullseye
U+025CF	•	•	•	•	•	•	•	\mdlgblkcircle	circle, filled
U+025D0		•				•	•	\circlelefthalfblack	circle, filled left half [harvey ball]
U+025D1						•	•	\circlerighthalfblack	circle, filled right half

USV	M	S	E	K	P	L	G	Macro	Description
U+025D2		•				•	•	\circlebottomhalfblack	circle, filled bottom half
U+025D3		•				•	•	\circletophalfblack	circle, filled top half
u+025D4		•				•	•	\circleurquadblack	circle with upper right quadrant black
U+025D5		•				•	•	\blackcircleulquadwhite	circle with all but upper left quadrant black
u+025D6		•				•	•	\blacklefthalfcircle	left half black circle
U+025D7						•	•	\blackrighthalfcircle	right half black circle
U+025D8								\inversebullet	inverse bullet
U+025D9		0						\inversewhitecircle	inverse white circle
U+025DA								\invwhiteupperhalfcircle	upper half inverse white circle
U+025DB		U						\invwhitelowerhalfcircle	lower half inverse white circle
U+025DC		(						\ularc	upper left quadrant circular arc
U+025DD		`						\urarc	upper right quadrant circular arc
U+025DE		J						\lrarc	lower right quadrant circular arc
U+025DF		(						\llarc	lower left quadrant circular arc
U+025E0		$\cap$						\topsemicircle	upper half circle
U+025E1		$\cup$						\botsemicircle	lower half circle
U+025E2		4						\lrblacktriangle	lower right triangle, filled
U+025E3		•						\llblacktriangle	lower left triangle, filled
U+025E4								\ulblacktriangle	upper left triangle, filled
U+025E5		•						\urblacktriangle	upper right triangle, filled
u+025E6	0	0	0	0	0	0	0	\smwhtcircle	white bullet

USV	M	S	Е	K	Р	L	G	Macro	Description
u+025E7								\squareleftblack	square, filled left half
u+025E8								\squarerightblack	square, filled right half
U+0 <b>2</b> 5E9								\squareulblack	square, filled top left corner
U+025EA								\squarelrblack	square, filled bottom right corner
U+025EC		$\triangle$						\trianglecdot	triangle with centered dot
U+025ED		lack					Δ	\triangleleftblack	up-pointing triangle with left half black
U+025EE		<b>1</b>					$oldsymbol{\Lambda}$	\trianglerightblack	up-pointing triangle with right half black
u+025ef	$\bigcirc$	$\bigcirc$	0	0	0		0	\lgwhtcircle	large circle
U+0 <b>2</b> 5F0		旦						\squareulquad	white square with upper left quadrant
U+025F1		60						\squarellquad	white square with lower left quadrant
U+025F2								\squarelrquad	white square with lower right quadrant
U+025F3		<u> </u>						\squareurquad	white square with upper right quadrant
U+025F4		0						\circleulquad	white circle with upper left quadrant
U+025F5		0						\circlellquad	white circle with lower left quadrant
u+025F6		Ф						\circlelrquad	white circle with lower right quadrant
U+0 <b>2</b> 5F7		Φ						\circleurquad	white circle with upper right quadrant
u+025F8		abla						\ultriangle	upper left triangle
U+025F9		4						\urtriangle	upper right triangle
u+025fa		7						\lltriangle	lower left triangle

USV	M	S	Е	K	Р	L	G	Macro	Description
u+025fв								\mdwhtsquare	white medium square
U+025FC		•	•	•				\mdblksquare	black medium square
U+025FD			0					\mdsmwhtsquare	white medium small square
U+025FE		•	٠	٠				\mdsmblksquare	black medium small square
U+025FF		⊿						\lrtriangle	lower right triangle
u+02605		*	*	*		*	*	\bigstar <sup>(a)</sup>	star, filled
u+02606		☆					*	\bigwhitestar	star, open
u+02609		•				0		\astrosun	sun
U+02621		2						\danger	dangerous bend (caution sign)
u+0263в		•				•		\blacksmiley	black smiling face
u+0263c		<b>\$</b>				Φ		\sun	white sun with rays
u+0263D		$\supset$				)		\rightmoon	first quarter moon
u+0263E		(				(		\leftmoon	last quarter moon
u+0 <b>2</b> 640		φ				Q		\female	venus, female
u+02642		ð				₫		\male	mars, male
u+02660	•	•	•	٠	•	<b>^</b>		$\space{-0.05cm} \space{-0.05cm} -0.05$	spades suit symbol
u+02661	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$		$\verb \heartsuit ^{(p)}$	heart suit symbol
u+02662	$\Diamond$	$\Diamond$	<b>♦</b>	<b>♦</b>	<b>♦</b>	$\Diamond$		$\verb \diamondsuit ^{(p)}$	diamond suit symbol
u+02663	<b>.</b>	•	*	*	*	*		$\verb \clubsuit ^{(p)}$	club suit symbol
u+02664	$\Diamond$	$\Diamond$	$\Diamond$	<b>\$</b>	Ç.	$\Diamond$		\varspadesuit	spade, white (card suit)
u+02665	•	•	•	•	•	•		\varheartsuit	filled heart (card suit)
u+02666	<b>*</b>	•	<b>♦</b>	•	•	•		\vardiamondsuit	filled diamond (card suit)

USV	M	S	E	K	P	L	G	Macro	Description
u+02667	දා	ф	දා	ф	c <sub>C</sub>	&		\varclubsuit	club, white (card suit)
u+0 <b>2</b> 669		J				ا		\quarternote	music note (sung text sign)
u+0266a	•∕	•		2	1	<b>&gt;</b>		\eighthnote	eighth note
u+0266в		J.				J		\twonotes	beamed eighth notes
u+0266d	þ	b	b	b	Ь	Ь		$f flat^{(p)}$	musical flat
u+0 <b>2</b> 66e	Ц	þ	4	4	Ħ	Ħ		$\mathbf{natural}^{(p)}$	music natural
u+0266f	#	#	#	#	#	#		$\S$	musical sharp
u+0267E		<b>∞</b>					<u>@</u>	\acidfree	permanent paper sign
u+02680		•						\dicei	die face-1
u+02681		:						\diceii	die face-2
u+02682		∵.						\diceiii	die face-3
u+02683		::						\diceiv	die face-4
u+02684		∷						\dicev	die face-5
u+02685		::						\dicevi	die face-6
u+02686		$\odot$						\circledrightdot	white circle with dot right
u+02687		$\odot$						\circledtwodots	white circle with two dots
u+02688		•						\blackcircledrightdot	black circle with white dot right
u+02689		•						\blackcircledtwodots	black circle with two white dots
u+026A5		₫				₫		\Hermaphrodite	male and female sign
u+026aa		0	0	0				\mdwhtcircle	medium white circle
u+026ав		•	•	•				\mdblkcircle	medium black circle
u+0 <b>2</b> 6ac		0	0	0		0		\mdsmwhtcircle	medium small white circle

USV	M	S	E	K	Р	L	G	Macro	Description
u+026B2		Υ						\neuter	neuter
U+02713	✓	✓	✓	<b>✓</b>	<b>√</b>			\checkmark	tick, check mark
U+02720	¥	4	4	*	¥			\maltese	maltese cross
U+0272A		•						\circledstar	circled white star
u+02736		*						\varstar	six pointed black star
U+0273D		*						\dingasterisk	heavy teardrop-spoked asterisk
u+0279в		<b>→</b>						\draftingarrow	right arrow with bold head (drafting)
u+0 <b>2</b> 700		Ľ						\threedangle	three dimensional angle
U+027C1								\whiteinwhitetriangle	white triangle containing small white triangle
u+027C3		©						\subsetcirc	open subset
u+0 <b>27</b> C4		<u></u>						\supsetcirc	open superset
U+027D0		$\Diamond$		$\Diamond$				\diamondcdot	white diamond with centred dot
U+0292B		X						\rdiagovfdiag	rising diagonal crossing falling diagonal
U+0292C		X						\fdiagovrdiag	falling diagonal crossing rising diagonal
U+0292D		X						\seovnearrow	south east arrow crossing north east arrow
U+0292E		X						\neovsearrow	north east arrow crossing south east arrow
U+0292F		X						\fdiagovnearrow	falling diagonal crossing north east arrow
U+02930		X						\rdiagovsearrow	rising diagonal crossing south east arrow
U+02931		X						\neovnwarrow	north east arrow crossing north west arrow

USV	M	S	E	K	Р	L	G	Macro	Description
U+02932		X						\nwovnearrow	north west arrow crossing north east arrow
u+02934		♪	٤					\uprightcurvearrow	arrow pointing rightwards then curving upwards
u+02935		<b>→</b>	$\supset$					\downrightcurvedarrow	arrow pointing rightwards then curving downwards
u+02981		•	•	•				\mdsmblkcircle	z notation spot
U+0 <b>2</b> 999		i						\fourvdots	dotted fence
u+0299a		*						\vzigzag	vertical zigzag line
u+0 <b>2</b> 99в		4						\measuredangleleft	measured angle opening left
U+0 <b>2</b> 99C		F						\rightanglesqr	right angle variant with square
U+0 <b>2</b> 99D		<u> </u>						\rightanglemdot	measured right angle with dot
u+0 <b>2</b> 99E		Ŀ						\angles	angle with s inside
U+0299F		<b>∠</b>						\angdnr	acute angle
u+0 <b>2</b> 9A0		Þ						\gtlpar	spherical angle opening left
u+0 <b>2</b> 9A1		∀*						\sphericalangleup	spherical angle opening up
u+029A2		7						\turnangle	turned angle
u+029A3		7						\revangle	reversed angle
u+029A4		∠						\angleubar	angle with underbar
u+029A5		$\overline{7}$						\revangleubar	reversed angle with underbar
u+029A6		_						\wideangledown	oblique angle opening up
u+029A7		_						\wideangleup	oblique angle opening down
u+029A8		₫						\measanglerutone	measured angle with open arm ending in arrow pointing up and right

USV	M	S	E	K	P	L	G	Macro	Description
U+029A9		Ā						\measanglelutonw	measured angle with open arm ending in arrow pointing up and left
U+029AA		₹						\measanglerdtose	measured angle with open arm ending in arrow pointing down and right
U+029AB		፟፟ቖ						\measangleldtosw	measured angle with open arm ending in arrow pointing down and left
U+0 <b>2</b> 9AC		⋫						\measangleurtone	measured angle with open arm ending in arrow pointing right and up
U+029AD		₹						\measangleultonw	measured angle with open arm ending in arrow pointing left and up
U+029AE		Þ <sub>a</sub>						\measangledrtose	measured angle with open arm ending in arrow pointing right and down
U+0 <b>2</b> 9AF		A						\measangledltosw	measured angle with open arm ending in arrow pointing left and down
U+0 <b>2</b> 9B0		Ø						\revemptyset	reversed empty set
u+029B1		Ø						\emptysetobar	empty set with overbar
U+029B2		Ø						\emptysetocirc	empty set with small circle above
u+029в3		Ø						\emptysetoarr	empty set with right arrow above
u+029B4		Ø						\emptysetoarrl	empty set with left arrow above
U+029BA		$\oplus$						\obot	circle divided by horizontal bar and top half divided by vertical bar
u+029вв		Ø						\olcross	circle with superimposed x
u+029BC		Ø						\odotslashdot	circled anticlockwise-rotated division sign
u+029BD		Ф						\uparrowoncircle	up arrow through circle
u+0 <b>2</b> 9ве		0						\circledwhitebullet	circled white bullet

USV	M	S	Е	K	Р	L	G	Macro	Description
U+029BF		•						\circledbullet	circled bullet
U+029C2		00						\cirscir	circle with small circle to the right
U+029C3		O=						\cirE	circle with two horizontal strokes to the right
U+0 <b>2</b> 9C9		<b>4</b>						\boxonbox	two joined squares
U+0 <b>2</b> 9CA		$\dot{\triangle}$						\triangleodot	triangle with dot above
u+0 <b>2</b> 9СВ								\triangleubar	triangle with underbar
U+0 <b>2</b> 9CC		Ŝ						\triangles	s in triangle
U+0 <b>2</b> 9DC		$\sim$						\iinfin	incomplete infinity
u+029DD		&						\tieinfty	tie over infinity
U+029DE		<b>\$</b>						\nvinfty	infinity negated with vertical bar
U+0 <b>2</b> 9E0								\laplac	square with contoured outline
u+0 <b>2</b> 9E7		‡						\thermod	thermodynamic
u+029E8		V						\downtriangleleftblack	down-pointing triangle with left half black
U+029E9		<b>T</b>						\downtrianglerightblack	down-pointing triangle with right half black
U+029EA		•						\blackdiamonddownarrow	black diamond with down
U+029EC		Q						\circledownarrow	white circle with down arrow
U+029ED		•						\blackcircledownarrow	black circle with down arrow
U+029EE		Φ						\errbarsquare	error-barred white square
U+0 <b>2</b> 9EF		•						\errbarblacksquare	error-barred black square
u+0 <b>2</b> 9F0		δ						\errbardiamond	error-barred white diamond
u+029F1		₹						\errbarblackdiamond	error-barred black diamond

usv	M	S	Е	K	Р	L	G	Macro	Description
U+029F2		Φ						\errbarcircle	error-barred white circle
U+029F3		₫						\errbarblackcircle	error-barred black circle
U+02AE1		s						\perps	perpendicular with s
U+02AF1		Î						\topcir	down tack with circle below
U+02B12								\squaretopblack	square with top half black
U+02B13								\squarebotblack	square with bottom half black
U+0 <b>2</b> B14								\squareurblack	square with upper right diago- nal half black
U+0 <b>2</b> B15								\squarellblack	square with lower left diagonal half black
U+02B16		•						\diamondleftblack	diamond with left half black
u+02B17		<b>•</b>						\diamondrightblack	diamond with right half black
U+02B18		<b>♦</b>						\diamondtopblack	diamond with top half black
U+0 <b>2</b> B19		<b>\( \rightarrow</b>						\diamondbotblack	diamond with bottom half black
U+02B1A								\dottedsquare	dotted square
U+02B1B								\lgblksquare	black large square
U+02B1C								\lgwhtsquare	white large square
U+02B1D								\vysmblksquare	black very small square
U+02B1E			0					\vysmwhtsquare	white very small square
U+02B1F		•						\pentagonblack	black pentagon
U+02B20		$\bigcirc$						\pentagon	white pentagon
U+02B21		0						\varhexagon	white hexagon
U+02B22		•						\varhexagonblack	black hexagon
U+02B23		•						\hexagonblack	horizontal black hexagon

USV	M	S	Е	K	Р	L	G	Macro	Description
U+02B24								\lgblkcircle	black large circle
U+02B25		•	•	•				\mdblkdiamond	black medium diamond
U+02B26		$\Diamond$	$\Diamond$	$\Diamond$				\mdwhtdiamond	white medium diamond
U+02B27		•	•	<b>*</b>				\mdblklozenge	black medium lozenge
u+02в28		<b>♦</b>	$\Diamond$	$\Diamond$				\mdwhtlozenge	white medium lozenge
U+02B29		•	•	•				\smblkdiamond	black small diamond
U+02B2A		•	•	•				\smblklozenge	black small lozenge
U+02B2B		<b>♦</b>	<b>♦</b>	<b>♦</b>				\smwhtlozenge	white small lozenge
U+02B2C		•						\blkhorzoval	black horizontal ellipse
U+02B2D		0						\whthorzoval	white horizontal ellipse
U+02B2E		•						\blkvertoval	black vertical ellipse
U+02B2F		0						\whtvertoval	white vertical ellipse
U+02B50		☆						\medwhitestar	white medium star
U+02B51		*						\medblackstar	black medium star
U+02B52		*						\smwhitestar	white small star
U+02B53		•						\rightpentagonblack	black right-pointing pentagon
u+02B54		$\Diamond$						\rightpentagon	white right-pointing pentagon
U+03012		₹						\postalmark	postal mark
U+03030		~~						\hzigzag	zigzag
U+1D7CE	0	0	0	0	0	0	0	\mbfzero	mathematical bold digit o
U+1D7CF	1	1	1	1	1	1	1	\mbfone	mathematical bold digit 1
U+1D7D0	2	2	2	2	2	2	2	\mbftwo	mathematical bold digit 2

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D7D1	3	3	3	3	3	3	3	\mbfthree	mathematical bold digit 3
U+1D7D2	4	4	4	4	4	4	4	\mbffour	mathematical bold digit 4
U+1D7D3	5	5	5	5	5	5	5	\mbffive	mathematical bold digit 5
U+1D7D4	6	6	6	6	6	6	6	\mbfsix	mathematical bold digit 6
U+1D7D5	7	7	7	7	7	7	7	\mbfseven	mathematical bold digit 7
u+1D7D6	8	8	8	8	8	8	8	\mbfeight	mathematical bold digit 8
U+1D7D7	9	9	9	9	9	9	9	\mbfnine	mathematical bold digit 9
U+1D7D8	0	0	0		0	0	0	\Bbbzero	mathematical double-struck digit o
U+1D7D9	1	1	1		1	1	1	\Bbbone	mathematical double-struck digit 1
U+1D7DA	2	2	2		2	2	2	\Bbbtwo	mathematical double-struck digit 2
U+1D7DB	3	3	3		3	3	3	\Bbbthree	mathematical double-struck digit 3
U+1D7DC	4	4	4		4	4	4	\Bbbfour	mathematical double-struck digit 4
U+1D7DD	5	5	5		5	5	5	\Bbbfive	mathematical double-struck digit 5
U+1D7DE	6	6	6		6	6	6	\Bbbsix	mathematical double-struck digit 6
U+1D7DF	7	7	7		7	7	7	\Bbbseven	mathematical double-struck digit 7
U+1D7E0	8	8	8		8	8	8	\Bbbeight	mathematical double-struck digit 8
U+1D7E1	<b>©</b>	9	9		9	9	9	\Bbbnine	mathematical double-struck digit 9
U+1D7E2	0	0	0	0	0	0	0	\msanszero	mathematical sans-serif digit o
U+1D7E3	1	1	1	1	1	1	1	\msansone	mathematical sans-serif digit 1
U+1D7E4	2	2	2	2	2	2	2	\msanstwo	mathematical sans-serif digit 2

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D7E5	3	3	3	3	3	3	3	\msansthree	mathematical sans-serif digit 3
U+1D7E6	4	4	4	4	4	4	4	\msansfour	mathematical sans-serif digit 4
U+1D7E7	5	5	5	5	5	5	5	\msansfive	mathematical sans-serif digit 5
U+1D7E8	6	6	6	6	6	6	6	\msanssix	mathematical sans-serif digit 6
U+1D7E9	7	7	7	7	7	7	7	\msansseven	mathematical sans-serif digit 7
U+1D7EA	8	8	8	8	8	8	8	\msanseight	mathematical sans-serif digit 8
U+1D7ЕВ	9	9	9	9	9	9	9	\msansnine	mathematical sans-serif digit 9
U+1D7EC	0	0	0	0	0	0	0	\mbfsanszero	mathematical sans-serif bold digit o
U+1D7ED	1	1	1	1	1	1	1	\mbfsansone	mathematical sans-serif bold digit 1
U+1D7EE	2	2	2	2	2	2	2	\mbfsanstwo	mathematical sans-serif bold digit 2
u+1D7EF	3	3	3	3	3	3	3	\mbfsansthree	mathematical sans-serif bold digit 3
u+1D7F0	4	4	4	4	4	4	4	\mbfsansfour	mathematical sans-serif bold digit 4
u+1D7F1	5	5	5	5	5	5	5	\mbfsansfive	mathematical sans-serif bold digit 5
U+1D7F2	6	6	6	6	6	6	6	\mbfsanssix	mathematical sans-serif bold digit 6
U+1D7F3	7	7	7	7	7	7	7	\mbfsansseven	mathematical sans-serif bold digit 7
u+1D7F4	8	8	8	8	8	8	8	\mbfsanseight	mathematical sans-serif bold digit 8
U+1D7F5	9	9	9	9	9	9	9	\mbfsansnine	mathematical sans-serif bold digit 9
u+1D7F6	0	0	0	0	0	0	0	\mttzero	mathematical monospace digit
U+1D7F7	1	1	1	1	1	1	1	\mttone	mathematical monospace digit

າ
nonospace digit
10

## 14 Relation symbols, \mathrel

USV	M	S	Е	K	Р	L	G	Macro	Description
u+0003C	<	<	<	<	<	<	<	\less	less-than sign r:
U+0003D	=	=	=	=	=	=	=	\equal	equals sign r:
U+0003E	>	>	>	>	>	>	>	\greater	greater-than sign r:
U+02050		С						\closure	close up
U+0 <b>21</b> 90	$\leftarrow$	<b>←</b>	<b>←</b>	<b>←</b>	<b>←</b>	<b>←</b>	<b>←</b>	$\verb  leftarrow ^{(p)}$	/leftarrow /gets a: leftward arrow
U+0 <b>2</b> 191	<b>↑</b>	1	1	1	1	<b>↑</b>	<b>↑</b>	$\mathtt{oxed{uparrow}^{(p)}}$	upward arrow
U+02192	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\verb \rightarrow (p) $	/rightarrow /to a: rightward arrow
U+02193	$\downarrow$	$\downarrow$	1	$\downarrow$	ļ	$\downarrow$	$\downarrow$	$\verb \downarrow ^{(p)}$	downward arrow
u+02194	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	$\verb \label{leftrightarrow } $	left and right arrow
U+0 <b>2</b> 195	<b>\</b>	<b>1</b>	1	<b>1</b>	<b>1</b>	<b>‡</b>	<b>‡</b>	$\verb \updownarrow ^{(p)}$	up and down arrow
U+0 <b>2</b> 196	_	Τ,	_	_	Κ.	Κ,	Κ,	$\normalfont{Nwarrow}^{(\mathrm{p})}$	nw pointing arrow
U+02197	7	1	1	7	7	7	7	$\nesuremath{\mathtt{Nearrow}}^{(\mathrm{p})}$	ne pointing arrow
U+02198	¥	>	\	$\searrow$	7	7	7	$\sl = \sl $	se pointing arrow
U+02199	<b>\</b>	1	/	/	✓	✓	✓	$\verb \swarrow ^{(p)}$	sw pointing arrow
U+0219A	<del>\/-</del>	<b>↔</b>	<b>←</b>	<b>←</b>	<del><!---</del--></del>	<del>//</del>	<del>//</del>	\nleftarrow <sup>(a)</sup>	not left arrow
u+0219в	<i>→</i> >	<b>→</b> >	<i>→</i>	<i>→</i> >	<i>→</i> >	<i>→</i> >	<i>→</i>	$\verb \nrightarrow ^{(a)}$	not right arrow
U+0219C		<b>K</b> ~		<b>~</b>		<∽	<b>K</b> ~	\leftwavearrow	left arrow-wavy
U+0219D		~		~1		<i>~</i> >	∼ı	\rightwavearrow	right arrow-wavy
U+0219E	<del>«</del>	<del>~~</del>	<del>«-</del>	<b>«</b> —	<del>«-</del>	#-	<del>«-</del>	$\verb \twoheadleftarrow ^{(a)}$	left two-headed arrow
U+0219F	*	<b>†</b>	†	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	\twoheaduparrow	up two-headed arrow
U+0 <b>2</b> 1A0	<b>→</b>	<b>→</b>	<b>→</b>	<b>→</b>	<b>→</b>	<b>→</b>	<b>→</b>	$\verb \twoheadrightarrow ^{(a)}$	right two-headed arrow

USV	M	S	E	K	P	L	G	Macro	Description
U+021A1	<b>*</b>	<b>\$</b>	ţ	<b>¥</b>	¥	<b>\$</b>	¥	\twoheaddownarrow	down two-headed arrow
U+021A2	$\leftarrow$	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	left arrow-tailed						
U+021A3	$\rightarrowtail$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	\rightarrowtail <sup>(a)</sup>	right arrow-tailed
U+021A4	$\leftarrow$	$\leftarrow$	<b>←</b>	$\leftarrow$	$\leftarrow$	$\leftarrow$	$\leftarrow$	\mapsfrom	maps to, leftward
U+021A5	1	1	1	1	1	1	1	\mapsup	maps to, upward
U+021A6	$\mapsto$	$\mbox{\tt \baseline}$	maps to, rightward						
U+021A7	Ţ	Ţ	Ţ	Ţ	Ţ	Ţ	Ţ	\mapsdown	maps to, downward
U+021A9	$\leftarrow$	<i>Ų</i>	<b>←</b>	$\leftarrow$	<b>←</b>	$\leftarrow$	<b>ب</b>	$\verb \hookleftarrow ^{(p)}$	left arrow-hooked
U+021AA	$\hookrightarrow$	$\verb \hookrightarrow ^{(p)}$	right arrow-hooked						
U+021AB	$\leftarrow$	↫	₩	←₽	←₽	<b>←</b> P	↔	$\verb \looparrowleft ^{(a)}$	left arrow-looped
U+021AC	$\rightarrow$	↔	↔	9→	↔	↔	↔	$\verb \looparrowright ^{(a)}$	right arrow-looped
U+021AD	<b>∜</b> \}	₩	₩	<b>↔</b>	<b>₹V</b> >	$\leftrightarrow$	↔	$\verb \label{leftrightsquigarrow}  (a)$	left and right arr-wavy
U+021AE	<del>⟨/⟩</del>	↔	↔	↔	↔	₩	<b>↔</b>	$\verb \nleftrightarrow ^{(a)}$	not left and right arrow
U+021AF		Ź				4	4	\downzigzagarrow	downwards zigzag arrow
U+021B0	4	1	1	4	4	4	4	\Lsh <sup>(a)</sup>	/lsh a:
U+021B1	Þ	٢	ř	P	۲	٢	1	$\backslash \mathtt{Rsh}^{(\mathtt{a})}$	/rsh a:
U+021B2	4	Ą	Ą	Ą	ل	4	4	\Ldsh	left down angled arrow
U+021B3	Ļ	Ļ	Ļ	<b>Ļ</b>	Ļ	<b>Ļ</b>	Ļ	\Rdsh	right down angled arrow
U+021B6	N	$\sim$	$ \leftarrow $	$\sim$	<b>~</b>	$\checkmark$	<b>∽</b>	$\verb \curvearrowleft ^{(a)}$	left curved arrow
U+021B7	$\sim$	$\Diamond$	$ \uparrow $	$\sim$	~	$\sim$	ightharpoons	$\verb \curvearrowright ^{(a)}$	right curved arrow
U+021BC		_	_	_	_	_	_	${\tt \label{leftharpoonup}}^{(p)}$	left harpoon-up
U+021BD	_	<del></del>	<del></del>	<u></u>	<u> </u>	<u></u>	<u> </u>	$\verb \label{leftharpoondown} $	left harpoon-down

USV	M	S	E	K	P	L	G	Macro	Description
U+021BE	1	1	1	1	1	1	1	$\verb \upharpoonright ^{(a)}$	/upharpoonright /restriction a: up harpoon-right
U+021BF	1	1	1	1	1	1	1	$\verb \upharpoonleft ^{(a)}$	up harpoon-left
U+021C0		_	<u> </u>	_	<u></u>	_		$\verb \rightharpoonup ^{(p)}$	right harpoon-up
U+021C1	$\overline{}$	7	_	$\rightarrow$	<b>-</b>	~	$\rightarrow$	$\verb \rightharpoondown ^{(p)}$	right harpoon-down
U+021C2	ļ	ļ	ļ	l	l	ļ	ļ	$\verb \downharpoonright ^{(a)}$	down harpoon-right
U+021C3	1	1	1	1	1	1	1	$\verb \downharpoonleft ^{(a)}$	down harpoon-left
U+021C4	$\rightleftharpoons$	⇄	⇄	$\rightleftharpoons$	⇄	$\leftrightarrows$	⇄	\rightleftarrows <sup>(a)</sup>	right arrow over left arrow
U+021C5	<b>\</b>	$\uparrow\downarrow$	1	$\uparrow\downarrow$	1↓	1	1	\updownarrows	up arrow, down arrow
U+021C6	$\leftrightarrows$	$\leftrightarrows$	≒	$\leftrightarrows$	≒	$\rightleftharpoons$	$\leftrightarrows$	\leftrightarrows <sup>(a)</sup>	left arrow over right arrow
U+021C7	$ \leftarrow $	⊭	⊭	⇇	⊭	⊭	⊭	$\verb \leftleftarrows ^{(a)}$	two left arrows
U+021C8	$\uparrow\uparrow$	$\uparrow\uparrow$	11	$\uparrow\uparrow$	<b>↑</b> ↑	<b>1</b>	<b>1</b>	$\verb \upuparrows ^{(\texttt{a})}$	two up arrows
U+0 <b>2</b> 1C9	$\Rightarrow$	$\Rightarrow$	⇒	$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	$\verb \rightrightarrows ^{(a)}$	two right arrows
U+021CA	$\downarrow \downarrow$	$\downarrow \downarrow$	<b>#</b>	$\downarrow \downarrow$	<b>#</b>	<b>#</b>	$\downarrow \downarrow$	$\verb \downdownarrows ^{(a)}$	two down arrows
U+021CB	$\leftrightharpoons$	<del>_</del>	<b>=</b>	$\leftrightharpoons$	<b>=</b>	<b>=</b>	<b>=</b>	$\verb \label{leftrightharpoons}  (a)$	left harpoon over right
U+021CC	$\rightleftharpoons$	$\rightleftharpoons$	<b>=</b>	$\rightleftharpoons$	<b>=</b>	$\rightleftharpoons$	$\rightleftharpoons$	$\verb \rightleftharpoons ^{( )}$	right harpoon over left
U+021CD	#	#	<b>#</b>	#	#	#	#	$\verb \nLeftarrow ^{(a)}$	not implied by
U+021CE	<b>#</b>	<b>#</b>	<b>#</b>	<b>⇔</b>	<b>#</b>	<b>#</b>	<b>#</b>	$\verb \nLeftrightarrow ^{(a)}$	not left and right double arrows
U+021CF	<b>#</b>	<b>#</b>	<b>#</b> >	∌	<b>#</b>	<b>⇒</b>	<b>#</b>	$\verb \nRightarrow ^{(a)}$	not implies
U+021D0	<b>=</b>	<b>\( =</b>	<b>=</b>	<b>(</b>	<b>=</b>	←	<b>(</b>	$\texttt{f Leftarrow}^{(p)}$	is implied by
U+0 <b>2</b> 1D1	$\uparrow$	$\uparrow$	$\uparrow$	$\uparrow$	î	1	1	$ackslash  extsf{Uparrow}^{(p)}$	up double arrow
U+021D2	$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	⇒	$\Rightarrow$	$\Rightarrow$	$\verb \Rightarrow ^{(p)}$	implies
U+021D3	$\Downarrow$	$\Downarrow$	$\downarrow$	$\downarrow$	<b>#</b>	$\downarrow$	$\downarrow$	$\verb \Downarrow ^{(p)}$	down double arrow

USV	M	S	Е	K	P	L	G	Macro	Description
U+021D4	$\Leftrightarrow$	$\Leftrightarrow$	<b>⇔</b>	$\Leftrightarrow$	$\Leftrightarrow$	$\Leftrightarrow$	$\Leftrightarrow$	$\verb \Leftrightarrow ^{(p)}$	left and right double arrow
U+0 <b>2</b> 1D5	<b>\$</b>	<b>\$</b>	<b></b>	<b>1</b>	1	<b>\$</b>	<b>‡</b>	$\verb \Updownarrow ^{(p)}$	up and down double arrow
U+021D6		N	V		<b>N</b>			\Nwarrow	nw pointing double arrow
U+0 <b>2</b> 1D7	7	1	1	7	1	1	1	\Nearrow	ne pointing double arrow
U+021D8		Ø	Ø	V	<b>\( \rightarrow\)</b>			\Searrow	se pointing double arrow
U+0 <b>2</b> 1D9	4	4	U	4	4	4	U	\Swarrow	sw pointing double arrow
U+0 <b>2</b> 1DA	<b></b>	<b></b>	€	€	<b></b>	<b>⇐</b>	<b>=</b>	$\verb \Lleftarrow ^{(a)}$	left triple arrow
U+021DB	$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	⇒	$\Rightarrow$	⇒	$\verb \Rrightarrow ^{(a)}$	right triple arrow
U+0 <b>2</b> 1DC	<b>₹</b> ∿	₩-	**	₩	₩.	₩	₩	\leftsquigarrow	leftwards squiggle arrow
U+0 <b>2</b> 1DD	^>	₩	<b>~</b> →	<b>∞</b> →	^>	<b>**</b>	~ <del>&gt;</del>	$\verb \rightsquigarrow ^{(a)}$	rightwards squiggle arrow
U+0 <b>2</b> 1E4		⊬				⊬	<b>—</b>	\barleftarrow	leftwards arrow to bar
U+0 <b>2</b> 1E5		$\rightarrow$				$\rightarrow$	$\rightarrow$ I	\rightarrowbar	rightwards arrow to bar
U+0 <b>2</b> 1F4		<del>-0&gt;</del>				<del>-•&gt;</del>	<del>- ○ &gt;</del>	\circleonrightarrow	right arrow with small circle
U+021F5	<b>\</b>	<b>\</b>	<b>↓</b> ↑	<b>\</b> 1	<b>↓</b> ↑	<b>\$</b>	<b>\</b>	\downuparrows	downwards arrow leftwards of upwards arrow
U+0 <b>2</b> 1F6	$\Rightarrow$	⇉	⇉	ightharpoons	$\vec{\Rightarrow}$	⇉	⇉	\rightthreearrows	three rightwards arrows
U+021F7		<del>(+</del>				<del>\</del>	<del>&lt;+</del>	\nvleftarrow	leftwards arrow with vertical stroke
U+021F8		<b>+</b> >				<b>→</b>	$\rightarrow$	\nvrightarrow	rightwards arrow with vertical stroke
U+021F9		↔				<b>↔</b>	<b>↔</b>	\nvleftrightarrow	left right arrow with vertical stroke
U+021FA		<del>&lt;  -</del>				<del>(  -</del>	<del>(  -</del>	\nVleftarrow	leftwards arrow with double vertical stroke
U+021FB		<del>-  &gt;</del>				₩	#>	\nVrightarrow	rightwards arrow with double vertical stroke
U+0 <b>2</b> 1FC		₩				<del>&lt;  &gt;</del>	<del>&lt;  &gt;</del>	\nVleftrightarrow	left right arrow with double vertical stroke

U+021FE         →         →         \rightarrowtriangle         rightwards open-headed to the period of the pe	USV	M	S	Е	K	Р	L	G	Macro	Description
U+021FF	U+021FD		<b>←</b>				<b>←</b>	←	\leftarrowtriangle	leftwards open-headed arrow
U+02208	U+021FE		$\rightarrow$				$\rightarrow$	$\rightarrow$	\rightarrowtriangle	rightwards open-headed arrow
U+02209	U+021FF		$\leftrightarrow$				$\Leftrightarrow$	$\leftrightarrow$	\leftrightarrowtriangle	left right open-headed arrow
U+02200	U+02208	€	€	€	€	€	€	€	$\operatorname{f ar n}^{(p)}$	set membership, variant
### #################################	U+02209	∉	∉	∉	∉	∉	∉	∉	$\notin^{(1)}$	negated set membership
U+0220C	U+0220A	€	€	ε	€	€	€	€	\smallin	set membership (small set membership)
U+0221D	U+0220B	∋	∋	Э	∋	∋	Э	Э	<b>\ni</b> (p)	contains, variant
U+0221D         X<	U+0 <b>22</b> 0C	∌	∌	∌	∌	∌	∌	∌	\nni	negated contains, variant
U+02223	U+0 <b>22</b> 0D	∋	€	Э	Э	∋	Э	Э	\smallni	/ni /owns r: contains (small contains as member)
U+02224       ↑<	U+0221D	$\propto$	α	$\propto$	$\infty$	∝	∝	α	$\mathbf{propto}^{(p)}$	is proportional to
U+02225	U+02223				1			1	$\mbox{\em mid}^{(p)}$	/mid r:
U+02226       ₩       ₩       ₩       ₩       ₩       \mathratio       not parallel         U+02236       :       :       :       :       :       \mathratio       ratio         U+02237       :       :       :       :       :       :       \mathratio       two colons         U+02239       -:       -:       -:       -:       -:       -:       .       \mathratio       excess (-:)         U+0223A       ::       ::       ::       ::       ::       \mathratio       minus with four dots, g properties         U+0223B       \times \tim	U+02224	ł	ł	ł	ł	ł	ł	ł	$\mbox{\sc nmid}^{(a)}$	negated mid
U+02236 : : : : : : : : : : : : : : : : : : :	U+02225				II				$\mathbf{parallel}^{(p)}$	parallel
U+02237 :: :: :: :: :: :: ::	u+02226	#	#	#	¥	¥	ł	ł	$\verb \nparallel ^{(a)}$	not parallel
U+02239 -: -: -: -: -: -: \dashcolon excess (-:)  U+0223A :: :: :: :: \dotsminusdots minus with four dots, g properties  U+0223B ∴ ∴ ∴ ∴ ∴ ∴ ∴ \kernelcontraction homothetic  U+0223C ~ ~ ~ ~ ~ ~ ~ ~ \sim(p) similar  U+0223D ~ ~ ~ ~ ~ ~ ~ ~ ~ \backsim(a) reverse similar	u+02236	:	:	:	:	:	:	:	\mathratio	ratio
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	U+02237	::	::	::	::	::	::	::	\Colon	two colons
$U+0223B  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \text{kernelcontraction} \qquad \text{homothetic}$ $U+0223C  \sim  \sim  \sim  \sim  \sim  \sim  \sim  \text{sim}^{(p)} \qquad \text{similar}$ $U+0223D  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \stackrel{\checkmark}{\sim}  \text{backsim}^{(a)} \qquad \text{reverse similar}$	U+02239	-:	-:	-:	-:	-:	<b>=</b> ;	-:	\dashcolon	excess (-:)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	U+0223A	H	∺	H	÷	H	∺	H	\dotsminusdots	minus with four dots, geometric properties
U+0223D ~ ~ ~ ~ ~ \backsim <sup>(a)</sup> reverse similar	U+0 <b>22</b> 3B	÷	∻	<b>∻</b>	<b>∻</b>	<b>∻</b>	÷	÷	\kernelcontraction	homothetic
	U+0 <b>223</b> C	~	~	~	~	~	~	~	$\sim^{(p)}$	similar
$U+02241  \not \sim  \land  \land  \text{not similar}$	U+0223D	~	~	~	~	~	~	~	$\verb \backsim ^{(a)}$	reverse similar
	U+02241	*	*	*	<b>≈</b>	*	*	4	\nsim <sup>(a)</sup>	not similar

USV	M	S	E	K	P	L	G	Macro	Description
U+02242	abla	≂	≂	≂	$\approx$	≂	≂	$\texttt{\eqsim}^{(a)}$	equals, similar
U+02243	$\simeq$	~	~	$\simeq$	~	~	~	$\slash{simeq^{(p)}}$	similar, equals
U+0 <b>22</b> 44	<b>*</b>	≄	<b>≄</b>	<b>*</b>	<b>4</b>	<b>≄</b>	<b>#</b>	\nsime	not similar, equals
U+02243	$\simeq$	~	~	$\simeq$	~	~	~	\sime	similar, equals (alias)
U+0 <b>22</b> 44	<b>4</b>	≄	<b>≄</b>	<b>4</b>	<b>#</b>	<b>≄</b>	≄	\nsimeq	not similar, equals (alias)
U+02245	$\cong$	$\cong$	≅	$\cong$	≅	≅	≅	$\backslash \mathtt{cong}^{(l)}$	congruent with
u+02246	≆	≆	≆	≆	≆	≆	≆	\simneqq	similar, not equals [vert only for 9573 entity]
U+0 <b>22</b> 47	<b>≇</b>	<b>≇</b>	<b>≇</b>	<b>≇</b>	<b>≇</b>	≇	≇	${f ar{n}cong}^{(a)}$	not congruent with
u+02248	$\approx$	≈	*	≈	≈	≈	≈	$\texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ \ }} \texttt{\ \ \ } \texttt{\ \ \ }} \texttt{\ \ \ }} \texttt{\ \ \ } \texttt{\ \ \ }} \texttt{\ \ \ }} \texttt{\ \ \ } \texttt{\ \ \ }} \texttt{\ \ \ } \texttt{\ \ \ }} \texttt{\ \ \ }} \texttt{\ \ \ } $	approximate
u+0 <b>224</b> 9	*	<b>*</b>	*	≉	<b>*</b>	*	<b>≉</b>	\napprox	not approximate
U+0224A	≊	≊	<u>81</u>	≊	<u>≈</u>	≊	≊	$\verb \approxeq ^{(a)}$	approximate, equals
U+0224B	≋	≋	<b>*</b>	≋	≋	≋	≋	\approxident	approximately identical to
U+0 <b>22</b> 4C	SII	<u>  </u>	<b>≅</b>	≅	<u> </u>	<u>``</u>	≅	\backcong	all equal to
U+0224D	$\approx$	$\simeq$	×	$\simeq$	×	×	×	$\texttt{\baselineskip}(\texttt{p})$	asymptotically equal to
U+0224E	≎	\$	<b>\$</b>	<b>*</b>	\$		<b>\$</b>	$\verb \Bumpeq ^{(a)}$	bumpy equals
U+0224F	<u>~</u>	<b>-</b>	<b>-</b>	<u>~</u>	<b>-</b>		<u></u>	$\verb \bumpeq ^{(a)}$	bumpy equals, equals
U+0 <b>22</b> 50	÷	÷	÷	÷	÷	≐	÷	$\dot{q}^{(l)}$	equals, single dot above
U+02251	÷	÷	÷	÷	÷	÷	÷	$\mathbf{\backslash Doteq}^{(\mathtt{a})}$	/doteqdot /doteq r: equals, even dots
U+02252	≒	≒	≒	≒	≒	≒	≒	$\verb \fallingdotseq ^{(a)}$	equals, falling dots
U+02253	≓	≓	≓	≓	≓	≓	≓	$\verb \risingdotseq ^{(a)}$	equals, rising dots
U+02254	:=	:=	:=	:=	:=	:=	:=	\coloneq	colon, equals
U+02255	=:	=:	=:	=:	=:	=:	=:	\eqcolon	equals, colon

USV	M	S	E	K	P	L	G	Macro	Description
u+02256	<u> </u>	•	<b>±</b>	<u> </u>	п	<u> </u>	#	$\operatorname{ extbf{ extbf{eqcirc}}}^{(a)}$	circle on equals sign
U+02257	<u>•</u>	<u>•</u>	<u>•</u>	<u></u>	<u>°</u>	<u>•</u>		$\texttt{\circeq}^{(a)}$	circle, equals
U+02258	<b>=</b>	â	≘		≘	=		\arceq	arc, equals; corresponds to
U+02259	<u></u>	<u></u>	<u></u>		<b>^</b>	<u>^</u>		\wedgeq	corresponds to (wedge, equals)
U+0225A	<u>~</u>	<u>×</u>	<u>×</u>		<u></u> ≚	<u>~</u>		\veeeq	logical or, equals
U+0225B	<u>*</u>	<u>*</u>	<u>*</u>		<u>*</u>	<u>*</u>		\stareq	star equals
U+0 <b>22</b> 5C	<u></u>	≜	≜	≜	<u></u>	<u></u>		$\verb \triangleq ^{(a)}$	triangle, equals
U+0225D	def	def	def		def =	def		\eqdef	equals by definition
U+0225E	<u>m</u>	<u>m</u>	<u>m</u>		<u>m</u>	<u>m</u>		\measeq	measured by (m over equals)
U+0225F	?	?	<u>?</u>		?	<u>?</u>		\questeq	equal with questionmark
U+0 <b>22</b> 60	<b>≠</b>	<b>≠</b>	<b>#</b>	≠	<b>≠</b>	<b>≠</b>	≠	$\ensuremath{\mathtt{ne}^{(\mathtt{p})}}$	/ne /neq r: not equal
U+0 <b>22</b> 61	=	≡	≡	≡	=	≡	=	$\mathtt{ar{equiv}^{(p)}}$	identical with
U+02262	<b>#</b>	≢	<b>≢</b>	≢	≢	<b>≢</b>	≢	\nequiv	not identical with
U+02263	≡	≡	≣	≣	≣	≣	≣	\Equiv	strict equivalence (4 lines)
u+02264	<u>≤</u>	<u>≤</u>	<b>≤</b>	<b>≤</b>	<b>\leq</b>	$\leq$	<b>≤</b>	${f lack}{f leq}^{(p)}$	/leq /le r: less-than-or-equal
U+02265	$\geq$	≥	≥	≥	≥	≥	≥	$\geq^{(p)}$	/geq /ge r: greater-than-or- equal
U+02266	$\leq$	≦	≦	≦	≦	≦	≦	\leqq <sup>(a)</sup>	less, double equals
u+02267	≧	≧	≧	$\geq$	≧	≧	≧	$\gray \gray \gra$	greater, double equals
U+02268	≨	≨	≨	≨	≨	≨	≨	$\label{lneqq}$	less, not double equals
U+02269	≩	≥	≩	≱	≥	≩	≩	$\gray \gray \gra$	greater, not double equals
u+0226a	«	«	«	«	«	«	«	<b>\11</b> <sup>(p)</sup>	much less than, type 2
u+0226в	>>	>>	<b>&gt;&gt;</b>	>>	>>	>>>	>>	$\lg g^{(p)}$	much greater than, type 2

USV	M	S	E	K	Р	L	G	Macro	Description
u+0226c	Ŏ	Ŏ	Ŏ	Ø	Q	Ŏ	Ŏ	\between <sup>(a)</sup>	between
u+0226D	*	*	*	*	*	*	*	\nasymp	not asymptotically equal to
u+0 <b>22</b> 6E	<b></b>	*	<b>≮</b>	<	≮	≮	*	$\n$	not less-than
u+0 <b>22</b> 6F	<i>&gt;</i>	*	<b>&gt;</b>	*	<b>&gt;</b>	<b>&gt;</b>	*	${f ar ngtr}^{(a)}$	not greater-than
U+0 <b>227</b> 0	≰	≰	≰	≰	≰	≰	≰	$\neq^{(a)}$	not less-than-or-equal
U+0 <b>227</b> 1	≱	≱	≱	≱	≱	≱	≱	${f \setminus ngeq}^{(a)}$	not greater-than-or-equal
U+02272	≲	≲	≲	≲	≲	≲	≲	$\verb \lesssim ^{(a)}$	less, similar
U+0 <b>22</b> 73	≳	≳	≳	≳	≳	≳	≳	$\texttt{\backslash gtrsim}^{(\texttt{a})}$	greater, similar
u+0 <b>22</b> 74	\$	\$	\$	≴	\$	≴	\$	\nlesssim	not less, similar
U+02275	≵	*	≵	Z	≵	≵	≵	\ngtrsim	not greater, similar
u+02276	≶	≶	≶	≶	≶	≶	≶	$\verb \label{lessgtr}  (\texttt{a})$	less, greater
U+02277	≷	≷	≷	≷	≷	≷	≷	$\verb \gtrless ^{(a)}$	greater, less
u+02278	≸	\$	\$	≱	\$	\$	\$	\nlessgtr	not less, greater
U+0 <b>227</b> 9	≹	≹	≹	₹	₹	₹	≱	\ngtrless	not greater, less
U+0227A	$\prec$	<	<	<	<	$\prec$	~	$\mathbf{prec}^{(p)}$	precedes
U+0227B	>	>	>	>	>	>	>	$\sl succ^{(p)}$	succeeds
U+0 <b>227</b> C	$\preccurlyeq$	$\preccurlyeq$	$ \preccurlyeq $	$\leq$	$\leq$	$\preccurlyeq$	≼	\preccurlyeq(a)	precedes, curly equals
U+0227D	⊱	≽	≽	≽	≽	≽	≽	\succcurlyeq <sup>(a)</sup>	succeeds, curly equals
U+0227E	$\preceq$	≾	≾	≾	≾	$\preceq$	≾	$\texttt{\precsim}^{(\texttt{a})}$	precedes, similar
U+0227F	≿	≿	≿	≿	≿	≿	≿	$\verb \succsim ^{(a)}$	succeeds, similar
u+02280	K	*	*	*	*	K	*	\nprec <sup>(a)</sup>	not precedes
U+02281	*	*	*	*	*	¥	*	$\normalfont{\mathtt{nsucc}}^{(\mathtt{a})}$	not succeeds

usv	M	S	E	K	P	L	G	Macro	Description
u+02282	C	C	C	C	C	C	C	$\sl bset^{(p)}$	subset or is implied by
u+02283	$\supset$	D	$\supset$	$\supset$	$\supset$	C	D	$\texttt{\sc supset}^{(p)}$	superset or implies
u+02284	¢	⊄	⊄	⊄	⊄	⊄	⊄	\nsubset	not subset, variant [slash negation]
u+02285	⊅	⊅	⊅	Þ	⊅	⊅	⊅	\nsupset	not superset, variant [slash negation]
U+02286	$\subseteq$	⊆	⊆	⊆	⊆	$\subseteq$	⊆	$\verb \subseteq ^{(p)}$	subset, equals
u+02287	$\supseteq$	⊇	⊇	⊇	⊇	2	⊇	$\verb \supseteq ^{(p)}$	superset, equals
u+02288	⊈	⊈	⊈	⊈	⊈	⊈	⊈	$\verb \nsubseteq ^{(a)}$	not subset, equals
u+0 <b>22</b> 89	⊉	⊉	⊉	⊋	⊉	⊉	⊉	$\verb \nsupseteq ^{(a)}$	not superset, equals
u+0228a	Ç	Ç	Ç	Ç	Ç	Ç	Ç	$\verb \subsetneq ^{(a)}$	subset, not equals
U+0228B	$\supseteq$	⊋	⊋	⊋	⊋	⊋	⊋	$\verb \supsetneq ^{(a)}$	superset, not equals
U+0228F		⊏	⊏	⊏	⊏	⊏	⊏	\sqsubset	square subset
U+0 <b>229</b> 0		⊐					⊐	\sqsupset	square superset
U+0 <b>22</b> 91	⊑	⊑	⊑	⊑	⊑	⊑	⊑	$\verb \sqsubseteq ^{(p)}$	square subset, equals
U+02292	⊒	⊒	⊒	⊒	⊒	⊒	⊒	$\verb \sqsupseteq ^{(p)}$	square superset, equals
U+022A2	H	F	H	F	H	⊢	F	$\mathbf{\backslash vdash}^{(p)}$	vertical, dash
U+022A3	4	⊣	Н	٦	Н	$\dashv$	Н	$\operatorname{\mathtt{\baseline}}^{(p)}$	dash, vertical
u+022A6	F	F	F	F	H	F	F	\assert	assertion (vertical, short dash)
U+022A7	þ	þ	þ	ŧ	þ	F	F	${\tt m{models}}^{(p)}$	models (vertical, short double dash)
U+022A8	þ	⊨	F	þ	F	⊨	F	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	vertical, double dash
U+022A9	⊩	⊩	⊩	⊩	⊩	⊩	IF	${f Vdash}^{(a)}$	double vertical, dash
U+0 <b>22</b> AA	III	III	⊪	⊪	⊪	⊩	⊪	$\verb Vvdash ^{(a)}$	triple vertical, dash
U+022AB	l⊨	I⊨	⊫	I=	⊫	⊫	I⊨	\VDash	double vert, double dash

USV	M	S	E	K	P	L	G	Macro	Description
U+022AC	¥	¥	¥	۲	¥	⊬	⊬	$\mathbf{\ \ }\mathbf{(a)}$	not vertical, dash
U+022AD	⊭	¥	¥	⊭	¥	⊭	¥	$\verb \nvDash ^{(a)}$	not vertical, double dash
U+022AE	<i></i>	¥	¥	<b>⊬</b>	⊮	⊮	I⊬	$\verb \nVdash ^{(a)}$	not double vertical, dash
U+022AF	⊭	¥	¥	¥⊨	Æ	⊭	I⊭	$\verb \nVDash ^{(a)}$	not double vert, double dash
U+0 <b>22</b> BO		4					3	\prurel	element precedes under relation
U+022B1		۶					۶	\scurel	succeeds under relation
U+022B2	$\triangleleft$	⊲	⊲	⊲	⊲	⊲	⊲	$\verb \vartriangleleft ^{(a)}$	left triangle, open, variant
u+022в3	$\triangleright$	$\triangleright$	$\triangleright$	$\triangleright$	$\triangleright$	$\triangleright$	<b>&gt;</b>	$\verb \vartriangleright ^{(a)}$	right triangle, open, variant
U+0 <b>22</b> B4	⊴	⊴	⊴	⊴	⊴	⊴	⊴	$\verb \trianglelefteq ^{(a)}$	left triangle, equals
U+022B5	⊵	⊵	⊵	⊵	⊵	⊵	₽	$\verb \trianglerighteq ^{(a)}$	right triangle, equals
u+0 <b>22</b> в6	0	<b>○</b>	0-	0—•	0-•	0-0	<b>⊶</b>	\origof	original of
U+022B7	•••	•••	•••	•—•	•-0	•	•••	\imageof	image of
u+022в8	-0	~	-0	-0	-0		~	$\verb \multimap ^{(a)}$	/multimap a:
U+022C8	M	M	M	M	M	M	M	$\verb \bowtie ^{(p)}$	bowtie
U+022CD	<u>S</u>	SI	<u>S</u>	~	<u>∽</u>	≃	≃	$\verb \backsimeq ^{(a)}$	reverse similar, equals
U+022D0	€	€	<b>©</b>	<b>©</b>	€		€	\Subset <sup>(a)</sup>	double subset
U+0 <b>22</b> D1	⋑	⋑	⋑	∋	∋		⋑	\Supset(a)	double superset
U+022D4		Μ	Μ	Ψ			ψ	$\verb+\pitchfork+^{(a)}$	pitchfork
U+022D5	#	#	#	#	#		#	\equalparallel	parallel, equal; equal or parallel
U+022D6	<	<	<	<	<	<	⋖	${f ar less dot}^{(a)}$	less than, with dot
U+022D7	>	≽	⊳	>	>	≽	≽	\gtrdot <sup>(a)</sup>	greater than, with dot
U+022D8	<b>///</b>	<b>**</b>	<b>///</b>	<b>***</b>	<b>///</b>	<b>///</b>	<b>**</b>	<b>\111</b> (a)	/ll /lll /llless r: triple less-than

USV	M	S	Е	K	P	L	G	Macro	Description
U+022D9	<i>&gt;&gt;&gt;</i>	<b>&gt;&gt;&gt;</b>	<b>&gt;&gt;&gt;</b>	<b>&gt;&gt;&gt;</b>	<i>&gt;&gt;&gt;</i>	<i>&gt;&gt;&gt;</i>	>>>	\ggg <sup>(a)</sup>	/ggg /gg /gggtr r: triple greater-than
U+022DA	$\leq$	<u>\leq</u>	<u>\{</u>	<u>\leq</u>	$\leq$	$\leq$	$\leq$	$\verb \lesseqgtr ^{(a)}$	less, equals, greater
U+022DB	$\geq$	>	>	>	$\geq$	$\geq$	$\geq$	$\verb \gtreqless ^{(a)}$	greater, equals, less
U+022DC	<	<	<	₹	₹	₹	₹	\eqless	equal-or-less
U+022DD	>	>	>	>	>	>	5	\eqgtr	equal-or-greater
U+022DE	$\Rightarrow$	⋞	<	<	4	⋞	*	$\verb \curlyeqprec ^{(a)}$	curly equals, precedes
U+022DF	×	*	<b>&gt;</b>	>	>	۶	>	$\verb \curlyeqsucc ^{(a)}$	curly equals, succeeds
U+022E0	⋠	≰	*	≼	≰	≰	*	\npreccurlyeq	not precedes, curly equals
U+022E1	*	*	*	*	*	*	¥	\nsucccurlyeq	not succeeds, curly equals
U+022E2	⊭	⊭	⋢	⊭	⋢	⊭	⊈	\nsqsubseteq	not, square subset, equals
U+022E3	⊉	⊉	⊉	⊉	⊉	⊉	⊉	\nsqsupseteq	not, square superset, equals
U+022E4	<u>_</u>	Ę –	Ę	Ę _	Ç _	Ç _	F	\sqsubsetneq	square subset, not equals
U+022E5	7	7	⊋	<b></b>	⊋	⊋	⊋	\sqsupsetneq	square superset, not equals
u+022E6	Ş √	\$	⋦	⋦	⋦	\$	⋦	\lnsim(a)	less, not similar
U+022E7	<i></i>	<i>&gt;</i> ≠	<i>≯</i>	<b>≥</b>	<i></i>	<i></i> ≈		\gnsim <sup>(a)</sup>	greater, not similar
U+022E8	<u> </u>	<b>∀</b> ≈	⋨	⋨	<b>⋨</b>	<b>⋨</b>	⋨	\precnsim(a) \succnsim(a)	precedes, not similar
U+022E9 U+022EA	<i>₹</i>	<i></i> ≉	≿ ≉	<i>≳</i> .	<i></i> ≵	≿ ≉	≿ ⋪	\nvartriangleleft	succeeds, not similar not left triangle
U+022EB	× ×	× ×	× Þ	~ <b>≯</b>	<b>≯</b>	× ≯	× ×	\nvartriangleright	not left triangle
U+022EC	₽	\$	\$	\$	₽	\$	⊅	\ntrianglelefteq(a)	not light triangle, equals
U+022ED	≠	≠	#	≱	⊭	≠	≠	$\t$ \ntrianglerighteq $^{(a)}$	not right triangle, equals
U+022EE	<i>∓</i> :	<del>7</del> :	:	:	<i>∓</i> :	<del>7-</del> :	<i>∓</i> :	\vdots <sup>(p)</sup>	vertical ellipsis
U I UZZEE	•	•	•	•	•	•	•	/4400B	vertical empsis

USV	M	S	E	K	P	L	G	Macro	Description
U+022F0	e.	.:	.:	.*		÷	1	\adots	three dots, ascending
U+0 <b>22</b> F1	Α,	٠.	٠.	٠.	٠.	٠.	N	$\texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ }} \texttt{\ \ \ } \texttt{\ \ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ } \texttt{\ \ }} \texttt{\ \ \ }} \texttt$	three dots, descending
U+022F2		€						\disin	element of with long horizontal stroke
U+022F3		⋳						\varisins	element of with vertical bar at end of horizontal stroke
U+022F4		e						\isins	small element of with vertical bar at end of horizontal stroke
U+022F5		Ė						\isindot	element of with dot above
u+0 <b>22</b> F6		⋶						\varisinobar	element of with overbar
U+022F7		€						\isinobar	small element of with overbar
U+022F8		⋸						\isinvb	element of with underbar
U+022F9		€						\isinE	element of with two horizontal strokes
U+022FA		⋺						\nisd	contains with long horizontal stroke
U+022FB		Ð						\varnis	contains with vertical bar at end of horizontal stroke
U+0 <b>22</b> FC		Ð						\nis	small contains with vertical bar at end of horizontal stroke
U+022FD		⋽						\varniobar	contains with overbar
U+022FE		5						\niobar	small contains with overbar
U+022FF		E						\bagmember	z notation bag membership
U+02322				^	$\overline{}$			$\mathbf{\backslash frown}^{(p)}$	down curve
U+02323	$\overline{}$	_		$\smile$	$\smile$	$\smile$	$\smile$	$\slash$ smile $^{(p)}$	up curve
U+0233F		+						\APLnotslash	solidus, bar through (apl functional symbol slash bar)
U+025B5		Δ	Δ	Δ				$\verb \vartriangle ^{(a)}$	/triangle - up triangle, open

USV	M	S	E	K	Р	L	G	Macro	Description
U+027C2		Т	Т		Т	Τ	Т	$\mathbf{perp}^{(p)}$	perpendicular
u+027c8		\C						\bsolhsub	reverse solidus preceding subset
U+0 <b>27</b> C9		⊃/						\suphsol	superset preceding solidus
U+027D2		Ψ						\upin	element of opening upwards
U+027D3		Ŀ						\pullback	lower right corner with dot
U+027D4		F						\pushout	upper left corner with dot
U+027DA	#	≓⊨	#	≠	⊭		非	\DashVDash	left and right double turnstile
U+0 <b>2</b> 7DB	╬	⊣⊢	⊣⊢	⊣⊢	4		H-	\dashVdash	left and right tack
U+027DC	<b>~</b>	<b>~</b>	<b>o</b> —	0—	<b>~</b>		<b>~</b>	\multimapinv	left multimap
U+027DD	$\vdash$	<u> </u>	<u> </u>	<b>—</b>	$\vdash$		$\vdash$	\vlongdash	long left tack
U+027DE	$\dashv$	—	$\dashv$	$\dashv$	$\dashv$		$\dashv$	\longdashv	long right tack
U+027DF		Î						\cirbot	up tack with circle above
U+027F0		1						\UUparrow	upwards quadruple arrow
U+027F1		₩						\DDownarrow	downwards quadruple arrow
U+027F2		O				4)	5	\acwgapcirclearrow	anticlockwise gapped circle arrow
U+027F3		C				(~	C	\cwgapcirclearrow	clockwise gapped circle arrow
u+027F4	$\bigoplus$	<b>⊕</b>	<b>•</b>	$\oplus$	<b>⊕</b>			\rightarrowonoplus	right arrow with circled plus
u+027F5	$\leftarrow$	$\leftarrow$	←	<b></b>	←	←	←	$\verb \longleftarrow ^{(p)}$	long leftwards arrow
u+027F6	$\longrightarrow$	$\verb \longrightarrow ^{(p)}$	long rightwards arrow						
U+027F7	$\longleftrightarrow$	$\verb \longleftrightarrow ^{(p)}$	long left right arrow						
U+027F8	$\leftarrow$	$\leftarrow$	⇐	$\leftarrow$	←	←	←	$\verb \Longleftarrow ^{(p)}$	long leftwards double arrow
u+027F9	$\Longrightarrow$	$\Longrightarrow$	$\Longrightarrow$	$\Longrightarrow$	$\Rightarrow$	$\Longrightarrow$	$\Longrightarrow$	$\verb \Longrightarrow ^{(p)}$	long rightwards double arrow

USV	M	S	E	K	Р	L	G	Macro	Description
U+027FA	$\iff$	$\Leftrightarrow$	$\iff$	$\iff$	$\iff$	$\iff$	$\iff$	$\verb \Longleftrightarrow ^{(p)}$	long left right double arrow
U+027FB	$\leftarrow$	$\longleftarrow$	$\leftarrow$	$\longleftarrow$	$\leftarrow$	$\leftarrow$	$\leftarrow$	\longmapsfrom	long leftwards arrow from bar
U+0 <b>2</b> 7FC	$\longmapsto$	$\longmapsto$	$\longmapsto$	$\longmapsto$	$\longmapsto$	$\mapsto$	$\longmapsto$	$\verb \longmapsto ^{(p)}$	long rightwards arrow from bar
U+027FD	$\iff$	$\iff$	$\iff$	$\iff$	$\leftarrow$	$\iff$	$\iff$	\Longmapsfrom	long leftwards double arrow from bar
U+027FE	$\Longrightarrow$	$\Longrightarrow$	$\Longrightarrow$	$\Longrightarrow$	$\Longrightarrow$	$\Longrightarrow$	$\Longrightarrow$	\Longmapsto	long rightwards double arrow from bar
U+027FF	<b>^^</b>	<b>~</b> ~~→	<b>~~~</b>	<b>₩</b>	<b>-</b> w>	~~~ <del>&gt;</del>	~~ <b>&gt;</b>	\longrightsquigarrow	long rightwards squiggle arrow
U+0 <b>2</b> 900		<del>-1&gt;&gt;</del>						\nvtwoheadrightarrow	rightwards two-headed arrow with vertical stroke
U+0 <b>2</b> 901		<del>11&gt;&gt;</del>						\nVtwoheadrightarrow	rightwards two-headed arrow with double vertical stroke
U+02902		#				#		\nvLeftarrow	leftwards double arrow with vertical stroke
U+02903		<b>⇒</b>				⇒		\nvRightarrow	rightwards double arrow with vertical stroke
u+02904		<b>#</b>				<b>⇔</b>		\nvLeftrightarrow	left right double arrow with vertical stroke
u+02905		₩						\twoheadmapsto	rightwards two-headed arrow from bar
u+02906	⊭	⊭	⊭	$\Leftrightarrow$	Ħ	⊭	⊭	\Mapsfrom	leftwards double arrow from bar
U+0 <b>2</b> 907	$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	$\Rightarrow$	⊨	$\Rightarrow$	⇔	\Mapsto	rightwards double arrow from bar
u+02908		‡						\downarrowbarred	downwards arrow with horizontal stroke
U+02909		‡						\uparrowbarred	upwards arrow with horizontal stroke
U+0 <b>2</b> 90A		⇑				1		\Uuparrow	upwards triple arrow
u+0 <b>2</b> 90в		₩				<b></b>		\Ddownarrow	downwards triple arrow
U+0290C		←-						\leftbkarrow	leftwards double dash arrow

USV	M	S	Е	K	P	L	G	Macro	Description
U+0290D		>						\rightbkarrow	rightwards double dash arrow
U+0 <b>2</b> 90E		<del>&lt;</del>						\leftdbkarrow	leftwards triple dash arrow
u+0 <b>2</b> 90F		>						\dbkarrow	rightwards triple dash arrow
U+02910		> <del>»</del>						\drbkarrow	rightwards two-headed triple dash arrow
U+0 <b>29</b> 11		>						\rightdotarrow	rightwards arrow with dotted stem
U+02912		<b>T</b>						\baruparrow	upwards arrow to bar
U+02913		Ţ						\downarrowbar	downwards arrow to bar
U+02914		>+>						\nvrightarrowtail	rightwards arrow with tail with vertical stroke
U+02915		<del>&gt;  &gt;</del>						\nVrightarrowtail	rightwards arrow with tail with double vertical stroke
U+02916		<b>&gt;&gt;&gt;</b>						\twoheadrightarrowtail	rightwards two-headed arrow with tail
U+02917		<del>)}</del>						\nvtwoheadrightarrowtail	rightwards two-headed arrow with tail with vertical stroke
U+02918		<del>/  &gt;</del>						\nVtwoheadrightarrowtail	rightwards two-headed arrow with tail with double vertical stroke
U+0 <b>2</b> 919		$\rightarrow$						\lefttail	leftwards arrow-tail
U+0291A		<b>—</b>						\righttail	rightwards arrow-tail
U+0 <b>2</b> 91B		«						\leftdbltail	leftwards double arrow-tail
U+0 <b>2</b> 91C		<b>&gt;</b>						\rightdbltail	rightwards double arrow-tail
U+0 <b>2</b> 91D		•←						\diamondleftarrow	leftwards arrow to black diamond
U+0 <b>2</b> 91E		<b>→•</b>						\rightarrowdiamond	rightwards arrow to black diamond
U+0 <b>2</b> 91F		•						\diamondleftarrowbar	leftwards arrow from bar to black diamond

USV	M	S	Е	K	P	L	G	Macro	Description
U+02920		<b>→•</b>						\barrightarrowdiamond	rightwards arrow from bar to black diamond
U+02921		7						\nwsearrow	north west and south east arrow
U+02922		7						\neswarrow	north east and south west arrow
U+02923		5						\hknwarrow	north west arrow with hook
u+02924		7						\hknearrow	north east arrow with hook
U+02925		5						\hksearrow	south east arrow with hook
u+02926		2						\hkswarrow	south west arrow with hook
u+02927		X						\tona	north west arrow and north east arrow
U+02928		X						\toea	north east arrow and south east arrow
U+02929		X						\tosa	south east arrow and south west arrow
U+0292A		×						\towa	south west arrow and north west arrow
U+02933		$\rightarrow$	$\rightarrow$					\rightcurvedarrow	wave arrow pointing directly right
u+0 <b>2</b> 936		Ų	Ļ					\leftdowncurvedarrow	arrow pointing downwards then curving leftwards
U+0 <b>2</b> 937		<i>\</i>	C,					\rightdowncurvedarrow	arrow pointing downwards then curving rightwards
u+02938		)						\cwrightarcarrow	right-side arc clockwise arrow
U+02939		Ç						\acwleftarcarrow	left-side arc anticlockwise arrow
U+0 <b>2</b> 93A		~						\acwoverarcarrow	top arc anticlockwise arrow
u+0293в		G						\acwunderarcarrow	bottom arc anticlockwise arrow
U+0 <b>2</b> 93C		æ						\curvearrowrightminus	top arc clockwise arrow with minus
U+0293D		户						\curvearrowleftplus	top arc anticlockwise arrow with plus

USV	M	S	Е	K	Р	L	G	Macro	Description
U+0293E		N						\cwundercurvearrow	lower right semicircular clockwise arrow
U+0293F		G						\ccwundercurvearrow	lower left semicircular anti- clockwise arrow
u+0 <b>2</b> 940		Ó						\acwcirclearrow	anticlockwise closed circle arrow
U+02941		Ò						\cwcirclearrow	clockwise closed circle arrow
u+02942		<b>↔</b>						\rightarrowshortleftarrow	rightwards arrow above short leftwards arrow
u+02943		$\longleftrightarrow$						\leftarrowshortrightarrow	leftwards arrow above short rightwards arrow
U+02944		$\stackrel{\bigstar}{\leftarrow}$						\shortrightarrowleftarrow	short rightwards arrow above leftwards arrow
u+02945		<del>+</del> >						\rightarrowplus	rightwards arrow with plus below
u+02946		←						\leftarrowplus	leftwards arrow with plus below
u+02947		**						\rightarrowx	rightwards arrow through x
u+02948		⇔						\leftrightarrowcircle	left right arrow through small circle
u+02949		*						\twoheaduparrowcircle	upwards two-headed arrow from small circle
U+0294A		<del></del>						\leftrightharpoonupdown	left barb up right barb down harpoon
u+0294в		~						\leftrightharpoondownup	left barb down right barb up harpoon
U+0294C		1						\updownharpoonrightleft	up barb right down barb left harpoon
u+0294D		1						\updownharpoonleftright	up barb left down barb right harpoon
u+0294E		<b>∠</b>						\leftrightharpoonupup	left barb up right barb up har- poon
U+0294F		ţ						\updownharpoonrightright	up barb right down barb right harpoon

USV	M	S	E	K	P	L	G	Macro	Description
U+02950		$\overline{}$						\leftrightharpoondowndown	left barb down right barb down harpoon
U+02951		1						\updownharpoonleftleft	up barb left down barb left harpoon
U+02952		l <del>′</del>						\barleftharpoonup	leftwards harpoon with barb up to bar
u+02953		<u>→</u>						\rightharpoonupbar	rightwards harpoon with barb up to bar
u+02954		T						\barupharpoonright	upwards harpoon with barb right to bar
u+02955		Ţ						\downharpoonrightbar	downwards harpoon with barb right to bar
u+02956		<del></del>						\barleftharpoondown	leftwards harpoon with barb down to bar
u+02957		<del>-</del> →l						\rightharpoondownbar	rightwards harpoon with barb down to bar
u+02958		1						\barupharpoonleft	upwards harpoon with barb left to bar
u+02959		7						\downharpoonleftbar	downwards harpoon with barb left to bar
u+0295A		$\leftarrow$						\leftharpoonupbar	leftwards harpoon with barb up from bar
u+0295в		$\vdash$						\barrightharpoonup	rightwards harpoon with barb up from bar
u+0295C		1						\upharpoonrightbar	upwards harpoon with barb right from bar
U+0295D		Ţ						\bardownharpoonright	downwards harpoon with barb right from bar
U+0295E		$\leftarrow$						\leftharpoondownbar	leftwards harpoon with barb down from bar
U+0295F		$\vdash$						\barrightharpoondown	rightwards harpoon with barb down from bar
u+0 <b>2</b> 960		1						\upharpoonleftbar	upwards harpoon with barb left from bar

USV	M	S	E	K	P	L	G	Macro	Description
U+02961		1						\bardownharpoonleft	downwards harpoon with barb left from bar
u+0 <b>2962</b>		<b>=</b>						\leftharpoonsupdown	leftwards harpoon with barb up above leftwards harpoon with barb down
u+0 <b>29</b> 63		1						\upharpoonsleftright	upwards harpoon with barb left beside upwards harpoon with barb right
u+0 <b>2964</b>		$\Rightarrow$						\rightharpoonsupdown	rightwards harpoon with barb up above rightwards harpoon with barb down
u+02965		1						\downharpoonsleftright	downwards harpoon with barb left beside downwards harpoon with barb right
u+02966		<b>±</b>						\leftrightharpoonsup	leftwards harpoon with barb up above rightwards harpoon with barb up
u+02967		<del></del>						\leftrightharpoonsdown	leftwards harpoon with barb down above rightwards har- poon with barb down
u+02968		<del>=</del>						\rightleftharpoonsup	rightwards harpoon with barb up above leftwards harpoon with barb up
u+0 <b>2</b> 969		=						\rightleftharpoonsdown	rightwards harpoon with barb down above leftwards harpoon with barb down
u+0296a		<b>=</b>						\leftharpoonupdash	leftwards harpoon with barb up above long dash
и+0296в		=						\dashleftharpoondown	leftwards harpoon with barb down below long dash
u+0296c		<b>⇒</b>						\rightharpoonupdash	rightwards harpoon with barb up above long dash
u+0 <b>2</b> 96D		=						\dashrightharpoondown	rightwards harpoon with barb down below long dash
u+0296E		11						\updownharpoonsleftright	upwards harpoon with barb left beside downwards harpoon with barb right
u+0 <b>2</b> 96f		11						\downupharpoonsleftright	downwards harpoon with barb left beside upwards harpoon with barb right

USV	M	S	Е	K	P	L	G	Macro	Description
U+02970		=						\rightimply	right double arrow with rounded head
U+02971		≕				€		\equalrightarrow	equals sign above rightwards arrow
U+02972		$\stackrel{\sim}{\to}$				<b>≃</b> →		\similarrightarrow	tilde operator above rightwards arrow
u+02973		<del>&lt;</del> ≂				€		\leftarrowsimilar	leftwards arrow above tilde operator
u+02974		⇒				⇒		\rightarrowsimilar	rightwards arrow above tilde operator
u+02975		≅				≅		\rightarrowapprox	rightwards arrow above almost equal to
u+0 <b>297</b> 6		≨						\ltlarr	less-than above leftwards arrow
U+02977		€						\leftarrowless	leftwards arrow through less-than
u+02978		≥						\gtrarr	greater-than above rightwards arrow
U+0 <b>297</b> 9		Ş						\subrarr	subset above rightwards arrow
u+0297A		€						\leftarrowsubset	leftwards arrow through subset
u+0297в		⊋						\suplarr	superset above leftwards arrow
u+0297C		⊱						\leftfishtail	left fish tail
U+0297D		⊣						\rightfishtail	right fish tail
U+0297E		Υ						\upfishtail	up fish tail
U+0297F		7						\downfishtail	down fish tail
u+02982		8				0		\typecolon	z notation type colon
u+0 <b>2</b> 9ce		$\bowtie$						\rtriltri	right triangle above left triangle
u+029CF		⊲∣						\ltrivb	left triangle beside vertical bar
u+0 <b>2</b> 9D0		⊳						\vbrtri	vertical bar beside right triangle

USV	M	S	Е	K	P	L	G	Macro	Description
U+029D1		M						\lfbowtie	left black bowtie
U+029D2		M						\rfbowtie	right black bowtie
U+029D3		H						\fbowtie	black bowtie
u+029D4		K						\lftimes	left black times
U+029D5		×						\rftimes	right black times
U+029DF		<b>○</b>		0—0				\dualmap	double-ended multimap
U+0 <b>2</b> 9E1		₫						\lrtriangleeq	increases as
U+029E3		#						\epars1	equals sign and slanted parallel
u+029E4		<i></i>						\smeparsl	equals sign and slanted parallel with tilde above
U+029E5		#						\eqvpars1	identical to and slanted parallel
u+029E6		Ħ						\gleichstark	gleich stark
u+0 <b>2</b> 9 <b>F</b> 4		∺						\ruledelayed	rule-delayed
u+02A59		×						\veeonwedge	logical or overlapping logical and
u+02a66		<del>=</del>						\eqdot	equals sign with dot below
u+02a67		≐						\dotequiv	identical with dot above
u+02A68		#						\equivVert	triple horizontal bar with double vertical stroke
u+02A69		#						\equivVvert	triple horizontal bar with triple vertical stroke
u+02a6a		<b>~</b>					<b>~</b>	\dotsim	tilde operator with dot above
u+02а6в		∻					∻	\simrdots	tilde operator with rising dots
U+02A6C		≈					≋	\simminussim	similar minus similar
u+02a6d		≐					≐	\congdot	congruent with dot above

USV	M	S	E	K	Р	L	G	Macro	Description
U+02A6E		*						\asteq	equals with asterisk
u+02A6f		ê						\hatapprox	almost equal to with circumflex accent
u+02A70		≊					<b>≅</b>	\approxeqq	approximately equal or equal to
U+02A73		≅					≂	\eqqsim	equals sign above tilde operator
u+02A74		<b>::=</b>		::=			::=	\Coloneq	double colon equal
U+02A75		==					==	\eqeq	two consecutive equals signs
u+02a76		===					===	\eqeqeq	three consecutive equals signs
U+02A77		<del>::</del>						\ddotseq	equals sign with two dots above and two dots below
u+02A78		<b>:::</b>						\equivDD	equivalent with four dots above
U+02A79		≪					≪	\ltcir	less-than with circle inside
U+02A7A		>					>	\gtcir	greater-than with circle inside
U+02A7B		?<						\ltquest	less-than with question mark above
u+02A7C		>,						\gtquest	greater-than with question mark above
U+02A7D	$\leq$	$\leq$	<b>«</b>	€	<b>\leq</b>	<b>«</b>	€	$\verb \left] \verb  leqslant  (a)$	less-than or slanted equal to
U+02A7E	≽	≽	≥	≽	≥	≽	≽	$\verb \geqslant ^{(a)}$	greater-than or slanted equal to
U+02A7F		€					€	\lesdot	less-than or slanted equal to with dot inside
u+02A80		≽					≽	\gesdot	greater-than or slanted equal to with dot inside
u+02A81		*						\lesdoto	less-than or slanted equal to with dot above
U+02A82		≱						\gesdoto	greater-than or slanted equal to with dot above
u+02a83		≼						\lesdotor	less-than or slanted equal to with dot above right

USV	M	S	E	K	P	L	G	Macro	Description
u+02a84		≽						\gesdotol	greater-than or slanted equal to with dot above left
u+02a85	×≈	≨	√≋	≨	≨		≨	$\verb \lessapprox ^{(a)}$	less-than or approximate
u+02a86	≋	≈	≳≋	≷	≳		≷	$\verb \gtrapprox ^{(a)}$	greater-than or approximate
u+02a87	≨	≨	≨	≨	≨	≨	\$	$\label{lneq}$	less-than and single-line not equal to
u+02a88	≥	<b>&gt;</b>	⋧	<i>&gt;</i>	≥	≥	<b>&gt;</b>	$\gray \gray \gra$	greater-than and single-line no equal to
u+02a89	<i>≤</i> ≉	≨	<b>&gt;</b> ≉	<b>&lt;</b> ≉	<b>&gt;</b> ≉		≨	$\label{lnapprox} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	less-than and not approximate
u+02a8a	<i>≽</i>	<i>≽</i>	>≉	<i>&gt;</i> ≈	<b>&gt;</b> ≉		≽	$\verb \gnapprox ^{(a)}$	greater-than and not approximate
u+02a8b	$\leq$	<b>\\</b>	<b>\( \)</b>	$\leq$				$\verb \label{lesseqqgtr}  (\texttt{a})$	less-than above double-line equal above greater-than
u+02a8c	$\geq$	<u>&gt;</u>	>IIV	\IIV				$\verb \gtreqqless ^{(a)}$	greater-than above double-line equal above less-than
u+02a8d		≦					≦	\lsime	less-than above similar or equa
u+02a8e		≥					≥	\gsime	greater-than above similar or equal
u+02a8f		<b>≈</b>					Ş	\lsimg	less-than above similar above greater-than
u+0 <b>2</b> A90		\?\					>>	\gsiml	greater-than above similar above less-than
u+02a91		≦						\1gE	less-than above greater-than above double-line equal
u+02A92		$\geqq$						\glE	greater-than above less-than above double-line equal
u+02a93								\lesges	less-than above slanted equal above greater-than above slanted equal
u+02a94		<b>/</b>						\gesles	greater-than above slanted equal above less-than above slanted equal
u+02a95	<	<	<	<	<			$\verb \eqslantless ^{(a)}$	slanted equal to or less-than

USV	M	S	E	K	P	L	G	Macro	Description
u+02a96	≽	≽	≽	≽	≽			$\verb  eqslantgtr^{(a)} $	slanted equal to or greater-than
u+02A97		€						\elsdot	slanted equal to or less-than with dot inside
u+02a98		≽						\egsdot	slanted equal to or greater-than with dot inside
u+02a99		₹						\eqqless	double-line equal to or less-than
u+02a9a		₹						\eqqgtr	double-line equal to or greater-than
u+02a9b		<b>*</b>						\eqqslantless	double-line slanted equal to or less-than
u+0 <b>2</b> A9C		*						\eqqslantgtr	double-line slanted equal to or greater-than
u+02a9d		~						\simless	similar or less-than
U+02A9E		~						\simgtr	similar or greater-than
u+02a9f		$\cong$						\simlE	similar above less-than above equals sign
U+02AA0		$\cong$						\simgE	similar above greater-than above equals sign
U+02AA1		«						\Lt	double nested less-than
U+02AA2		≽						\Gt	double nested greater-than
U+02AA3		<u>«</u>						\partialmeetcontraction	double less-than with underbar
U+02AA4		×						\glj	greater-than overlapping less-than
U+02AA5		$\times$						\gla	greater-than beside less-than
u+02aa6		◁						\ltcc	less-than closed by curve
U+02AA7		$\triangleright$						\gtcc	greater-than closed by curve
u+02aa8		৶						\lescc	less-than closed by curve above slanted equal
U+02AA9		$\triangleright$						\gescc	greater-than closed by curve above slanted equal

USV	M	S	E	K	Р	L	G	Macro	Description
U+02AAA		€						\smt	smaller than
U+02AAB		>						\lat	larger than
U+02AAC		≤						\smte	smaller than or equal to
U+02AAD		≥						\late	larger than or equal to
U+02AAE		≘					≙	\bumpeqq	equals sign with bumpy above
U+02AAF	$\preceq$	≤	$\preceq$	≤	$\leq$	$\preceq$	≼	$\preceq^{(p)}$	precedes above single-line equals sign
U+0 <b>2</b> ABO	≽	≥	≥	≥	≥	≽	≽	$\scalebox{succeq}^{(p)}$	succeeds above single-line equals sign
U+02AB1		≠	⋨	⋨		⋨	¥	\precneq	precedes above single-line not equal to
U+02AB2		≽	≽	≽		≿	≽	\succneq	succeeds above single-line not equal to
U+02AB3		≦	≅	≦		≅	≅	\preceqq	precedes above equals sign
U+02AB4		≧	≧	≧		≽	≧	\succeqq	succeeds above equals sign
U+02AB5		<b>≼</b>	≨	≨		≨	≨	$\verb \precneqq ^{(a)}$	precedes above not equal to
u+02ab6		≱	≱	≽		<b>≽</b>	≩	$\verb \succneqq ^{(a)}$	succeeds above not equal to
U+02AB7		¥≋	≨	≨			వ	$\verb \precapprox ^{(a)}$	precedes above almost equal to
u+02ab8		X≈	≿≋	⋛			≿	$\verb \succapprox ^{(a)}$	succeeds above almost equal to
U+02AB9		<b>∀</b> ≉	≨	≼			<b>ష</b>	$\verb \precnapprox ^{(a)}$	precedes above not almost equal to
U+02ABA		<b></b>	<b>/</b> #	>≈			≽	$\verb \succnapprox ^{(a)}$	succeeds above not almost equal to
U+O2ABB		*					*	\Prec	double precedes
U+02ABC		<b>&gt;&gt;</b>					<b>&gt;&gt;</b>	\Succ	double succeeds
U+02ABD		c					c	\subsetdot	subset with dot
U+O2ABE		∍					∍	\supsetdot	superset with dot

USV	M	S	E	K	Р	L	G	Macro	Description
U+O2ABF		Ţ						\subsetplus	subset with plus sign below
U+0 <b>2</b> AC0		⊋						\supsetplus	superset with plus sign below
U+02AC1		×						\submult	subset with multiplication sign below
U+02AC2		×						\supmult	superset with multiplication sign below
U+02AC3		≐						\subedot	subset of or equal to with dot above
U+02AC4		≐						\supedot	superset of or equal to with dot above
U+02AC5		⊆	⊆	⊆			⊆	$\verb \subseteqq ^{(a)}$	subset of above equals sign
u+02ac6		⊇	2	$\supseteq$			⊇	$\verb \supseteqq ^{(a)}$	superset of above equals sign
U+02AC7		≲					⊊	\subsim	subset of above tilde operator
u+02ac8		⊋					⊋	\supsim	superset of above tilde operator
U+02AC9		≅					Ş	\subsetapprox	subset of above almost equal to
U+02ACA		≋					⊋	\supsetapprox	superset of above almost equal to
U+02ACB		≨	Ç	⊊			⊊	$\verb \subsetneqq ^{(a)}$	subset of above not equal to
U+02ACC		⊋	⊋	⊋			⊋	$\verb \supsetneqq ^{(a)}$	superset of above not equal to
U+02ACD								\lsqhook	square left open box operator
U+02ACE								\rsqhook	square right open box operator
U+02ACF		а						\csub	closed subset
U+02AD0		D						\csup	closed superset
U+02AD1		ቧ						\csube	closed subset or equal to
U+02AD2		₽						\csupe	closed superset or equal to
U+02AD3		S						\subsup	subset above superset

usv	M	S	Е	K	P	L	G	Macro	Description
U+02AD4		2						\supsub	superset above subset
U+02AD5								\subsub	subset above subset
u+02ad6		3						\supsup	superset above superset
U+02AD7		C						\suphsub	superset beside subset
U+02AD8		€						\supdsub	superset beside and joined by dash with subset
U+02AD9		M						\forkv	element of opening downwards
U+02ADA		Τ						\topfork	pitchfork with tee top
U+02ADB		ή						\mlcp	transversal intersection
U+02ADC		凇						\forks	forking
U+02ADD		Ψ						\forksnot	nonforking
U+02ADE		4						\shortlefttack	short left tack
U+02ADF		т						\shortdowntack	short down tack
U+02AE0		т						\shortuptack	short up tack
U+02AE2		Ħ						\vDdash	vertical bar triple right turnstile
U+02AE3		⊣						\dashV	double vertical bar left turnstile
U+02AE4		≓						\Dashv	vertical bar double left turnstile
U+02AE5		킈						\DashV	double vertical bar double left turnstile
U+02AE6		⊬						\varVdash	long dash from left member of double vertical
U+02AE7		₹						\Barv	short down tack with overbar
U+02AE8		±						\vBar	short up tack with underbar
U+02AE9		÷						\vBarv	short up tack above short down tack

USV	M	S	E	K	P	L	G	Macro	Description
U+02AEA		Π		π				\barV	double down tack
U+02AEB		Ш		Щ				\Vbar	double up tack
U+02AEC		∃						\Not	double stroke not sign
U+02AED		F						\bNot	reversed double stroke not sign
U+02AEE		+						\revnmid	does not divide with reversed negation slash
U+02AEF		Ŷ						\cirmid	vertical line with circle above
U+02AFO		Ŷ						\midcir	vertical line with circle below
U+02AF2		#						\nhpar	parallel with horizontal stroke
U+02AF3		#						\parsim	parallel with tilde operator
u+02AF7		<b>«</b>						\lllnest	stacked very much less-than
u+02af8		<b>&gt;</b>						\gggnest	stacked very much greater-than
U+02AF9		$\leqslant$		$\leqslant$				\leqqslant	double-line slanted less-than or equal to
U+02AFA		$\geqslant$						\geqqslant	double-line slanted greater-than or equal to
U+0 <b>2</b> B30		<del>(0-</del>				€		\circleonleftarrow	left arrow with small circle
U+02B31	<b>\( </b>	₽	Ħ	€	₽	⊭	₽	\leftthreearrows	three leftwards arrows
U+02B32		<del>(</del>						\leftarrowonoplus	left arrow with circled plus
u+02B33	₩	<b>←</b>	<b>~</b> ~~	<b>←</b> ~~~	₩.		<b>←</b> ~~	\longleftsquigarrow	long leftwards squiggle arrow
U+02B34		<del>«I-</del>						\nvtwoheadleftarrow	leftwards two-headed arrow with vertical stroke
U+02B35		₩I						\nVtwoheadleftarrow	leftwards two-headed arrow with double vertical stroke
u+02в36		<del>«</del> -i						\twoheadmapsfrom	leftwards two-headed arrow from bar
U+02B37		<b>≪</b> ≺						\twoheadleftdbkarrow	leftwards two-headed triple- dash arrow

USV	M	S	E	K	P	L	G	Macro	Description
u+02в38		<b>←</b> ····						\leftdotarrow	leftwards arrow with dotted stem
U+02B39		#						\nvleftarrowtail	leftwards arrow with tail with vertical stroke
U+02B3A		₩						\nVleftarrowtail	leftwards arrow with tail with double vertical stroke
U+02B3B		<del>«</del> ~						\twoheadleftarrowtail	leftwards two-headed arrow with tail
U+0 <b>2</b> B3C		<del>«</del> K						\nvtwoheadleftarrowtail	leftwards two-headed arrow with tail with vertical stroke
U+02B3D		₩						\nVtwoheadleftarrowtail	leftwards two-headed arrow with tail with double vertical stroke
U+02B3E		<del>«×</del>						\leftarrowx	leftwards arrow through x
U+02B3F		<b>←</b>	<b>←</b>					\leftcurvedarrow	wave arrow pointing directly left
U+0 <b>2</b> B40		⇐						\equalleftarrow	equals sign above leftwards arrow
U+02B41		<del>~</del>						\bsimilarleftarrow	reverse tilde operator above leftwards arrow
U+02B42		€						\leftarrowbackapprox	leftwards arrow above reverse almost equal to
U+02B43		<b>→</b>						\rightarrowgtr	rightwards arrow through greater-than
U+0 <b>2</b> B44		⇒						\rightarrowsupset	rightwards arrow through subset
U+02B45		€					€	\LLeftarrow	leftwards quadruple arrow
u+02в46		∌					⇒	\RRightarrow	rightwards quadruple arrow
U+02B47		<del>&gt;&gt;</del>						\bsimilarrightarrow	reverse tilde operator above rightwards arrow
U+02B48		ಘ						\rightarrowbackapprox	rightwards arrow above reverse almost equal to
u+0 <b>2</b> B49		<del>~</del>						\similarleftarrow	tilde operator above leftwards arrow

USV	M	S	E	K	P	L	G	Macro	Description
U+02B4A		€≅						\leftarrowapprox	leftwards arrow above almost equal to
U+02B4B		←						\leftarrowbsimilar	leftwards arrow above reverse tilde operator
u+0 <b>2</b> B4C		⇒						\rightarrowbsimilar	righttwards arrow above reverse tilde operator

# 15 Alphabetical symbols, \mathalpha

## 15.1 Normal weight

## 15.1.1 Upright Greek, uppercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+00391	A	A	A	A	A	A	A	\mupAlpha	capital alpha, greek
U+00392	В	В	В	В	В	В	В	\mupBeta	capital beta, greek
U+00393	Γ	Γ	Γ	Γ	Γ	Γ	Γ	\mupGamma	capital gamma, greek
U+00394	Δ	Δ	Δ	Δ	Δ	Δ	Δ	\mupDelta	capital delta, greek
U+00395	E	Е	Е	Е	Е	E	E	\mupEpsilon	capital epsilon, greek
u+00396	$\mathbf{Z}$	Z	Z	Z	Z	Z	Z	\mupZeta	capital zeta, greek
U+00397	Н	Н	Н	Н	Н	Н	Н	\mupEta	capital eta, greek
u+00398	Θ	Θ	Θ	Θ	Θ	Θ	Θ	\mupTheta	capital theta, greek
u+00399	Ι	I	I	I	Ι	I	I	\mupIota	capital iota, greek
U+0039A	K	K	K	K	K	K	K	\mupKappa	capital kappa, greek
U+0039B	Λ	Λ	Λ	Λ	Λ	Λ	Λ	\mupLambda	capital lambda, greek
U+0039C	Μ	M	M	M	M	M	M	\mupMu	capital mu, greek
U+0039D	N	N	N	N	N	N	N	\mupNu	capital nu, greek
U+0039E	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	\mupXi	capital xi, greek
U+0039F	О	O	O	O	O	O	O	\mupOmicron	capital omicron, greek
U+003A0	П	П	П	П	П	П	П	\mupPi	capital pi, greek
U+003A1	Р	P	P	P	P	P	P	\mupRho	capital rho, greek
U+003A3	Σ	Σ	Σ	Σ	Σ	Σ	Σ	\mupSigma	capital sigma, greek
U+003A4	Т	T	T	T	T	T	Т	\mupTau	capital tau, greek
U+003A5	Υ	Y	Υ	Υ	Y	Y	Υ	\mupUpsilon	capital upsilon, greek

usv	M	S	E	K	P	L	G	Macro	Description
u+003A6	Φ	Φ	Φ	Φ	Φ	Φ	Φ	\mupPhi	capital phi, greek
U+003A7	X	X	X	X	X	X	X	\mupChi	capital chi, greek
u+003a8	Ψ	Ψ	Ψ	Ψ	Ψ	Ψ	Ψ	\mupPsi	capital psi, greek
U+003A9	Ω	Ω	Ω	Ω	Ω	Ω	Ω	\mupOmega	capital omega, greek

## 15.1.2 Upright Greek, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+003B1	α	α	α	α	α	α	α	\mupalpha	small alpha, greek
U+003B2	β	β	β	β	β	β	β	\mupbeta	small beta, greek
U+003B3	γ	γ	Υ	γ	γ	γ	γ	\mupgamma	small gamma, greek
U+003B4	δ	δ	δ	δ	δ	δ	8	\mupdelta	small delta, greek
U+003B5	ε	ε	ε	3	3	3	ε	\mupvarepsilon	rounded small varepsilon, greek
u+003B6	ζ	ζ	ζ	ζ	ζ	ζ	ζ	\mupzeta	small zeta, greek
и+003в7	η	η	η	η	η	η	η	\mupeta	small eta, greek
u+003B8	θ	θ	θ	θ	θ	θ	θ	\muptheta	straight theta, small theta, greek
u+003B9	ι	ι	ι	ι	ι	ι	ι	\mupiota	small iota, greek
U+003BA	κ	κ	К	κ	К	κ	κ	\mupkappa	small kappa, greek
и+003вв	λ	λ	λ	λ	λ	λ	λ	\muplambda	small lambda, greek
U+003BC	μ	μ	μ	μ	μ	μ	μ	\mupmu	small mu, greek
U+003BD	ν	ν	ν	ν	ν	ν	ν	\mupnu	small nu, greek
и+003ве	ξ	ξ	ξ	ξ	ξ	ξ	ξ	\mupxi	small xi, greek
U+003BF	O	0	0	o	0	O	0	\mupomicron	small omicron, greek

USV	M	S	Е	K	P	L	G	Macro	Description
U+003C0	π	π	π	π	π	π	π	\muppi	small pi, greek
U+003C1	ρ	ρ	ρ	ρ	ρ	ρ	ρ	\muprho	small rho, greek
U+003C2	ς	ς	ς	ς	ς	ς	ς	\mupvarsigma	terminal sigma, greek
U+003C3	σ	σ	σ	σ	σ	σ	σ	\mupsigma	small sigma, greek
u+003c4	τ	τ	τ	τ	τ	τ	τ	\muptau	small tau, greek
u+003c5	υ	υ	υ	υ	υ	υ	υ	\mupupsilon	small upsilon, greek
u+003c6	φ	φ	φ	φ	φ	φ	φ	\mupvarphi	curly or open small phi, greek
u+003c7	χ	χ	χ	χ	χ	χ	χ	\mupchi	small chi, greek
u+003c8	ψ	ψ	ψ	ψ	ψ	ψ	ψ	\muppsi	small psi, greek
u+003c9	ω	ω	ω	ω	ω	ω	ω	\mupomega	small omega, greek
U+003D1	θ	д	θ	θ	θ	θ	Э	\mupvartheta	/vartheta - curly or open theta
U+003D5	ф	ф	φ	ф	ф	ф	ф	\mupphi	/straightphi - small phi, greek
U+003D6	$\Box$	σ	۵	۵	Ø	$\bar{\omega}$	ā	\mupvarpi	rounded small pi (pomega), greek
U+003DC		F		F		F		\upDigamma	capital digamma
U+003DD		F	F			F		\updigamma	old greek small letter digamma
U+003F0	N	χ	κ	×	κ	и	к	\mupvarkappa	rounded small kappa, greek
U+003F1	9	ę	6	0	Q	6	6	\mupvarrho	rounded small rho, greek
U+003F4	Θ	θ	θ	Θ	Θ	θ	θ	\mupvarTheta	greek capital theta symbol
U+003F5	$\epsilon$	€	€	$\epsilon$	€	€	E	\mupepsilon	greek lunate varepsilon symbol

15.1.3 Italic, Latin, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D434	$\overline{A}$	$\overline{A}$	A	A	A	A	A	\mitA	mathematical italic capital a
U+1D435	B	В	В	В	В	В	В	\mitB	mathematical italic capital b
U+1D436	C	C	C	С	С	C	C	\mitC	mathematical italic capital c
U+1D437	D	D	D	D	D	D	D	\mitD	mathematical italic capital d
U+1D438	E	E	E	Ε	Ε	E	E	\mitE	mathematical italic capital e
U+1D439	F	F	F	F	F	F	F	\mitF	mathematical italic capital f
U+1D43A	G	G	G	G	G	G	G	\mitG	mathematical italic capital g
U+1D43B	H	Н	H	Н	Н	Н	Н	\mitH	mathematical italic capital h
U+1D43C	I	I	I	I	I	I	I	\mitI	mathematical italic capital i
U+1D43D	J	J	J	J	J	J	J	\mitJ	mathematical italic capital j
U+1D43E	K	K	K	K	K	K	K	\mitK	mathematical italic capital k
U+1D43F	L	L	L	L	L	L	L	\mitL	mathematical italic capital l
U+1D440	M	M	M	M	M	M	M	\mitM	mathematical italic capital m
U+1D441	N	N	N	N	N	N	N	\mitN	mathematical italic capital n
U+1D442	0	0	0	0	0	0	0	\mit0	mathematical italic capital o
U+1D443	P	P	P	P	P	P	P	\mitP	mathematical italic capital p
U+1D444	Q	Q	Q	Q	Q	Q	Q	\mitQ	mathematical italic capital q
U+1D445	R	R	R	R	R	R	R	\mitR	mathematical italic capital r
u+1D446	S	S	S	S	S	S	S	\mitS	mathematical italic capital s
U+1D447	T	T	T	T	T	T	T	\mitT	mathematical italic capital t
u+1D448	U	U	U	U	U	U	U	\mitU	mathematical italic capital u
U+1D449	V	V	V	V	V	V	V	\mitV	mathematical italic capital v

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D44A	W	W	W	W	W	W	W	\mitW	mathematical italic capital w
U+1D44B	X	X	X	X	X	X	X	\mitX	mathematical italic capital x
U+1D44C	Y	Y	Y	Y	Υ	Y	Y	\mitY	mathematical italic capital y
U+1D44D	Z	Z	Z	Z	Z	Z	Z	\mitZ	mathematical italic capital z

15.1.4 Italic, Latin, lowercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D44E	a	а	a	а	а	a	а	\mita	mathematical italic small a
u+1D44F	b	b	b	b	b	b	b	\mitb	mathematical italic small b
U+1D450	c	c	c	С	С	c	С	\mitc	mathematical italic small c
U+1D451	d	d	d	d	d	d	d	\mitd	mathematical italic small d
U+1D452	e	e	e	e	е	e	е	\mite	mathematical italic small e
U+1D453	f	f	f	f	f	f	f	\mitf	mathematical italic small f
U+1D454	g	g	g	g	8	g	g	\mitg	$mathematical\ italic\ small\ g$
u+1D456	i	i	i	i	i	i	i	\miti	mathematical italic small i
U+1D457	j	j	j	j	j	j	j	\mitj	mathematical italic small j
U+1D458	k	k	k	k	k	k	k	\mitk	mathematical italic small k
U+1D459	l	l	l	1	1	l	l	\mitl	mathematical italic small l
U+1D45A	m	m	m	m	m	m	m	\mitm	mathematical italic small m
U+1D45B	n	n	n	n	n	n	n	\mitn	mathematical italic small n
U+1D45C	0	0	0	0	0	0	0	\mito	mathematical italic small o
U+1D45D	p	p	p	p	p	p	p	\mitp	mathematical italic small p

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D45E	q	q	q	q	q	q	q	\mitq	mathematical italic small q
U+1D45F	r	r	r	r	r	r	r	\mitr	mathematical italic small r
u+1D460	s	S	s	S	S	s	s	\mits	mathematical italic small s
u+1D461	t	t	t	t	t	t	t	\mitt	mathematical italic small t
u+1D462	u	и	и	и	и	и	и	\mitu	mathematical italic small u
u+1D463	v	υ	υ	v	v	ν	v	\mitv	mathematical italic small v
u+1D464	w	w	w	w	w	w	w	\mitw	mathematical italic small w
u+1D465	x	x	x	х	х	x	х	\mitx	mathematical italic small x
u+1D466	y	y	y	y	y	у	у	\mity	mathematical italic small y
u+1D467	z	Z	z	z	z	z	z	\mitz	mathematical italic small z

## 15.1.5 Italic Greek, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D6E2	A	A	A	A	A	A	A	\mitAlpha	mathematical italic capital alpha
u+1D6E3	B	В	В	В	В	В	В	\mitBeta	mathematical italic capital beta
u+1d6e4	$\Gamma$	Γ	Γ	Γ	Γ	Γ	Γ	\mitGamma	mathematical italic capital gamma
u+1D6E5	Δ	Δ	Δ	Δ	Δ	Δ	Δ	\mitDelta	mathematical italic capital delta
U+1D6E6	E	E	E	Е	E	E	E	\mitEpsilon	mathematical italic capital epsilon
u+1D6E7	Z	Z	Z	Z	Z	Z	Z	\mitZeta	mathematical italic capital zeta
U+1D6E8	H	Н	Н	Н	Н	Н	Н	\mitEta	mathematical italic capital eta
U+1D6E9	$\Theta$	Θ	Θ	Θ	Θ	Θ	Θ	\mitTheta	mathematical italic capital theta
u+1d6ea	I	I	I	I	I	I	I	\mitIota	mathematical italic capital iota

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1D6ев	K	K	K	K	K	K	K	\mitKappa	mathematical italic capital kappa
u+1d6ec	Λ	Λ	Λ	Λ	Λ	Λ	Λ	\mitLambda	mathematical italic capital lambda
u+1d6ed	M	M	M	M	M	M	M	\mitMu	mathematical italic capital mu
U+1D6EE	N	N	N	N	N	N	N	\mitNu	mathematical italic capital nu
u+1d6ef	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	\mitXi	mathematical italic capital xi
u+1D6F0	0	0	0	0	0	0	0	\mit0micron	mathematical italic capital omicron
u+1D6F1	П	П	П	П	П	П	П	\mitPi	mathematical italic capital pi
U+1D6F2	P	P	P	P	P	P	P	\mitRho	mathematical italic capital rho
U+1D6F3	$\Theta$	θ	θ	θ	θ	θ	θ	\mitvarTheta	mathematical italic capital theta symbol
u+1D6F4	$\Sigma$	$\Sigma$	Σ	Σ	Σ	Σ	Σ	\mitSigma	mathematical italic capital sigma
u+1D6F5	T	T	T	T	T	T	T	\mitTau	mathematical italic capital tau
U+1D6F6	Υ	Υ	Υ	Υ	Y	Y	Υ	\mitUpsilon	mathematical italic capital upsilon
u+1D6F7	Φ	Φ	Φ	Φ	Φ	Φ	Φ	\mitPhi	mathematical italic capital phi
u+1D6F8	X	X	X	X	X	X	X	\mitChi	mathematical italic capital chi
u+1D6F9	$\Psi$	Ψ	Ψ	Ψ	Ψ	Ψ	$\Psi$	\mitPsi	mathematical italic capital psi
u+1d6fa	Ω	Ω	Ω	Ω	Ω	Ω	Ω	\mitOmega	mathematical italic capital omega

15.1.6 Italic Greek, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D6FC	$\alpha$	α	α	α	α	α	α	\mitalpha	mathematical italic small alpha
U+1D6FD	β	β	β	β	β	β	β	\mitbeta	mathematical italic small beta

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D6FE	$\gamma$	γ	γ	γ	γ	γ	γ	\mitgamma	mathematical italic small gamma
u+1D6ff	δ	δ	δ	δ	δ	δ	δ	\mitdelta	mathematical italic small delta
U+1D700	ε	ε	ε	ε	ε	ε	ε	\mitvarepsilon	mathematical italic small varepsilon
U+1D701	ζ	ζ	ζ	ζ	ζ	ζ	ζ	\mitzeta	mathematical italic small zeta
U+1D702	$\eta$	η	η	η	η	η	η	\miteta	mathematical italic small eta
U+1D703	$\theta$	θ	$\theta$	$\theta$	$\theta$	$\theta$	θ	\mittheta	mathematical italic small theta
U+1D704	ι	ι	ι	l	l	l	ı	\mitiota	mathematical italic small iota
U+1D705	$\kappa$	κ	κ	κ	κ	κ	κ	\mitkappa	mathematical italic small kappa
U+1D706	λ	λ	λ	λ	λ	λ	λ	\mitlambda	mathematical italic small lambda
U+1D707	$\mu$	μ	μ	μ	μ	μ	μ	\mitmu	mathematical italic small mu
U+1D708	$\nu$	ν	ν	ν	ν	ν	ν	\mitnu	mathematical italic small nu
U+1D709	ξ	ξ	ξ	ξ	ξ	ξ	کی	\mitxi	mathematical italic small xi
U+1D70A	0	0	0	0	0	0	0	\mitomicron	mathematical italic small omi- cron
U+1D70B	$\pi$	$\pi$	$\pi$	π	$\pi$	$\pi$	π	\mitpi	mathematical italic small pi
U+1D70C	ho	ρ	ρ	ρ	ρ	ρ	p	\mitrho	mathematical italic small rho
U+1D70D	ς	ς	ς	Ç	ς	S	ς	\mitvarsigma	mathematical italic small final sigma
U+1D70E	$\sigma$	σ	σ	σ	$\sigma$	σ	σ	\mitsigma	mathematical italic small sigma
U+1D70F	au	τ	τ	τ	τ	τ	τ	\mittau	mathematical italic small tau
U+1D710	v	υ	v	υ	υ	υ	υ	\mitupsilon	mathematical italic small upsilon
U+1D711	$\varphi$	$\varphi$	φ	φ	φ	φ	$\varphi$	\mitvarphi	mathematical italic small phi
U+1D712	χ	χ	χ	χ	$\chi$	χ	χ	\mitchi	mathematical italic small chi

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D713	$\psi$	ψ	ψ	ψ	ψ	ψ	ψ	\mitpsi	mathematical italic small psi
U+1D714	$\omega$	ω	ω	ω	ω	ω	ω	\mitomega	mathematical italic small omega
U+1D715	$\partial$	д	д	$\partial$	д	д	д	\mitpartial	mathematical italic partial differential
U+1D716	$\epsilon$	$\epsilon$	$\epsilon$	$\epsilon$	$\epsilon$	$\epsilon$	$\epsilon$	\mitepsilon	mathematical italic varepsilon symbol
U+1D717	θ	θ	θ	θ	θ	θ	д	\mitvartheta	mathematical italic theta symbol
U+1D718	n	х	κ	×	и	×	x	\mitvarkappa	mathematical italic kappa symbol
U+1D719	$\phi$	φ	φ	φ	φ	$\phi$	φ	\mitphi	mathematical italic phi symbol
U+1D71A	Q	ę	Q	0	Q	Q	е	\mitvarrho	mathematical italic rho symbol
U+1D71B	$\overline{\omega}$	$\overline{\omega}$	<sub>@</sub>	$\bar{\omega}$	$\omega$	Ø	Ø	\mitvarpi	mathematical italic pi symbol

## 15.1.7 Script, Latin, uppercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D49C	$\mathcal{A}$	$\mathcal{A}$	A	A	A	$\mathcal{A}$	$\mathcal{A}$	\mscrA	mathematical script capital a
u+1D49E	$\mathcal{C}$	$\mathcal{C}$	C	C	C	C	$\mathscr{C}$	\mscrC	mathematical script capital c
u+1D49F	$\mathcal{D}$	$\mathcal{D}$	<b>D</b>	2	D	D	Ø	\mscrD	mathematical script capital d
U+1D4A2	$\mathcal{G}$	9	$\mathscr{G}$	$\mathcal{G}$	G	$\mathscr{G}$	$\mathscr{G}$	\mscrG	mathematical script capital g
u+1D4A5	$\mathcal{J}$	$\mathcal{J}$	J	J	J	J	J	\mscrJ	mathematical script capital j
u+1d4a6	$\mathcal{K}$	$\mathcal K$	$\mathcal{K}$	K	$\mathcal{K}$	${\mathscr K}$	Ж	\mscrK	mathematical script capital k
u+1D4A9	$\mathcal{N}$	$\mathcal{N}$	N	N	$\mathcal{N}$	$\mathcal{N}$	$\mathcal{N}$	\mscrN	mathematical script capital n
u+1d4aa	0	O	0	0	0	0	0	\mscr0	mathematical script capital o
U+1D4AB	${\cal P}$	${\cal P}$	Ø	Þ	P	P	J.	\mscrP	mathematical script capital p

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D4AC	Q	Q	2	Q	Q	Q	Q	\mscrQ	mathematical script capital q
U+1D4AE	$\mathcal{S}$	$\mathcal{S}$	S	S	5	S	8	\mscrS	mathematical script capital s
u+1d4af	$\mathcal{T}$	$\mathcal{F}$	$\mathcal{T}$	T	T	T	$\mathcal{T}$	\mscrT	mathematical script capital t
U+1D4BO	$\mathcal{U}$	u	U	$\mathscr{U}$	и	$\mathcal{U}$	u	\mscrU	mathematical script capital u
U+1D4B1	v	$\nu$	$\mathcal{V}$	V	U	V	$\mathcal V$	\mscrV	mathematical script capital v
U+1D4B2	W	w	W	W	W	W	W	\mscrW	mathematical script capital w
U+1D4B3	$\boldsymbol{x}$	$\boldsymbol{x}$	$\mathscr{X}$	$\mathscr{X}$	$\boldsymbol{\chi}$	${\mathscr X}$	$\mathcal{X}$	\mscrX	mathematical script capital x
U+1D4B4	y	y	¥	¥	y	¥	¥	\mscrY	mathematical script capital y
U+1D4B5	$\mathcal{Z}$	z	$\mathcal{Z}$	${\mathcal Z}$	Z	${\mathcal Z}$	${\mathcal Z}$	\mscrZ	mathematical script capital z

15.1.8 Script, Latin, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D4B6		а			a	a	a	\mscra	mathematical script small a
U+1D4B7		Б			в	C	$\ell$	\mscrb	mathematical script small b
U+1D4B8		c			c	c	c	\mscrc	mathematical script small c
U+1D4B9		d			d	d	d	\mscrd	mathematical script small d
U+1D4BB		f			ß	f	f	\mscrf	mathematical script small f
U+1D4BD		ĥ			h	ħ	ħ	\mscrh	mathematical script small h
U+1D4BE		i			i	i	i	\mscri	mathematical script small i
U+1D4BF		j			j	j	j	\mscrj	mathematical script small j
U+1D4CO		k			k	Ŕ	k	\mscrk	mathematical script small k
U+1D4C1		$\ell$			l	$\ell$	$\ell$	\mscrl	mathematical script small l

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D4C2		m			m	m	m	\mscrm	mathematical script small m
U+1D4C3		n			n	n	n	\mscrn	mathematical script small n
U+1D4C5		р			P	12	p	\mscrp	mathematical script small p
u+1D4C6		q			q	q	q	\mscrq	mathematical script small q
u+1D4C7		r			r	r	r	\mscrr	mathematical script small r
u+1D4c8		s			5	3	ಕ	\mscrs	mathematical script small s
u+1D4C9		t			t	ŧ	ŧ	\mscrt	mathematical script small t
U+1D4CA		и			и	u	u	\mscru	mathematical script small u
U+1D4CB		v			v	v	v	\mscrv	mathematical script small v
u+1D4CC		w			w	w	w	\mscrw	mathematical script small w
u+1D4CD		x			$\boldsymbol{x}$	$\boldsymbol{x}$	x	\mscrx	mathematical script small x
u+1d4ce		у			y	y	y	\mscry	mathematical script small y
U+1D4CF		z			z	z	な	\mscrz	mathematical script small z

## 15.1.9 Fraktur, Latin, uppercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D504	U	U	A	A	A	U	U	\mfrakA	mathematical fraktur capital a
U+1D505	$\mathfrak{B}$	\mfrakB	mathematical fraktur capital b						
U+1D507	D	D	D	D	D	D	D	\mfrakD	mathematical fraktur capital d
U+1D508	Œ	Œ	E	£	Œ	Œ	E	\mfrakE	mathematical fraktur capital e
U+1D509	$\mathfrak{F}$	$\mathfrak{F}$	$\mathfrak{F}$	F	$\mathfrak{F}$	$\mathfrak{F}$	$\mathfrak{F}$	\mfrakF	mathematical fraktur capital f
U+1D50A	G	ß	G	<b></b>	G	ß	6	\mfrakG	mathematical fraktur capital g

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D50D	J	$\mathfrak{F}$	$\mathfrak{J}$	J	J	$\mathfrak{F}$	3	\mfrakJ	mathematical fraktur capital j
U+1D50E	R	Ŕ	R	Ŕ	R	R	Я	\mfrakK	mathematical fraktur capital k
U+1D50F	$\mathfrak{L}$	Ω	$\mathfrak{L}$	$\mathfrak{L}$	$\mathfrak{L}$	Ω	$\mathfrak{L}$	\mfrakL	mathematical fraktur capital l
U+1D510	M	M	M	m	M	M	M	\mfrakM	mathematical fraktur capital m
U+1D511	N	N	N	Ω	N	N	N	\mfrakN	mathematical fraktur capital n
U+1D512	Ð	D	D	Ø	D	D	D	\mfrak0	mathematical fraktur capital o
U+1D513	$\mathfrak{P}$	P	P	p	$\mathfrak{P}$	P	$\mathfrak{P}$	\mfrakP	mathematical fraktur capital p
U+1D514	Ω	Q	Ω	Q	Ω	Q	Q	\mfrakQ	mathematical fraktur capital q
U+1D516	S	S	S	5	S	©	S	\mfrakS	mathematical fraktur capital s
U+1D517	$\mathfrak{T}$	T	$\mathfrak{T}$	Υ	$\mathfrak{T}$	T	I	\mfrakT	mathematical fraktur capital t
U+1D518	u	u	u	u	u	u	u	\mfrakU	mathematical fraktur capital u
U+1D519	V	$\mathfrak{V}$	IJ	v	IJ	$\mathfrak{V}$	$\mathfrak{V}$	\mfrakV	mathematical fraktur capital v
U+1D51A	W	W	W	w	W	W	W	\mfrakW	mathematical fraktur capital w
U+1D51B	X	X	X	X	X	X	X	\mfrakX	mathematical fraktur capital x
U+1D51C	Ŋ	Ŋ	Ŋ	Ņ	Ŋ	Ŋ	Ŋ	\mfrakY	mathematical fraktur capital y

15.1.10 Fraktur, Latin, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D51E	a	a	a	a	a	a	a	\mfraka	mathematical fraktur small a
U+1D51F	b	$\mathfrak{b}$	b	b	b	в	b	\mfrakb	mathematical fraktur small b
U+1D520	c	c	c	¢	c	c	c	\mfrakc	mathematical fraktur small c
U+1D521	б	б	ð	δ	ð	б	б	\mfrakd	mathematical fraktur small d

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D522	e	e	e	e	e	e	e	\mfrake	mathematical fraktur small e
U+1D523	f	f	f	f	f	f	f	\mfrakf	mathematical fraktur small f
U+1D524	$\mathfrak{g}$	$\mathfrak{g}$	$\mathfrak{g}$	g	$\mathfrak{g}$	g	$\mathfrak{g}$	\mfrakg	mathematical fraktur small g
U+1D525	ħ	$\mathfrak{h}$	ħ	þ	h	$\mathfrak{h}$	ħ	\mfrakh	mathematical fraktur small h
U+1D526	i	į	i	i	i	į	į	\mfraki	mathematical fraktur small i
U+1D527	j	j	j	j	j	ţ	j	\mfrakj	mathematical fraktur small j
U+1D528	ŧ	ŧ	ŧ	k	ŧ	ŧ	ŧ	\mfrakk	mathematical fraktur small k
U+1D529	ı	ţ	ι	Į	ı	ţ	Ĭ	\mfrakl	mathematical fraktur small l
U+1D52A	m	m	m	m	m	m	m	\mfrakm	mathematical fraktur small m
U+1D52B	n	n	n	n	n	n	n	\mfrakn	mathematical fraktur small n
U+1D <b>52</b> C	0	o	0	o	0	O	D	\mfrako	mathematical fraktur small o
U+1D52D	p	þ	p	ρ	p	þ	p	\mfrakp	mathematical fraktur small p
U+1D52E	q	q	q	q	q	q	q	\mfrakq	mathematical fraktur small q
U+1D52F	r	r	r	r	r	r	r	\mfrakr	mathematical fraktur small r
U+1D530	s	ß	s	5	s	ß	5	\mfraks	mathematical fraktur small s
U+1D531	ŧ	t	ŧ	t	ŧ	t	t	\mfrakt	mathematical fraktur small t
U+1D532	u	u	u	ц	u	u	u	\mfraku	mathematical fraktur small u
U+1D533	v	b	v	U	v	b	v	\mfrakv	mathematical fraktur small v
U+1D534	w	m	w	w	w	m	w	\mfrakw	mathematical fraktur small w
U+1D535	ŗ	ŧ	ŗ	¥	ŗ	ŧ	x	\mfrakx	mathematical fraktur small x
U+1D536	ŋ	ŋ	ŋ	y	ŋ	ŋ	ŋ	\mfraky	mathematical fraktur small y
U+1D537	3	3	3	Z	3	3	3	\mfrakz	mathematical fraktur small z

15.1.11 Blackboard, Latin, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D538	A	A	A	A	A	A	A	\BbbA	mathematical double-struck capital a
U+1D539	$\mathbb{B}$	B	B	$\mathbb{B}$	$\mathbb{B}$	B	$\mathbb{B}$	\BbbB	mathematical double-struck capital b
U+1D53B	$\mathbb{D}$	$\mathbb{D}$	D	$\mathbb{D}$	$\mathbb{D}$	$\mathbb{D}$	$\mathbb{D}$	\BbbD	mathematical double-struck capital d
U+1D53C	E	E	E	E	E	E	E	\BbbE	mathematical double-struck capital e
U+1D53D	F	F	F	$\mathbb{F}$	F	$\mathbb{F}$	F	\BbbF	mathematical double-struck capital f
U+1D53E	G	G	G	$\mathbb{G}$	G	G	G	\BbbG	mathematical double-struck capital g
u+1D540	0	0	0	I	I	I	I	\BbbI	mathematical double-struck capital i
U+1D541	J	J	J	J	J	J	J	\BbbJ	mathematical double-struck capital j
U+1D542	K	K	K	K	K	K	K	\BbbK	mathematical double-struck capital k
U+1D543	L	L	L	$\mathbb{L}$	L	L	L	\BbbL	mathematical double-struck capital l
U+1D544	M	M	M	M	M	<b>I</b> M	M	\BbbM	mathematical double-struck capital m
u+1D546	0	0	0	0	0	0	0	\Bbb0	mathematical double-struck capital o
U+1D54A	S	S	S	\$	S	\$	S	\BbbS	mathematical double-struck capital s
U+1D54B	T	T	T	$\mathbb{T}$	T	T	T	\BbbT	mathematical double-struck capital t
U+1D54C	$\mathbb{U}$		$\mathbb{U}$	$\mathbb{U}$	$\mathbb{U}$	U	U	\BbbU	mathematical double-struck capital u
U+1D54D	$\bigvee$	$\mathbb{V}$	$\mathbb{V}$	$\mathbb{V}$	$\mathbb{V}$	$\mathbb{V}$	$\mathbb{V}$	\BbbV	mathematical double-struck capital v
U+1D54E	$\mathbb{W}$	W	W	W	W	W	W	\BbbW	mathematical double-struck capital w

USV	M	S	E	K	P	L	G	Macro	Description
U+1D54F	X	X	X	X	X	X	$\mathbb{X}$	\BbbX	mathematical double-struck capital x
U+1D550	Y	Y	Y	Y	Y	Y	Y	\BbbY	mathematical double-struck capital y

15.1.12 Blackboard, Latin, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D552	0	а	а		а	a	а	\Bbba	mathematical double-struck small a
U+1D553	Ь	b	b		b	b	b	\Bbbb	mathematical double-struck small b
u+1D554	C	C	C		C	C	C	\Bbbc	mathematical double-struck small c
U+1D555	d	d	d		d	d	d	\Bbbd	mathematical double-struck small d
U+1D556	e	e	e		e	e	e	\Bbbe	mathematical double-struck small e
U+1D557	ſ	f	ſ		ſ	ſſ	f	\Bbbf	mathematical double-struck small f
U+1D558	g	g	99		90	9	g	\Bbbg	mathematical double-struck small g
u+1D559	h	h	h		h	h	h	\Bbbh	mathematical double-struck small h
U+1D55A	Î	i	i		i	i	i	\Bbbi	mathematical double-struck small i
U+1D55B	ĵ	j	j		j	j	j	\Bbbj	mathematical double-struck small j
u+1D55C	k	k	k	lk	k	k	k	\Bbbk <sup>(a)</sup>	mathematical double-struck small k
U+1D55D	Q	1	1		1	1	1	\Bbbl	mathematical double-struck small l
U+1D55E	m	m	m		m	m	m	\Bbbm	mathematical double-struck small m
U+1D55F	n	n	n		n	n	n	\Bbbn	mathematical double-struck small n

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D560	0	0	0		0	0	0	\Bbbo	mathematical double-struck small o
U+1D561	þ	þ	$\mathbb{P}$		$\mathbb{P}$	P	P	\Bbbp	mathematical double-struck small p
U+1D562	q	q	q		q	q	q	\Bbbq	mathematical double-struck small q
U+1D563	r	r	ľ		II°	r	ľ	\Bbbr	mathematical double-struck small r
U+1D564	\$	S	S		S	\$	S	\Bbbs	mathematical double-struck small s
U+1D565	t	t	t		t	t	t	\Bbbt	mathematical double-struck small t
U+1D566	u	u	u		u	u	u	\Bbbu	mathematical double-struck small u
U+1D567	<b>V</b>	$\mathbb{V}$	V		$\mathbb{V}$	${f v}$	V	\Bbbv	mathematical double-struck small v
U+1D568	₩	W	W		W	W	W	\Bbbw	mathematical double-struck small w
U+1D569	X	X	X		X	X	X	\Bbbx	mathematical double-struck small x
u+1D56a	у	У	У		У	У	у	\Bbby	mathematical double-struck small y
u+1D56в	Z	Z	Z		Z	Z	Z	\Bbbz	mathematical double-struck small z

15.1.13 Sans serif, Latin, uppercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D5A0	Α	Α	Α	Α	Α	A	A	\msansA	mathematical sans-serif capital a
U+1D5A1	В	В	В	В	В	В	В	\msansB	mathematical sans-serif capital b
U+1D5A2	С	С	С	С	С	С	С	\msansC	mathematical sans-serif capital c
U+1D5A3	D	D	D	D	D	D	D	\msansD	mathematical sans-serif capital d

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D5A4	Е	Е	Е	E	Е	Е	Е	\msansE	mathematical sans-serif capital e
U+1D5A5	F	F	F	F	F	F	F	\msansF	mathematical sans-serif capital f
U+1D5A6	G	G	G	G	G	G	G	\msansG	mathematical sans-serif capital g
U+1D5A7	Н	Н	Н	Н	Н	Н	Н	\msansH	mathematical sans-serif capital h
u+1D5A8	1	1	1	1	1	I	1	\msansI	mathematical sans-serif capital i
U+1D5A9	J	J	J	J	J	J	J	\msansJ	mathematical sans-serif capital j
U+1D5AA	K	K	K	K	K	K	K	\msansK	mathematical sans-serif capital k
U+1D5AB	L	L	L	L	L	L	L	\msansL	mathematical sans-serif capital l
U+1D5AC	M	М	M	М	M	M	M	\msansM	mathematical sans-serif capital m
U+1D5AD	N	N	N	N	N	N	N	\msansN	mathematical sans-serif capital n
U+1D5AE	0	0	0	0	0	O	O	\msans0	mathematical sans-serif capital o
U+1D5AF	Р	Р	Р	Р	Р	Р	Р	\msansP	mathematical sans-serif capital p
U+1D5B0	Q	Q	Q	Q	Q	Q	Q	\msansQ	mathematical sans-serif capital q
U+1D5B1	R	R	R	R	R	R	R	\msansR	mathematical sans-serif capital r
U+1D5B2	S	S	S	S	S	S	S	\msansS	mathematical sans-serif capital s
U+1D5B3	Т	Т	Т	Т	Т	Т	Т	\msansT	mathematical sans-serif capital t
U+1D5B4	U	U	U	U	U	U	U	\msansU	mathematical sans-serif capital u
U+1D5B5	V	V	V	٧	V	V	V	\msansV	mathematical sans-serif capital v
U+1D5B6	W	W	W	W	W	W	W	\msansW	mathematical sans-serif capital w

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D5B7	X	X	X	X	Χ	X	X	\msansX	mathematical sans-serif capital x
U+1D5B8	Υ	Υ	Υ	Υ	Υ	Y	Υ	\msansY	mathematical sans-serif capital y
U+1D5B9	Z	Z	Z	Z	Z	Z	Z	\msansZ	mathematical sans-serif capital z

15.1.14 Sans serif, Latin, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D5BA	а	а	а	а	a	a	a	\msansa	mathematical sans-serif small a
U+1D5BB	b	b	b	b	b	b	b	\msansb	mathematical sans-serif small b
U+1D5BC	С	С	С	С	С	С	С	\msansc	mathematical sans-serif small c
U+1D5BD	d	d	d	d	d	d	d	\msansd	mathematical sans-serif small d
U+1D5BE	е	е	е	е	е	e	e	\msanse	mathematical sans-serif small e
U+1D5BF	f	f	f	f	f	f	f	\msansf	mathematical sans-serif small f
U+1D5C0	g	g	g	g	g	g	g	\msansg	$mathematical \ sans-serif \ small \ g$
U+1D5C1	h	h	h	h	h	h	h	\msansh	mathematical sans-serif small h
U+1D5C2	i	i	i	i	i	i	i	\msansi	mathematical sans-serif small i
U+1D5C3	j	j	j	j	j	j	j	\msansj	mathematical sans-serif small j
U+1D5C4	k	k	k	k	k	k	k	\msansk	$mathematical \ sans-serif \ small \ k$
U+1D5C5	I	l	I	l	1	1	1	\msansl	mathematical sans-serif small l
u+1D5C6	m	m	m	m	m	m	m	\msansm	mathematical sans-serif small m
U+1D5C7	n	n	n	n	n	n	n	\msansn	mathematical sans-serif small n
U+1D5C8	0	0	0	0	0	0	0	\msanso	mathematical sans-serif small o
U+1D5C9	р	р	р	р	р	р	р	\msansp	mathematical sans-serif small p

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D5CA	q	q	q	q	q	q	q	\msansq	mathematical sans-serif small q
U+1D5CB	r	r	r	r	r	r	r	\msansr	mathematical sans-serif small r
U+1D5CC	S	S	S	S	S	S	S	\msanss	mathematical sans-serif small s
U+1D5CD	t	t	t	t	t	t	t	\msanst	mathematical sans-serif small t
U+1D5CE	u	u	u	u	u	u	u	\msansu	mathematical sans-serif small u
U+1D5CF	٧	V	V	٧	٧	V	V	\msansv	$mathematical \ sans-serif \ small \ v$
U+1D5D0	W	W	W	W	W	w	w	\msansw	mathematical sans-serif small w
U+1D5D1	X	Х	X	X	X	X	x	\msansx	$mathematical \ sans-serif \ small \ x$
U+1D5D2	у	у	У	у	У	у	У	\msansy	mathematical sans-serif small y
U+1D5D3	Z	Z	Z	Z	Z	Z	Z	\msansz	mathematical sans-serif small z

15.1.15 Italic sans serif, Latin, uppercase

USV	M	S	E	K	P	L	G	Macro	Description
U+1D608	Α	Α	Α	Α	Α	Α	A	\mitsansA	mathematical sans-serif italic capital a
U+1D609	В	В	В	В	В	В	В	\mitsansB	mathematical sans-serif italic capital b
U+1D60A	С	С	С	С	С	C	С	\mitsansC	mathematical sans-serif italic capital c
U+1D60B	D	D	D	D	D	D	D	\mitsansD	mathematical sans-serif italic capital d
U+1D60C	Ε	Ε	Ε	Ε	Ε	Ε	Ε	\mitsansE	mathematical sans-serif italic capital e
U+1D60D	F	F	F	F	F	F	F	\mitsansF	mathematical sans-serif italic capital f
U+1D60E	G	G	G	G	G	G	G	\mitsansG	mathematical sans-serif italic capital g
U+1D60F	Н	Н	Н	Н	Н	Н	Н	\mitsansH	mathematical sans-serif italic capital h

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D610	1	I	1	I	I	I	I	\mitsansI	mathematical sans-serif italic capital i
U+1D611	J	J	J	J	J	J	J	\mitsansJ	mathematical sans-serif italic capital j
U+1D612	K	K	K	K	K	K	K	\mitsansK	mathematical sans-serif italic capital k
U+1D613	L	L	L	L	L	L	L	\mitsansL	mathematical sans-serif italic capital l
u+1D614	М	Μ	М	М	М	М	М	\mitsansM	mathematical sans-serif italic capital m
U+1D615	N	N	N	N	N	N	N	\mitsansN	mathematical sans-serif italic capital n
U+1D616	0	0	0	0	0	0	0	\mitsans0	mathematical sans-serif italic capital o
U+1D617	Р	Р	P	Р	P	P	Р	\mitsansP	mathematical sans-serif italic capital p
U+1D618	Q	Q	Q	Q	Q	Q	Q	\mitsansQ	mathematical sans-serif italic capital q
U+1D619	R	R	R	R	R	R	R	\mitsansR	mathematical sans-serif italic capital r
U+1D61A	S	S	S	S	5	S	S	\mitsansS	mathematical sans-serif italic capital s
U+1D61B	T	Т	Т	Т	Т	T	Т	\mitsansT	mathematical sans-serif italic capital t
U+1D61C	U	U	U	U	U	U	U	\mitsansU	mathematical sans-serif italic capital u
U+1D61D	V	V	V	V	V	V	V	\mitsansV	mathematical sans-serif italic capital v
U+1D61E	W	W	W	W	W	W	W	\mitsansW	mathematical sans-serif italic capital w
U+1D61F	X	Χ	X	Χ	Χ	X	X	\mitsansX	mathematical sans-serif italic capital x
U+1D620	Y	Υ	Y	Υ	Y	Y	Y	\mitsansY	mathematical sans-serif italic capital y
U+1D6 <b>2</b> 1	Z	Ζ	Z	Z	Z	Z	Z	\mitsansZ	mathematical sans-serif italic capital z

15.1.16 Italic sans serif, Latin, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D622	а	а	а	а	а	а	а	\mitsansa	mathematical sans-serif italic small a
U+1D623	b	b	Ь	Ь	b	b	Ь	\mitsansb	mathematical sans-serif italic small b
U+1D6 <b>2</b> 4	С	С	С	С	С	С	С	\mitsansc	mathematical sans-serif italic small c
U+1D625	d	d	d	d	d	d	d	\mitsansd	mathematical sans-serif italic small d
U+1D626	e	е	e	e	е	e	e	\mitsanse	mathematical sans-serif italic small e
U+1D627	f	f	f	f	f	f	f	\mitsansf	mathematical sans-serif italic small f
U+1D628	g	g	g	g	g	g	g	\mitsansg	mathematical sans-serif italic small g
U+1D629	h	h	h	h	h	h	h	\mitsansh	mathematical sans-serif italic small h
U+1D62A	i	i	i	i	i	i	i	\mitsansi	mathematical sans-serif italic small i
U+1D62B	j	j	j	j	j	j	j	\mitsansj	mathematical sans-serif italic small j
U+1D62C	k	k	k	k	k	k	k	\mitsansk	mathematical sans-serif italic small k
U+1D62D	1	l	I	l	1	l	l	\mitsansl	mathematical sans-serif italic small l
U+1D62E	m	m	m	m	m	m	m	\mitsansm	mathematical sans-serif italic small m
U+1D62F	n	n	n	n	n	n	n	\mitsansn	mathematical sans-serif italic small n
U+1D630	0	0	0	0	0	0	0	\mitsanso	mathematical sans-serif italic small o
U+1D631	p	p	p	p	р	p	p	\mitsansp	mathematical sans-serif italic small p
U+1D632	q	q	q	q	q	q	q	\mitsansq	mathematical sans-serif italic small q

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D633	r	r	r	r	r	r	r	\mitsansr	mathematical sans-serif italic small r
u+1D634	S	S	S	S	S	S	S	\mitsanss	mathematical sans-serif italic small s
u+1D635	t	t	t	t	t	t	t	\mitsanst	mathematical sans-serif italic small t
U+1D636	и	и	и	и	и	и	и	\mitsansu	mathematical sans-serif italic small u
u+1D637	V	V	V	V	V	V	V	\mitsansv	mathematical sans-serif italic small v
U+1D638	W	W	W	W	W	w	w	\mitsansw	mathematical sans-serif italic small w
U+1D639	X	Χ	X	X	X	X	X	\mitsansx	mathematical sans-serif italic small x
u+1d63a	y	у	y	У	y	y	y	\mitsansy	mathematical sans-serif italic small y
U+1D63B	Z	Z	Z	Z	Z	Z	Z	\mitsansz	mathematical sans-serif italic small z

## 15.1.17 Typewriter, Latin, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1D670	A	A	A	Α	A	A	A	\mttA	mathematical monospace capital a
u+1D671	В	В	В	В	В	В	В	\mttB	mathematical monospace capital b
u+1D672	С	С	С	С	С	C	C	\mttC	mathematical monospace capital c
u+1D673	D	D	D	D	D	D	D	\mttD	mathematical monospace capital d
u+1D674	Е	Е	Е	E	Е	Е	Е	\mttE	mathematical monospace capital e
u+1D675	F	F	F	F	F	F	F	\mttF	mathematical monospace capital f

USV	M	S	Е	K	P	L	G	Macro	Description
u+1D676	G	G	G	G	G	G	G	\mttG	mathematical monospace capital g
u+1D677	Н	Н	Н	Н	Н	Н	Н	\mttH	mathematical monospace capital h
u+1D678	I	Ι	I	Ι	Ι	I	I	\mttI	mathematical monospace capital i
u+1D679	J	J	J	J	J	J	J	\mttJ	mathematical monospace capital j
u+1d67a	K	K	K	K	K	K	K	\mttK	mathematical monospace capital k
u+1D67в	L	L	L	L	L	L	L	\mttL	mathematical monospace capital l
u+1D67C	M	M	M	М	M	M	M	\mttM	mathematical monospace capital m
u+1D67D	N	N	N	N	N	N	N	\mttN	mathematical monospace capital n
u+1D67E	0	0	0	0	0	0	0	\mtt0	mathematical monospace capital o
U+1D67F	P	Р	Р	P	P	P	P	\mttP	mathematical monospace capital p
U+1D680	Q	Q	Q	Q	Q	Q	Q	\mttQ	$\label{eq:mathematical} \mbox{mathematical monospace capital } q$
U+1D681	R	R	R	R	R	R	R	\mttR	mathematical monospace capital r
U+1D682	S	S	S	S	S	S	S	\mttS	mathematical monospace capital s
U+1D683	Т	Т	Т	Т	T	Т	Т	\mttT	mathematical monospace capital t
u+1D684	U	U	U	U	U	U	U	\mttU	mathematical monospace capital u
u+1D685	V	V	V	٧	V	V	V	\mttV	mathematical monospace capital $\boldsymbol{v}$
U+1D686	W	W	W	W	W	W	W	\mttW	mathematical monospace capital w

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1D687	Х	X	X	Χ	Х	X	Х	\mttX	mathematical monospace capital x
U+1D688	Y	Y	Y	Υ	Y	Y	Y	\mttY	mathematical monospace capital y
U+1D689	Z	Z	Z	Z	Z	Z	Z	\mttZ	mathematical monospace capital z

## 15.1.18 Typewriter, Latin, lowercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D68A	a	a	a	a	a	a	a	\mtta	mathematical monospace small a
u+1D68в	Ъ	b	b	b	b	b	b	\mttb	mathematical monospace small b
U+1D68C	С	С	С	С	С	С	С	\mttc	mathematical monospace small c
U+1D68D	d	d	d	d	d	d	d	\mttd	mathematical monospace small d
u+1D68e	е	е	е	e	е	е	е	\mtte	mathematical monospace small e
U+1D68F	f	f	f	f	f	f	f	\mttf	mathematical monospace small f
u+1D690	g	g	g	g	g	g	g	\mttg	mathematical monospace small g
u+1D691	h	h	h	h	h	h	h	\mtth	mathematical monospace small h
u+1D692	i	i	i	i	i	i	i	\mtti	mathematical monospace small i
u+1D693	j	j	j	j	j	j	j	\mttj	mathematical monospace small j
U+1D694	k	k	k	k	k	k	k	\mttk	mathematical monospace small k
u+1D695	1	1	1	1	1	1	1	\mttl	mathematical monospace small l

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D696	m	m	m	m	m	m	m	\mttm	mathematical monospace small m
U+1D697	n	n	n	n	n	n	n	\mttn	mathematical monospace small n
U+1D698	0	0	0	0	0	0	0	\mtto	mathematical monospace small o
U+1D699	p	p	p	p	p	p	p	\mttp	mathematical monospace small p
u+1D69A	q	q	q	q	q	q	q	\mttq	mathematical monospace small q
u+1D69в	r	r	r	r	r	r	r	\mttr	mathematical monospace small r
U+1D69C	s	s	S	S	S	S	s	\mtts	mathematical monospace small s
U+1D69D	t	t	t	t	t	t	t	\mttt	mathematical monospace small t
u+1D69E	u	u	u	u	u	u	u	\mttu	mathematical monospace small u
u+1D69F	v	v	v	٧	V	v	v	\mttv	mathematical monospace small v
U+1D6A0	W	W	W	W	W	W	W	\mttw	mathematical monospace small w
U+1D6A1	x	X	x	X	Х	x	x	\mttx	mathematical monospace small x
U+1D6A2	у	у	у	у	у	у	у	\mtty	mathematical monospace small y
U+1D6A3	z	Z	Z	Z	Z	z	z	\mttz	mathematical monospace small z

15.2 Bold15.2.1 Bold, Latin, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D400	A	A	A	A	A	A	A	\mbfA	mathematical bold capital a
U+1D401	В	В	В	В	В	В	В	\mbfB	mathematical bold capital b

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D402	C	C	C	С	C	С	С	\mbfC	mathematical bold capital c
U+1D403	D	D	D	D	D	D	D	\mbfD	mathematical bold capital d
U+1D404	$\mathbf{E}$	E	E	E	E	E	E	\mbfE	mathematical bold capital e
U+1D405	$\mathbf{F}$	F	F	F	F	F	F	\mbfF	mathematical bold capital f
U+1D406	$\mathbf{G}$	G	G	G	G	G	G	\mbfG	mathematical bold capital g
U+1D407	н	Н	Н	Н	Н	Н	Н	\mbfH	mathematical bold capital h
U+1D408	Ι	I	I	I	Ι	I	I	\mbfI	mathematical bold capital i
U+1D409	J	J	J	J	J	J	J	\mbfJ	mathematical bold capital j
U+1D40A	K	K	K	K	K	K	K	\mbfK	mathematical bold capital k
U+1D40B	${f L}$	L	L	L	L	L	L	\mbfL	mathematical bold capital l
U+1D40C	$\mathbf{M}$	M	M	M	M	M	M	\mbfM	mathematical bold capital m
U+1D40D	N	N	N	N	N	N	N	\mbfN	mathematical bold capital n
U+1D40E	O	O	0	O	O	O	o	\mbf0	mathematical bold capital o
U+1D40F	P	P	P	P	P	P	P	\mbfP	mathematical bold capital p
U+1D410	$\mathbf{Q}$	Q	Q	Q	Q	Q	Q	\mbfQ	mathematical bold capital q
U+1D411	$\mathbf{R}$	R	R	R	R	R	R	\mbfR	mathematical bold capital r
U+1D412	$\mathbf{S}$	S	S	S	S	S	S	\mbfS	mathematical bold capital s
U+1D413	$\mathbf{T}$	Т	T	T	T	T	T	\mbfT	mathematical bold capital t
U+1D414	U	U	U	U	U	U	U	\mbfU	mathematical bold capital u
U+1D415	V	V	V	V	V	V	V	\mbfV	mathematical bold capital v
U+1D416	$\mathbf{W}$	w	W	W	W	W	W	\mbfW	mathematical bold capital w
U+1D417	X	X	X	X	X	X	X	\mbfX	mathematical bold capital x

USV	M	S	E	K	P	L	G	Macro	Description
U+1D418	Y	Y	Y	Y	Y	Y	Y	\mbfY	mathematical bold capital y
U+1D419	$\mathbf{Z}$	Z	Z	Z	Z	Z	Z	\mbfZ	mathematical bold capital z

15.2.2 Bold, Latin, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D41A	a	a	a	a	a	a	a	\mbfa	mathematical bold small a
U+1D41B	b	b	b	b	b	b	b	\mbfb	mathematical bold small b
U+1D41C	c	c	c	c	c	c	c	\mbfc	mathematical bold small c
U+1D41D	d	d	d	d	d	d	d	\mbfd	mathematical bold small d
U+1D41E	e	e	e	e	e	e	e	\mbfe	mathematical bold small e
U+1D41F	$\mathbf{f}$	f	f	f	f	f	f	\mbff	mathematical bold small f
U+1D420	g	g	g	g	g	g	g	\mbfg	mathematical bold small g
U+1D421	h	h	h	h	h	h	h	\mbfh	mathematical bold small h
U+1D422	i	i	i	i	i	i	i	\mbfi	mathematical bold small i
U+1D423	j	j	j	j	j	j	j	\mbfj	mathematical bold small j
U+1D424	k	k	k	k	k	k	k	\mbfk	mathematical bold small k
U+1D425	1	1	1	1	1	1	1	\mbfl	mathematical bold small l
U+1D426	m	m	m	m	m	m	m	\mbfm	mathematical bold small m
U+1D427	n	n	n	n	n	n	n	\mbfn	mathematical bold small n
U+1D428	0	0	0	0	0	0	0	\mbfo	mathematical bold small o
u+1D429	p	p	p	p	p	p	p	\mbfp	mathematical bold small p
U+1D42A	$\mathbf{q}$	q	q	q	q	q	q	\mbfq	mathematical bold small q

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D42B	r	r	r	r	r	r	r	\mbfr	mathematical bold small r
U+1D <b>42</b> C	s	S	S	S	S	S	S	\mbfs	mathematical bold small s
U+1D42D	$\mathbf{t}$	t	t	t	t	t	t	\mbft	mathematical bold small t
U+1D42E	u	u	u	u	u	u	u	\mbfu	mathematical bold small u
U+1D4 <b>2</b> F	v	v	v	v	v	v	v	\mbfv	mathematical bold small v
U+1D430	w	w	w	w	w	w	w	\mbfw	mathematical bold small w
U+1D431	x	X	X	X	x	X	X	\mbfx	mathematical bold small x
U+1D432	y	y	y	y	y	y	y	\mbfy	mathematical bold small y
U+1D433	$\mathbf{z}$	Z	Z	Z	Z	Z	z	\mbfz	mathematical bold small z

#### 15.2.3 Bold Greek, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D6A8	A	A	A	A	A	A	A	\mbfAlpha	mathematical bold capital alpha
U+1D6A9	В	В	В	В	В	В	В	\mbfBeta	mathematical bold capital beta
U+1D6AA	Γ	Γ	Γ	Γ	Γ	Γ	Γ	\mbfGamma	mathematical bold capital gamma
U+1D6AB	Δ	Δ	Δ	Δ	Δ	Δ	Δ	\mbfDelta	mathematical bold capital delta
U+1D6AC	E	E	E	E	E	E	E	\mbfEpsilon	mathematical bold capital epsilon
u+1d6ad	$\mathbf{Z}$	Z	Z	Z	Z	Z	Z	\mbfZeta	mathematical bold capital zeta
u+1d6ae	Н	Н	Н	Н	Н	Н	Н	\mbfEta	mathematical bold capital eta
u+1d6af	Θ	Θ	Θ	Θ	Θ	Θ	Θ	\mbfTheta	mathematical bold capital theta
u+1D6во	Ι	I	I	I	I	I	I	\mbfIota	mathematical bold capital iota
U+1D6B1	K	K	K	K	K	K	K	\mbfKappa	mathematical bold capital kappa

USV	M	S	E	K	P	L	G	Macro	Description
U+1D6B2	Λ	Λ	Λ	Λ	Λ	Λ	Λ	\mbfLambda	mathematical bold capital lambda
и+1D6в3	M	M	M	M	M	M	M	\mbfMu	mathematical bold capital mu
U+1D6B4	N	N	N	N	N	N	N	\mbfNu	mathematical bold capital nu
U+1D6B5	Ξ	Ξ	Ξ	Ξ	E	Ξ	Ξ	\mbfXi	mathematical bold capital xi
u+1D6B6	O	0	0	O	O	O	O	\mbf0micron	mathematical bold capital omicron
U+1D6B7	П	П	П	П	П	П	П	\mbfPi	mathematical bold capital pi
U+1D6B8	P	P	P	P	P	P	P	\mbfRho	mathematical bold capital rho
u+1D6B9	θ	θ	θ	Θ	Θ	θ	θ	\mbfvarTheta	mathematical bold capital theta symbol
u+1D6ba	Σ	Σ	Σ	Σ	Σ	Σ	Σ	\mbfSigma	mathematical bold capital sigma
u+1D6вв	$\mathbf{T}$	T	T	T	T	T	T	\mbfTau	mathematical bold capital tau
и+1D6вс	Υ	Y	Υ	Υ	Y	Y	Υ	\mbfUpsilon	mathematical bold capital upsilon
U+1D6BD	Φ	Φ	Φ	Φ	Φ	Φ	Φ	\mbfPhi	mathematical bold capital phi
u+1D6ве	X	X	X	X	X	X	X	\mbfChi	mathematical bold capital chi
U+1D6BF	Ψ	Ψ	Ψ	Ψ	Ψ	Ψ	Ψ	\mbfPsi	mathematical bold capital psi
u+1D6co	Ω	Ω	Ω	Ω	Ω	Ω	Ω	\mbf0mega	mathematical bold capital omega

15.2.4 Bold Greek, lowercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D6C2	α	α	α	α	α	α	α	\mbfalpha	mathematical bold small alpha
U+1D6C3	β	β	β	β	β	β	β	\mbfbeta	mathematical bold small beta
u+1D6c4	γ	γ	Υ	γ	γ	γ	γ	\mbfgamma	mathematical bold small gamma

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D6C5	δ	δ	δ	δ	δ	δ	8	\mbfdelta	mathematical bold small delta
U+1D6C6	ε	ε	ε	3	3	3	٤	\mbfvarepsilon	mathematical bold small varepsilon
u+1D6c7	ζ	ζ	ζ	ζ	ζ	ζ	ζ	\mbfzeta	mathematical bold small zeta
U+1D6C8	η	η	η	η	η	η	η	\mbfeta	mathematical bold small eta
U+1D6C9	θ	θ	θ	θ	θ	θ	θ	\mbftheta	mathematical bold small theta
u+1D6ca	ι	ι	ι	ι	ι	ι	ι	\mbfiota	mathematical bold small iota
u+1D6св	κ	κ	K	κ	к	κ	κ	\mbfkappa	mathematical bold small kappa
u+1D6cc	λ	λ	λ	λ	λ	λ	λ	\mbflambda	mathematical bold small lambda
u+1D6CD	μ	μ	μ	μ	μ	μ	μ	\mbfmu	mathematical bold small mu
U+1D6CE	ν	ν	v	ν	ν	ν	ν	\mbfnu	mathematical bold small nu
U+1D6CF	ξ	ξ	ξ	ξ	ξ	ξ	ξ	\mbfxi	mathematical bold small xi
U+1D6D0	O	0	0	0	0	0	0	\mbfomicron	mathematical bold small omi- cron
U+1D6D1	π	π	π	π	π	π	π	\mbfpi	mathematical bold small pi
U+1D6D2	ρ	ρ	ρ	ρ	ρ	ρ	ρ	\mbfrho	mathematical bold small rho
U+1D6D3	ς	ς	ς	Ç	ς	ς	ς	\mbfvarsigma	mathematical bold small final sigma
u+1D6D4	σ	σ	σ	σ	σ	σ	σ	\mbfsigma	mathematical bold small sigma
U+1D6D5	τ	τ	τ	τ	τ	τ	τ	\mbftau	mathematical bold small tau
U+1D6D6	υ	υ	υ	υ	υ	υ	υ	\mbfupsilon	mathematical bold small upsilon
u+1D6D7	φ	φ	φ	φ	φ	φ	φ	\mbfvarphi	mathematical bold small phi
U+1D6D8	χ	χ	χ	χ	χ	χ	χ	\mbfchi	mathematical bold small chi
U+1D6D9	ψ	ψ	ψ	ψ	ψ	ψ	ψ	\mbfpsi	mathematical bold small psi

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1d6da	ω	ω	ω	ω	ω	ω	ω	\mbfomega	mathematical bold small omega
u+1D6DB	9	9	9	д	9	9	9	\mbfpartial	mathematical bold partial dif- ferential
U+1D6DC	ε	€	E	$\epsilon$	E	E	€	\mbfepsilon	mathematical bold varepsilon symbol
U+1D6DD	$\vartheta$	િ	θ	9	θ	Э	Э	\mbfvartheta	mathematical bold theta symbol
u+1D6DE	n	ĸ	ĸ	и	и	и	ж	\mbfvarkappa	mathematical bold kappa symbol
U+1D6DF	ф	ф	ф	ф	ф	ф	ф	\mbfphi	mathematical bold phi symbol
U+1D6E0	Q	ę	Q	0	Q	9	6	\mbfvarrho	mathematical bold rho symbol
U+1D6E1	Β	æ	0	۵	ထ	ω	Ø	\mbfvarpi	mathematical bold pi symbol

15.2.5 Bold italic, Latin, uppercase

USV	M	S	E	K	P	L	G	Macro	Description
u+1D468	A	A	A	A	A	A	A	\mbfitA	mathematical bold italic capital a
u+1D469	$\boldsymbol{B}$	В	В	В	В	В	В	\mbfitB	mathematical bold italic capital b
u+1d46a	$\boldsymbol{C}$	C	C	C	C	C	C	\mbfitC	mathematical bold italic capital c
u+1d46в	D	D	D	D	D	D	D	\mbfitD	mathematical bold italic capital d
u+1D46c	$oldsymbol{E}$	E	E	E	E	E	E	\mbfitE	mathematical bold italic capital e
u+1d46d	$oldsymbol{F}$	F	F	F	F	F	F	\mbfitF	mathematical bold italic capital f
u+1D46e	G	$\boldsymbol{G}$	G	G	G	G	$\boldsymbol{G}$	\mbfitG	$ \begin{array}{c} \text{mathematical bold italic capital} \\ g \end{array} $
u+1d46f	H	H	H	Н	Н	Н	H	\mbfitH	mathematical bold italic capital h

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D470	I	I	I	I	I	I	I	\mbfitI	mathematical bold italic capital i
u+1D471	J	J	J	J	J	J	J	\mbfitJ	mathematical bold italic capital j
U+1D472	K	K	K	K	K	K	K	\mbfitK	mathematical bold italic capital k
U+1D473	$oldsymbol{L}$	L	L	L	L	L	L	\mbfitL	mathematical bold italic capital l
u+1D474	M	M	M	M	M	M	M	\mbfitM	mathematical bold italic capital m
U+1D475	N	N	N	N	N	N	N	\mbfitN	mathematical bold italic capital n
u+1D476	0	0	0	0	0	0	0	\mbfit0	mathematical bold italic capital o
u+1D477	P	P	P	P	P	P	P	\mbfitP	mathematical bold italic capital p
u+1D478	Q	Q	Q	Q	Q	Q	Q	\mbfitQ	mathematical bold italic capital q
u+1D479	R	R	R	R	R	R	R	\mbfitR	mathematical bold italic capital r
U+1D47A	$oldsymbol{S}$	S	S	S	S	S	S	\mbfitS	mathematical bold italic capital s
U+1D47B	T	T	T	T	T	T	T	\mbfitT	mathematical bold italic capital t
U+1D47C	$oldsymbol{U}$	U	U	U	U	U	<b>U</b>	\mbfitU	mathematical bold italic capital u
u+1D47D	V	$oldsymbol{V}$	$oldsymbol{V}$	V	V	V	V	\mbfitV	mathematical bold italic capital v
U+1D47E	W	W	W	W	W	W	W	\mbfitW	mathematical bold italic capital w
u+1D47F	X	X	X	X	X	X	X	\mbfitX	mathematical bold italic capital x
u+1D480	Y	Y	Y	Y	Y	Y	Y	\mbfitY	mathematical bold italic capital y
u+1D481	$\boldsymbol{Z}$	Z	Z	Z	Z	Z	Z	\mbfitZ	mathematical bold italic capital z

15.2.6 Bold italic, Latin, lowercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D482	$\boldsymbol{a}$	а	а	а	а	а	а	\mbfita	mathematical bold italic small a
U+1D483	b	b	b	b	b	b	b	\mbfitb	mathematical bold italic small b
U+1D484	$\boldsymbol{c}$	c	c	С	С	c	c	\mbfitc	mathematical bold italic small c
u+1D485	d	d	d	d	d	d	d	\mbfitd	mathematical bold italic small d
u+1D486	e	e	e	e	e	e	e	\mbfite	mathematical bold italic small e
u+1D487	f	f	f	f	f	f	f	\mbfitf	mathematical bold italic small f
U+1D488	$\boldsymbol{g}$	g	g	g	g	g	g	\mbfitg	mathematical bold italic small g
u+1D489	h	h	h	h	h	h	b	\mbfith	mathematical bold italic small h
u+1d48a	$oldsymbol{i}$	i	i	i	i	i	i	\mbfiti	mathematical bold italic small i
u+1D48в	$oldsymbol{j}$	j	j	j	j	j	j	\mbfitj	mathematical bold italic small j
U+1D48C	$\boldsymbol{k}$	k	k	k	k	k	k	\mbfitk	mathematical bold italic small k
u+1D48D	$\boldsymbol{l}$	l	l	1	1	l	l	\mbfitl	mathematical bold italic small l
U+1D48E	m	m	m	m	m	m	m	\mbfitm	mathematical bold italic small
u+1d48f	$\boldsymbol{n}$	n	n	n	n	n	n	\mbfitn	mathematical bold italic small n
U+1D490	0	0	0	0	0	0	0	\mbfito	mathematical bold italic small o
u+1D491	$oldsymbol{p}$	p	p	p	p	p	p	\mbfitp	mathematical bold italic small p
U+1D492	$oldsymbol{q}$	q	q	q	q	q	q	\mbfitq	mathematical bold italic small q
U+1D493	r	r	r	r	r	r	r	\mbfitr	mathematical bold italic small r
u+1D494	s	s	s	s	s	S	s	\mbfits	mathematical bold italic small s

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D495	t	t	t	t	t	t	t	\mbfitt	mathematical bold italic small t
U+1D496	$oldsymbol{u}$	и	u	и	и	u	u	\mbfitu	mathematical bold italic small u
U+1D497	$oldsymbol{v}$	v	v	$\boldsymbol{v}$	v	v	v	\mbfitv	mathematical bold italic small v
u+1D498	$oldsymbol{w}$	w	w	w	w	w	w	\mbfitw	mathematical bold italic small
U+1D499	$\boldsymbol{x}$	x	x	x	x	x	x	\mbfitx	mathematical bold italic small x
u+1D49A	$oldsymbol{y}$	y	y	y	y	y	y	\mbfity	mathematical bold italic small y
U+1D49B	z	z	$\boldsymbol{z}$	$\boldsymbol{z}$	z	z	z	\mbfitz	mathematical bold italic small z

## 15.2.7 Bold italic Greek, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D71C	A	A	A	A	A	A	A	\mbfitAlpha	mathematical bold italic capital alpha
U+1D71D	$\boldsymbol{B}$	В	В	В	В	В	В	\mbfitBeta	mathematical bold italic capital beta
U+1D71E	$oldsymbol{\Gamma}$	Γ	Γ	Γ	Γ	Γ	Γ	\mbfitGamma	mathematical bold italic capital gamma
U+1D71F	Δ	Δ	Δ	Δ	Δ	Δ	4	\mbfitDelta	mathematical bold italic capital delta
U+1D <b>72</b> 0	$\boldsymbol{E}$	E	E	E	E	E	E	\mbfitEpsilon	mathematical bold italic capital epsilon
U+1D721	$\boldsymbol{Z}$	Z	Z	Z	Z	Z	Z	\mbfitZeta	mathematical bold italic capital zeta
U+1D722	H	H	H	Н	Н	Н	H	\mbfitEta	mathematical bold italic capital eta
u+1D723	Θ	Θ	0	Θ	Θ	Θ	0	\mbfitTheta	mathematical bold italic capital theta
U+1D724	I	I	I	I	I	I	I	\mbfitIota	mathematical bold italic capital iota
U+1D725	K	K	K	K	K	K	K	\mbfitKappa	mathematical bold italic capital kappa

USV	M	S	E	K	P	L	G	Macro	Description
u+1D726	Λ	Λ	Λ	Λ	Λ	Λ	Λ	\mbfitLambda	mathematical bold italic capital lambda
U+1D <b>72</b> 7	M	M	M	M	M	M	M	\mbfitMu	mathematical bold italic capital mu
U+1D728	N	N	N	N	N	N	N	\mbfitNu	mathematical bold italic capital nu
U+1D729	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	Z	\mbfitXi	mathematical bold italic capital xi
U+1D72A	0	0	0	0	0	0	0	\mbfit0micron	mathematical bold italic capital omicron
U+1D72B	П	П	П	П	П	П	П	\mbfitPi	mathematical bold italic capital pi
U+1D <b>72</b> C	P	P	P	P	P	P	P	\mbfitRho	mathematical bold italic capital rho
U+1D <b>72</b> D	θ	θ	θ	θ	θ	θ	θ	\mbfitvarTheta	mathematical bold italic capital theta symbol
U+1D72E	$oldsymbol{arSigma}$	Σ	Σ	Σ	Σ	Σ	Σ	\mbfitSigma	mathematical bold italic capital sigma
U+1D72F	T	T	T	T	T	T	T	\mbfitTau	mathematical bold italic capital tau
u+1D730	Υ	Y	Υ	Υ	Y	Y	Υ	\mbfitUpsilon	mathematical bold italic capital upsilon
U+1D731	Φ	Φ	Φ	Φ	Φ	Φ	Φ	\mbfitPhi	mathematical bold italic capital phi
U+1D732	X	X	X	X	X	X	X	\mbfitChi	mathematical bold italic capital chi
U+1D733	$\Psi$	Ψ	Ψ	Ψ	Ψ	Ψ	Ψ	\mbfitPsi	mathematical bold italic capital psi
U+1D734	$\Omega$	Ω	Ω	Ω	Ω	Ω	Ω	\mbfit0mega	mathematical bold italic capital omega

15.2.8 Bold italic Greek, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1D736	α	α	α	α	α	α	α	\mbfitalpha	mathematical bold italic small alpha
U+1D737	$oldsymbol{eta}$	β	β	β	β	β	β	\mbfitbeta	mathematical bold italic small beta
U+1D738	$\gamma$	γ	γ	γ	γ	γ	γ	\mbfitgamma	mathematical bold italic small gamma
u+1D739	δ	δ	δ	δ	δ	δ	8	\mbfitdelta	mathematical bold italic small delta
U+1D73A	ε	ε	ε	ε	ε	ε	ε	\mbfitvarepsilon	mathematical bold italic small varepsilon
U+1D73B	ζ	ζ	ζ	ζ	ζ	ζ	ζ	\mbfitzeta	mathematical bold italic small zeta
U+1D73C	η	η	η	η	η	η	η	\mbfiteta	mathematical bold italic small eta
U+1D73D	$\boldsymbol{\theta}$	θ	$\boldsymbol{\theta}$	θ	θ	$\boldsymbol{\theta}$	θ	\mbfittheta	mathematical bold italic small theta
U+1D73E	ι	ι	ι	ı	ι	ı	ι	\mbfitiota	mathematical bold italic small iota
U+1D73F	$\kappa$	κ	κ	κ	κ	κ	κ	\mbfitkappa	mathematical bold italic small kappa
u+1D740	λ	λ	λ	λ	λ	λ	λ	\mbfitlambda	mathematical bold italic small lambda
u+1D741	$\mu$	μ	μ	μ	μ	μ	μ	\mbfitmu	mathematical bold italic small
U+1D742	ν	ν	v	ν	ν	ν	ν	\mbfitnu	mathematical bold italic small nu
u+1D743	ξ	ξ	ξ	ξ	ξ	ξ	N.	\mbfitxi	mathematical bold italic small xi
u+1D744	0	0	0	0	0	0	0	\mbfitomicron	mathematical bold italic small omicron
U+1D745	$\pi$	$\pi$	$\pi$	π	$\pi$	π	$\pi$	\mbfitpi	mathematical bold italic small pi
u+1D746	ρ	ρ	ρ	ρ	ρ	ρ	P	\mbfitrho	mathematical bold italic small rho
U+1D747	ς	5	ς	Ç	ς	S	ς	\mbfitvarsigma	mathematical bold italic small final sigma
u+1D748	$\sigma$	σ	σ	σ	$\sigma$	σ	σ	\mbfitsigma	mathematical bold italic small sigma

USV	M	S	E	K	Р	L	G	Macro	Description
u+1D749	au	τ	τ	τ	τ	τ	τ	\mbfittau	mathematical bold italic small tau
u+1D74A	$oldsymbol{v}$	υ	$\boldsymbol{v}$	υ	v	v	υ	\mbfitupsilon	mathematical bold italic small upsilon
U+1D74B	$\varphi$	$\varphi$	φ	φ	φ	φ	P	\mbfitvarphi	mathematical bold italic small phi
u+1D74C	χ	χ	χ	χ	χ	χ	χ	\mbfitchi	mathematical bold italic small chi
U+1D74D	$oldsymbol{\psi}$	ψ	ψ	ψ	ψ	ψ	*	\mbfitpsi	mathematical bold italic small psi
U+1D74E	$\omega$	ω	ω	ω	ω	ω	ω	\mbfitomega	mathematical bold italic small omega
U+1D74F	д	8	д	9	9	д	д	\mbfitpartial	mathematical bold italic partial differential
U+1D750	$\epsilon$	$\epsilon$	$\epsilon$	$\epsilon$	$\epsilon$	$\epsilon$	€	\mbfitepsilon	mathematical bold italic varepsilon symbol
U+1D751	θ	ð	ð	ð	ð	Э	ð	\mbfitvartheta	mathematical bold italic theta symbol
U+1D752	и	x	κ	и	и	ĸ	×	\mbfitvarkappa	mathematical bold italic kappa symbol
U+1D753	$\phi$	φ	φ	φ	φ	φ	φ	\mbfitphi	mathematical bold italic phi symbol
u+1D754	Q	g	Q	o	Q	Q	e	\mbfitvarrho	mathematical bold italic rho symbol
U+1D755	$\overline{\omega}$	$\boldsymbol{\varpi}$	Ø	<sub>@</sub>	W	$\boldsymbol{\varpi}$	Ø	\mbfitvarpi	mathematical bold italic pi symbol

## 15.2.9 Bold script, Latin, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D4D0	$\mathcal{A}$	$\mathcal{A}$	A	A	$\mathcal{A}$	A	A	\mbfscrA	mathematical bold script capital a
U+1D4D1	$\mathcal{B}$	$\mathcal{B}$	B	B	$\mathcal{B}$	B	B	\mbfscrB	mathematical bold script capital b
U+1D4D2	$\mathcal{C}$	e	C	$\mathscr{C}$	C	8	C	\mbfscrC	mathematical bold script capital

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1D4D3	$\mathcal{D}$	D	9	D	D	Ø	Ø	\mbfscrD	mathematical bold script capital d
U+1D4D4	Е	8	E	&	$\mathcal{E}$	8	8	\mbfscrE	mathematical bold script capital e
U+1D4D5	$\mathcal{F}$	$\mathcal{F}$	F	F	$\mathcal{F}$	F	F	\mbfscrF	mathematical bold script capital f
u+1D4D6	${\cal G}$	g	G	G	G	G	$\mathcal{G}$	\mbfscrG	mathematical bold script capital g
U+1D4D7	$\mathcal{H}$	$\mathcal{H}$	${\mathcal H}$	H	$\mathcal{H}$	$\mathcal{H}$	$\mathcal{H}$	\mbfscrH	mathematical bold script capital h
u+1D4D8	$\mathcal I$	$\mathcal{J}$	g	J	$\mathcal{I}$	J	J	\mbfscrI	mathematical bold script capital i
u+1D4D9	$\mathcal{J}$	J	J	J	$\mathcal{J}$	J	J	\mbfscrJ	mathematical bold script capital j
u+1D4DA	$\mathcal K$	Ж	$\mathcal{K}$	K	K	${\mathscr K}$	Ж	\mbfscrK	mathematical bold script capital k
U+1D4DB	$\mathcal{L}$	£	$\mathscr{L}$	$\mathscr{L}$	L	$\mathscr{L}$	${\mathscr L}$	\mbfscrL	mathematical bold script capital l
U+1D4DC	$\mathcal{M}$	$\mathcal{M}$	М	M	$\mathcal{M}$	M	M	\mbfscrM	mathematical bold script capital m
U+1D4DD	$\mathcal{N}$	$\mathcal{N}$	N	N	$\mathcal{N}$	N	N	\mbfscrN	mathematical bold script capital n
u+1D4DE	O	O	0	0	o	0	0	\mbfscr0	mathematical bold script capital o
u+1D4DF	$\mathcal{P}$	$\mathcal{P}$	<i>9</i>	<i>P</i>	P	<i>9</i> °	<i>9</i>	\mbfscrP	mathematical bold script capital p
u+1D4E0	$\mathcal{Q}$	Q	2	Q	Q	Q	Q	\mbfscrQ	mathematical bold script capital q
u+1D4E1	$\mathcal{R}$	$\mathcal{R}$	R	R	$\mathcal{R}$	R	R	\mbfscrR	mathematical bold script capital r
u+1D4E2	S	S	S	$\mathscr{S}$	5	8	8	\mbfscrS	mathematical bold script capital s
u+1D4E3	$\mathcal{T}$	$\mathcal{F}$	7	$\mathscr{T}$	T	${\mathscr T}$	${\mathcal T}$	\mbfscrT	mathematical bold script capital t
u+1D4E4	u	и	$\mathscr{U}$	$\mathscr{U}$	u	u	u	\mbfscrU	mathematical bold script capital u

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D4E5	$\nu$	ν	7⁄	V	U	V	V	\mbfscrV	mathematical bold script capital v
U+1D4E6	w	w	W	W	W	W	W	\mbfscrW	mathematical bold script capital w
U+1D4E7	$\boldsymbol{x}$	$\boldsymbol{x}$	X	X	$\boldsymbol{\chi}$	$\boldsymbol{x}$	$\boldsymbol{x}$	\mbfscrX	mathematical bold script capital x
U+1D4E8	у	y	Ŋ	¥	y	y	y	\mbfscrY	mathematical bold script capital y
U+1D4E9	Z	z	$\mathcal{Z}$	${\mathcal Z}$	Z	$\boldsymbol{\mathscr{Z}}$	Æ	\mbfscrZ	mathematical bold script capital z

15.2.10 Bold script, Latin, lowercase

USV	M	S	E	K	Р	L	G	Macro	Description
U+1D4EA		а			a	a	a	\mbfscra	mathematical bold script small a
u+1D4eb		b			В	в	в	\mbfscrb	mathematical bold script small b
u+1d4ec		c			$\boldsymbol{c}$	c	$oldsymbol{c}$	\mbfscrc	mathematical bold script small c
u+1d4ed		d			d	d	d	\mbfscrd	mathematical bold script small d
U+1D4EE		e			e	e	e	\mbfscre	mathematical bold script small e
U+1D4EF		f			ß	f	f	\mbfscrf	mathematical bold script small
U+1D4F0		д			д	g	g	\mbfscrg	mathematical bold script small g
u+1D4F1		ĥ			h	ħ	ħ	\mbfscrh	mathematical bold script small h
U+1D4F2		i			i	i	i	\mbfscri	mathematical bold script small
U+1D4F3		j			j	j	j	\mbfscrj	mathematical bold script small j
U+1D4F4		k			k	R	k	\mbfscrk	mathematical bold script small k

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D4F5		ŀ			l	$\ell$	$\ell$	\mbfscrl	mathematical bold script small l
u+1D4F6		m			m	m	m	\mbfscrm	mathematical bold script small m
U+1D4F7		n			$\boldsymbol{n}$	n	n	\mbfscrn	mathematical bold script small n
u+1D4F8		o			o	0	•	\mbfscro	mathematical bold script small o
u+1D4F9		p			P	P	P	\mbfscrp	mathematical bold script small p
u+1d4fa		q			q	q	<b>q</b>	\mbfscrq	mathematical bold script small q
U+1D4FB		r			r	*	*	\mbfscrr	mathematical bold script small r
u+1D4FC		S			\$	3	ð	\mbfscrs	mathematical bold script small s
u+1D4FD		t			t	ŧ	ŧ	\mbfscrt	mathematical bold script small t
u+1d4fe		u			и	u	u	\mbfscru	mathematical bold script small u
u+1D4ff		$oldsymbol{v}$			v	v	v	\mbfscrv	mathematical bold script small v
U+1D500		w			w	w	w	\mbfscrw	mathematical bold script small w
u+1D501		x			x	$\boldsymbol{x}$	$oldsymbol{x}$	\mbfscrx	mathematical bold script small x
U+1D502		y			y	¥	y	\mbfscry	mathematical bold script small y
U+1D503		z			z	Z	×	\mbfscrz	mathematical bold script small z

15.2.11 Bold fraktur, Latin, uppercase

usv	M	S	E	K	P	L	G	Macro	Description
U+1D56C	21	21	21	A	21	21	U	\mbffrakA	mathematical bold fraktur capital a

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D56D	33	8	23	B	23	8	$\mathfrak{B}$	\mbffrakB	mathematical bold fraktur capital b
U+1D56E	c	C	c	C	c	C	C	\mbffrakC	mathematical bold fraktur capital c
U+1D56F	D	20	D	D	D	2	Ð	\mbffrakD	mathematical bold fraktur capital d
U+1D570	e	E	e	£	E	Œ	C	\mbffrakE	mathematical bold fraktur capital e
U+1D571	$\mathfrak{F}$	$\mathfrak{F}$	$\mathfrak{F}$	F	$\mathfrak{F}$	$\mathfrak{F}$	$\mathfrak{F}$	\mbffrakF	mathematical bold fraktur capital f
U+1D572	G	ß	G	G	G	Œ	6	\mbffrakG	mathematical bold fraktur capital g
U+1D573	H	Ð	H	Б	H	Ð	5	\mbffrakH	mathematical bold fraktur capital h
U+1D574	I	ន	I	I	I	ន	3	\mbffrakI	mathematical bold fraktur capital i
U+1D575	J	ร	J	J	J	ร	3	\mbffrakJ	mathematical bold fraktur capital j
u+1D576	R	Я	Ŗ	Ŕ	R	R	Я	\mbffrakK	mathematical bold fraktur capital k
U+1D577	$\mathfrak{L}$	Q	$\mathfrak{L}$	L	$\mathfrak{L}$	Q	Ω	\mbffrakL	mathematical bold fraktur capital l
U+1D578	M	m	M	m	M	m	M	\mbffrakM	mathematical bold fraktur capital m
U+1D579	N	N	N	n	N	N	N	\mbffrakN	mathematical bold fraktur capital n
U+1D57A	O	Ø	D	Ø	D	D	D	\mbffrak0	mathematical bold fraktur capital o
U+1D57B	Ŗ	P	Ŗ	p	P	P	Ŗ	\mbffrakP	mathematical bold fraktur capital p
U+1D57C	Q	Ø	Q	Q	Q	Ð	Q	\mbffrakQ	mathematical bold fraktur capital q
U+1D57D	R	R	R	R	R	R	R	\mbffrakR	mathematical bold fraktur capital r
U+1D57E	S	8	S	5	6	<u>©</u>	8	\mbffrakS	mathematical bold fraktur capital s

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D57F	T	T	T	τ	T	T	I	\mbffrakT	mathematical bold fraktur capital t
U+1D580	U	u	N	u	u	u	u	\mbffrakU	mathematical bold fraktur capital u
U+1D581	V	Ø	V	v	V	Ø	V	\mbffrakV	mathematical bold fraktur capital v
U+1D582	W	W	W	w	W	W	W	\mbffrakW	mathematical bold fraktur capital w
U+1D583	X	x	$\mathfrak{X}$	X	X	x	x	\mbffrakX	mathematical bold fraktur capital x
U+1D584	Ŋ	Ŋ	Ŋ	Ņ	Ŋ	Ŋ	Ð	\mbffrakY	mathematical bold fraktur capital y
U+1D585	3	3	3	3	3	3	3	\mbffrakZ	mathematical bold fraktur capital z

15.2.12 Bold fraktur, Latin, lowercase

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1D586	a	a	a	a	a	a	a	\mbffraka	mathematical bold fraktur small
u+1D587	ь	b	ь	b	ь	b	b	\mbffrakb	mathematical bold fraktur small b
u+1D588	c	c	c	¢	c	c	c	\mbffrakc	mathematical bold fraktur small
U+1D589	ð	ð	ð	b	ð	b	ð	\mbffrakd	mathematical bold fraktur small d
u+1d58a	e	e	e	e	e	e	e	\mbffrake	mathematical bold fraktur small
u+1D58в	f	f	f	f	f	f	f	\mbffrakf	mathematical bold fraktur small f
u+1D58c	$\mathfrak{g}$	g	$\mathfrak{g}$	g	$\mathfrak{g}$	g	g	\mbffrakg	mathematical bold fraktur small
u+1D58D	h	ħ	ħ	þ	h	ħ	ħ	\mbffrakh	mathematical bold fraktur small h
U+1D58E	i	i	i	i	i	i	i	\mbffraki	mathematical bold fraktur small

USV	M	S	E	K	P	L	G	Macro	Description
U+1D58F	j	j	j	j	j	j	i	\mbffrakj	mathematical bold fraktur small j
U+1D590	ŧ	ŧ	ŧ	k	ŧ	ţ	ŧ	\mbffrakk	mathematical bold fraktur small k
U+1D591	ι	ţ	ι	ĺ	ı	ţ	I	\mbffrakl	mathematical bold fraktur small l
U+1D592	m	m	m	m	m	m	m	\mbffrakm	mathematical bold fraktur small
U+1D593	n	n	n	n	n	n	n	\mbffrakn	mathematical bold fraktur small
u+1D594	0	ø	0	o	0	ø	o	\mbffrako	mathematical bold fraktur small
U+1D595	p	Þ	p	p	p	Þ	p	\mbffrakp	mathematical bold fraktur small
u+1D596	q	q	q	q	q	q	q	\mbffrakq	
U+1D597	r	r	r	r	r	r	r	\mbffrakr	mathematical bold fraktur small
U+1D598	s	ક	s	$\mathfrak{S}$	s	S	5	\mbffraks	mathematical bold fraktur small
u+1D599	ŧ	t	t	t	t	t	t	\mbffrakt	mathematical bold fraktur small t
U+1D59A	u	u	u	ц	u	u	u	\mbffraku	mathematical bold fraktur small
U+1D59В	v	b	v	U	v	b	v	\mbffrakv	mathematical bold fraktur small
U+1D59C	w	w	w	w	w	w	w	\mbffrakw	mathematical bold fraktur small
U+1D59D	ŗ	¥	ŗ	¥	ŗ	¥	x	\mbffrakx	mathematical bold fraktur small
U+1D59E	ŋ	ŋ	ŋ	y	ŋ	ŋ	ŋ	\mbffraky	mathematical bold fraktur small y
u+1D59F	3	3	3	Z	3	3	3	\mbffrakz	mathematical bold fraktur small

15.2.13 Bold sans serif, Latin, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D5D4	Α	Α	A	Α	A	A	A	\mbfsansA	mathematical sans-serif bold capital a
U+1D5D5	В	В	В	В	В	В	В	\mbfsansB	mathematical sans-serif bold capital b
U+1D5D6	С	С	С	С	С	C	C	\mbfsansC	mathematical sans-serif bold capital c
U+1D5D7	D	D	D	D	D	D	D	\mbfsansD	mathematical sans-serif bold capital d
U+1D5D8	E	E	E	E	E	E	E	\mbfsansE	mathematical sans-serif bold capital e
U+1D5D9	F	F	F	F	F	F	F	\mbfsansF	mathematical sans-serif bold capital f
U+1D5DA	G	G	G	G	G	G	G	\mbfsansG	mathematical sans-serif bold capital g
U+1D5DB	Н	н	Н	Н	н	Н	Н	\mbfsansH	mathematical sans-serif bold capital h
U+1D5DC	ı	ı	ı	1	ī	I	ī	\mbfsansI	mathematical sans-serif bold capital i
U+1D5DD	J	J	J	J	J	J	J	\mbfsansJ	mathematical sans-serif bold capital j
U+1D5DE	K	K	K	K	K	K	K	\mbfsansK	mathematical sans-serif bold capital k
U+1D5DF	L	L	L	L	L	L	L	\mbfsansL	mathematical sans-serif bold capital l
U+1D5E0	М	M	M	М	М	M	M	\mbfsansM	mathematical sans-serif bold capital m
U+1D5E1	N	N	N	N	N	N	N	\mbfsansN	mathematical sans-serif bold capital n
U+1D5E2	0	0	0	0	0	O	O	\mbfsans0	mathematical sans-serif bold capital o
U+1D5E3	P	P	P	P	P	P	P	\mbfsansP	mathematical sans-serif bold capital p
U+1D5E4	Q	Q	Q	Q	Q	Q	Q	\mbfsansQ	mathematical sans-serif bold capital q
U+1D5E5	R	R	R	R	R	R	R	\mbfsansR	mathematical sans-serif bold capital r

USV	M	S	Е	K	P	L	G	Macro	Description
u+1D5E6	S	S	S	S	S	S	S	\mbfsansS	mathematical sans-serif bold capital s
U+1D5E7	Т	Т	Т	Т	Т	Т	Т	\mbfsansT	mathematical sans-serif bold capital t
u+1D5E8	U	U	U	U	U	U	U	\mbfsansU	mathematical sans-serif bold capital u
U+1D5E9	V	V	V	٧	V	V	V	\mbfsansV	mathematical sans-serif bold capital v
U+1D5EA	W	W	W	W	W	W	w	\mbfsansW	mathematical sans-serif bold capital w
U+1D5EB	X	X	X	X	X	X	X	\mbfsansX	mathematical sans-serif bold capital x
U+1D5EC	Y	Υ	Y	Υ	Y	Y	Y	\mbfsansY	mathematical sans-serif bold capital y
U+1D5ED	Z	Z	Z	Z	Z	Z	Z	\mbfsansZ	mathematical sans-serif bold capital z

### 15.2.14 Bold sans serif, Latin, lowercase

USV	M	S	E	K	P	L	G	Macro	Description
U+1D5EE	a	а	a	a	a	a	a	\mbfsansa	mathematical sans-serif bold small a
U+1D5EF	b	b	b	b	b	b	b	\mbfsansb	mathematical sans-serif bold small b
u+1D5F0	С	c	С	С	C	c	c	\mbfsansc	mathematical sans-serif bold small c
U+1D5F1	d	d	d	d	d	d	d	\mbfsansd	mathematical sans-serif bold small d
U+1D5F2	е	е	e	е	е	e	e	\mbfsanse	mathematical sans-serif bold small e
u+1D5F3	f	f	f	f	f	f	f	\mbfsansf	mathematical sans-serif bold small f
U+1D5F4	g	g	g	g	g	g	g	\mbfsansg	mathematical sans-serif bold small g
U+1D5F5	h	h	h	h	h	h	h	\mbfsansh	mathematical sans-serif bold small h

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D5F6	i	i	i	i	i	i	i	\mbfsansi	mathematical sans-serif bold small i
U+1D5F7	j	j	j	j	j	j	j	\mbfsansj	mathematical sans-serif bold small j
U+1D5F8	k	k	k	k	k	k	k	\mbfsansk	mathematical sans-serif bold small k
U+1D5F9	1	ι	1	ι	ī	1	1	\mbfsansl	mathematical sans-serif bold small l
U+1D5FA	m	m	m	m	m	m	m	\mbfsansm	mathematical sans-serif bold small m
U+1D5FB	n	n	n	n	n	n	n	\mbfsansn	mathematical sans-serif bold small n
U+1D5FC	0	0	0	Ο	0	0	0	\mbfsanso	mathematical sans-serif bold small o
U+1D5FD	p	р	p	p	р	p	p	\mbfsansp	mathematical sans-serif bold small p
U+1D5FE	q	q	q	q	q	q	q	\mbfsansq	mathematical sans-serif bold small q
U+1D5FF	r	r	r	r	r	r	r	\mbfsansr	mathematical sans-serif bold small r
U+1D600	S	s	S	s	S	S	S	\mbfsanss	mathematical sans-serif bold small s
U+1D601	t	t	t	t	t	t	t	\mbfsanst	mathematical sans-serif bold small t
U+1D602	u	u	u	u	u	u	u	\mbfsansu	mathematical sans-serif bold small u
U+1D603	v	v	v	V	v	v	v	\mbfsansv	mathematical sans-serif bold small v
U+1D604	w	w	w	w	w	w	w	\mbfsansw	mathematical sans-serif bold small w
U+1D605	x	x	X	x	x	x	x	\mbfsansx	mathematical sans-serif bold small x
U+1D606	у	у	y	у	у	y	у	\mbfsansy	mathematical sans-serif bold small y
U+1D607	Z	z	Z	Z	Z	Z	z	\mbfsansz	mathematical sans-serif bold small z

15.2.15 Bold italic sans serif, Latin, uppercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D63C	A	Α	A	Α	A	A	A	\mbfitsansA	mathematical sans-serif bold italic capital a
U+1D63D	В	В	В	В	В	В	В	\mbfitsansB	mathematical sans-serif bold italic capital b
U+1D63E	С	С	С	С	С	C	C	\mbfitsansC	mathematical sans-serif bold italic capital c
U+1D63F	D	D	D	D	D	D	D	\mbfitsansD	mathematical sans-serif bold italic capital d
u+1D640	E	E	E	Ε	E	E	E	\mbfitsansE	mathematical sans-serif bold italic capital e
U+1D641	F	F	F	F	F	F	F	\mbfitsansF	mathematical sans-serif bold italic capital f
U+1D642	G	G	G	G	G	G	G	\mbfitsansG	mathematical sans-serif bold italic capital g
U+1D643	Н	Н	Н	Н	н	Н	Н	\mbfitsansH	mathematical sans-serif bold italic capital h
U+1D644	1	I	1	1	1	I	I	\mbfitsansI	mathematical sans-serif bold italic capital i
U+1D645	J	J	J	J	J	J	J	\mbfitsansJ	mathematical sans-serif bold italic capital j
U+1D646	K	K	K	K	K	K	K	\mbfitsansK	mathematical sans-serif bold italic capital k
u+1D647	L	L	L	L	L	L	L	\mbfitsansL	mathematical sans-serif bold italic capital l
U+1D648	М	М	M	М	М	М	М	\mbfitsansM	mathematical sans-serif bold italic capital m
U+1D649	N	N	N	N	N	N	N	\mbfitsansN	mathematical sans-serif bold italic capital n
u+1d64a	0	0	0	0	0	0	0	\mbfitsans0	mathematical sans-serif bold italic capital o
U+1D64B	P	P	P	P	P	P	P	\mbfitsansP	mathematical sans-serif bold italic capital p
U+1D64C	Q	Q	Q	Q	Q	Q	Q	\mbfitsansQ	mathematical sans-serif bold italic capital q

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1D64D	R	R	R	R	R	R	R	\mbfitsansR	mathematical sans-serif bold italic capital r
u+1D64E	S	S	S	S	S	S	S	\mbfitsansS	mathematical sans-serif bold italic capital s
u+1D64F	<b>T</b>	Τ	T	Т	T	T	T	\mbfitsansT	mathematical sans-serif bold italic capital t
u+1D650	U	U	U	U	U	U	U	\mbfitsansU	mathematical sans-serif bold italic capital u
U+1D651	V	V	V	V	V	V	V	\mbfitsansV	mathematical sans-serif bold italic capital v
U+1D652	W	W	W	W	W	W	W	\mbfitsansW	mathematical sans-serif bold italic capital w
u+1D653	X	X	X	X	X	X	X	\mbfitsansX	mathematical sans-serif bold italic capital x
u+1D654	Y	Y	Y	Y	Y	Y	Y	\mbfitsansY	mathematical sans-serif bold italic capital y
U+1D655	Z	Z	Z	Z	Z	Z	Z	\mbfitsansZ	mathematical sans-serif bold italic capital z

15.2.16 Bold italic sans serif, Latin, lowercase

USV	M	S	Е	K	P	L	G	Macro	Description
u+1D656	a	а	a	а	а	а	а	\mbfitsansa	mathematical sans-serif bold italic small a
u+1D657	b	b	b	Ь	b	b	b	\mbfitsansb	mathematical sans-serif bold italic small b
u+1D658	С	c	C	С	C	c	c	\mbfitsansc	mathematical sans-serif bold italic small c
u+1D659	d	d	d	d	d	d	d	\mbfitsansd	mathematical sans-serif bold italic small d
u+1d65a	e	e	e	e	e	e	e	\mbfitsanse	mathematical sans-serif bold italic small e
u+1D65в	f	f	f	f	f	f	f	\mbfitsansf	mathematical sans-serif bold italic small f
u+1D65C	g	g	g	g	g	g	g	\mbfitsansg	mathematical sans-serif bold italic small g

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D65D	h	h	h	h	h	h	h	\mbfitsansh	mathematical sans-serif bold italic small h
U+1D65E	i	i	i	i	i	i	i	\mbfitsansi	mathematical sans-serif bold italic small i
U+1D65F	j	j	j	j	j	j	j	\mbfitsansj	mathematical sans-serif bold italic small j
u+1D660	k	k	k	k	k	k	k	\mbfitsansk	mathematical sans-serif bold italic small k
u+1D661	1	ı	1	l	1	l	l	\mbfitsansl	mathematical sans-serif bold italic small l
U+1D662	m	m	m	m	m	m	m	\mbfitsansm	mathematical sans-serif bold italic small m
U+1D663	n	n	n	n	n	n	n	\mbfitsansn	mathematical sans-serif bold italic small n
U+1D664	0	0	0	0	0	0	0	\mbfitsanso	mathematical sans-serif bold italic small o
U+1D665	p	p	p	p	p	p	p	\mbfitsansp	mathematical sans-serif bold italic small p
u+1D666	q	q	q	q	q	q	q	\mbfitsansq	mathematical sans-serif bold italic small q
u+1D667	r	r	r	r	r	r	r	\mbfitsansr	mathematical sans-serif bold italic small r
u+1D668	s	s	s	S	S	S	S	\mbfitsanss	mathematical sans-serif bold italic small s
U+1D669	t	t	t	t	t	t	t	\mbfitsanst	mathematical sans-serif bold italic small t
u+1D66a	u	и	u	и	и	и	и	\mbfitsansu	mathematical sans-serif bold italic small u
u+1D66в	v	v	V	v	v	V	v	\mbfitsansv	mathematical sans-serif bold italic small v
U+1D66C	w	w	w	w	W	w	w	\mbfitsansw	mathematical sans-serif bold italic small w
U+1D66D	x	x	X	X	X	X	x	\mbfitsansx	mathematical sans-serif bold italic small x
u+1D66e	y	y	y	у	y	y	y	\mbfitsansy	mathematical sans-serif bold italic small y

USV	M	S	E	K	P	L	G	Macro	Description
U+1D66F	Z	Z	Z	Z	Z	Z	Z	\mbfitsansz	mathematical sans-serif bold italic small z

## 15.2.17 Bold sans serif Greek, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D756	A	A	A	Α	A	A	A	\mbfsansAlpha	mathematical sans-serif bold capital alpha
U+1D757	В	В	В	В	В	В	В	\mbfsansBeta	mathematical sans-serif bold capital beta
U+1D758	Γ	г	Γ	Γ	г	Γ	Γ	\mbfsansGamma	mathematical sans-serif bold capital gamma
U+1D759	Δ	Δ	Δ	Δ	Δ	Δ	Δ	\mbfsansDelta	mathematical sans-serif bold capital delta
U+1D75A	E	E	E	E	E	E	E	\mbfsansEpsilon	mathematical sans-serif bold capital epsilon
U+1D75B	Z	Z	Z	Z	Z	Z	Z	\mbfsansZeta	mathematical sans-serif bold capital zeta
U+1D75C	Н	Н	Н	Н	Н	Н	Н	\mbfsansEta	mathematical sans-serif bold capital eta
U+1D75D	Θ	Θ	Θ	Θ	Θ	Θ	Θ	\mbfsansTheta	mathematical sans-serif bold capital theta
U+1D75E	ı	ı	ı	I	ī	1	I	\mbfsansIota	mathematical sans-serif bold capital iota
U+1D75F	K	K	K	K	K	K	K	\mbfsansKappa	mathematical sans-serif bold capital kappa
U+1D760	٨	٨	٨	٨	٨	٨	٨	\mbfsansLambda	mathematical sans-serif bold capital lambda
u+1D761	М	M	M	М	M	M	M	\mbfsansMu	mathematical sans-serif bold capital mu
U+1D762	N	N	N	N	N	N	N	\mbfsansNu	mathematical sans-serif bold capital nu
U+1D763	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	\mbfsansXi	mathematical sans-serif bold capital xi
U+1D764	0	0	0	0	0	O	O	\mbfsans0micron	mathematical sans-serif bold capital omicron

M	S	Е	K	Р	L	G	Macro	Description
П	П	П	П	п	П	П	\mbfsansPi	mathematical sans-serif bold capital pi
P	P	P	P	P	P	P	\mbfsansRho	mathematical sans-serif bold capital rho
Θ	Θ	Θ	Θ	θ	Θ	θ	\mbfsansvarTheta	mathematical sans-serif bold capital theta symbol
Σ	Σ	Σ	Σ	Σ	Σ	Σ	\mbfsansSigma	mathematical sans-serif bold capital sigma
т	т	Т	Т	т	Т	Т	\mbfsansTau	mathematical sans-serif bold capital tau
Υ	Y	Υ	Υ	Y	Y	Y	\mbfsansUpsilon	mathematical sans-serif bold capital upsilon
Ф	Φ	Ф	Φ	Φ	Ф	Φ	\mbfsansPhi	mathematical sans-serif bold capital phi
X	X	X	X	X	X	X	\mbfsansChi	mathematical sans-serif bold capital chi
Ψ	Ψ	Ψ	Ψ	Ψ	Ψ	Ψ	\mbfsansPsi	mathematical sans-serif bold capital psi
Ω	Ω	Ω	Ω	Ω	Ω	Ω	\mbfsans0mega	mathematical sans-serif bold capital omega
	Π P Θ Σ T T Φ	Π Π	Π Π Π Π Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε	Π Π Π Π Π Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε	Π Π Π Π Π Π Π Π Θ Θ Θ Θ Θ Σ Σ Σ Σ Σ Σ Σ	Π Π Π Π Π Π Π Π Π Π Ε Ε Ε Ε Ε Ε Ε Ε Ε Ε	Π Π Π Π Π Π Π Π Π Π Π Π Θ Θ Θ Θ Θ Θ Θ Θ	Π Π Π Π Π Π Π Π H hbfsansPi  P P P P P P P P hmbfsansRho  Θ Θ Θ Θ Θ Θ Θ hmbfsansVarTheta  Σ Σ Σ Σ Σ Σ Σ Σ hmbfsansSigma  Τ Τ Τ Τ Τ Τ Τ Τ Τ hmbfsansTau  Υ Υ Υ Υ Υ Υ Υ Υ Υ hmbfsansUpsilon  Φ Φ Φ Φ Φ Φ Φ hmbfsansPhi  Χ Χ Χ Χ Χ Χ Χ Χ Χ λmbfsansChi  Ψ Ψ Ψ Ψ Ψ Ψ Ψ Ψ Ψ hmbfsansPsi

## 15.2.18 Bold sans serif Greek, lowercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D770	α	α	α	α	α	α	α	\mbfsansalpha	mathematical sans-serif bold small alpha
u+1D771	β	β	β	β	β	β	β	\mbfsansbeta	mathematical sans-serif bold small beta
U+1D772	7	γ	7	γ	γ	γ	γ	\mbfsansgamma	mathematical sans-serif bold small gamma
U+1D773	δ	δ	δ	δ	δ	δ	δ	\mbfsansdelta	mathematical sans-serif bold small delta
U+1D774	ε	ε	ε	3	ε	3	ε	\mbfsansvarepsilon	mathematical sans-serif bold small varepsilon
U+1D775	ζ	ζ	ζ	ζ	ζ	ζ	ζ	\mbfsanszeta	mathematical sans-serif bold small zeta

USV	M	S	E	K	P	L	G	Macro	Description
U+1D776	η	η	η	η	η	η	η	\mbfsanseta	mathematical sans-serif bold small eta
U+1D777	θ	θ	θ	θ	θ	θ	θ	\mbfsanstheta	mathematical sans-serif bold small theta
U+1D778	ι	ι	L	ι	ι	ι	ι	\mbfsansiota	mathematical sans-serif bold small iota
U+1D779	κ	K	κ	κ	K	К	К	\mbfsanskappa	mathematical sans-serif bold small kappa
U+1D77A	λ	λ	λ	λ	λ	λ	λ	\mbfsanslambda	mathematical sans-serif bold small lambda
U+1D77B	μ	μ	μ	μ	μ	μ	μ	\mbfsansmu	mathematical sans-serif bold small mu
U+1D77C	ν	ν	ν	ν	ν	ν	ν	\mbfsansnu	mathematical sans-serif bold small nu
U+1D77D	ξ	ξ	ξ	ξ	ξ	ξ	ξ	\mbfsansxi	mathematical sans-serif bold small xi
U+1D77E	0	0	0	0	0	0	0	\mbfsansomicron	mathematical sans-serif bold small omicron
U+1D77F	π	π	π	π	π	π	π	\mbfsanspi	mathematical sans-serif bold small pi
U+1D780	ρ	ρ	ρ	ρ	ρ	ρ	ρ	\mbfsansrho	mathematical sans-serif bold small rho
U+1D781	ς	ς	ς	ς	ς	S	S	\mbfsansvarsigma	mathematical sans-serif bold small final sigma
U+1D782	σ	σ	σ	σ	σ	σ	σ	\mbfsanssigma	mathematical sans-serif bold small sigma
U+1D783	τ	τ	τ	τ	τ	τ	τ	\mbfsanstau	mathematical sans-serif bold small tau
u+1D784	υ	U	υ	υ	U	υ	υ	\mbfsansupsilon	mathematical sans-serif bold small upsilon
u+1D785	φ	φ	φ	φ	φ	φ	φ	\mbfsansvarphi	mathematical sans-serif bold small phi
U+1D786	χ	X	χ	χ	X	χ	χ	\mbfsanschi	mathematical sans-serif bold small chi
u+1D787	ψ	ψ	ψ	ψ	Ψ	ψ	ψ	\mbfsanspsi	mathematical sans-serif bold small psi

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D788	ω	ω	ω	ω	ω	ω	ω	\mbfsansomega	mathematical sans-serif bold small omega
u+1D789	9	9	9	9	9			\mbfsanspartial	mathematical sans-serif bold partial differential
u+1D78a	ε	ε	E	ε	€		ε	\mbfsansepsilon	mathematical sans-serif bold varepsilon symbol
u+1D78в	ϑ	9	ϑ	θ	9	9	9	\mbfsansvartheta	mathematical sans-serif bold theta symbol
u+1D78c	и	x	и		×			\mbfsansvarkappa	mathematical sans-serif bold kappa symbol
u+1D78D	ф	ф	ф	ф	ф			\mbfsansphi	mathematical sans-serif bold phi symbol
u+1D78e	Q	ę	Q	9	6			\mbfsansvarrho	mathematical sans-serif bold rho symbol
u+1D78f	ω	យ	ω	۵	បា			\mbfsansvarpi	mathematical sans-serif bold pi symbol

## 15.2.19 Bold italic sans serif Greek, uppercase

USV	M	S	Е	K	Р	L	G	Macro	Description
U+1D790	A	Α	A	Α	A	A		\mbfitsansAlpha	mathematical sans-serif bold italic capital alpha
U+1D791	В	В	В	В	В	В		\mbfitsansBeta	mathematical sans-serif bold italic capital beta
U+1D792	Γ	Γ	Γ	Γ	Γ	Γ		\mbfitsansGamma	mathematical sans-serif bold italic capital gamma
U+1D793	Δ	Δ	Δ	Δ	Δ	Δ		\mbfitsansDelta	mathematical sans-serif bold italic capital delta
U+1D794	E	E	E	Ε	E	E		\mbfitsansEpsilon	mathematical sans-serif bold italic capital epsilon
U+1D795	Z	Z	Z	Z	Z	Z		\mbfitsansZeta	mathematical sans-serif bold italic capital zeta
u+1D796	Н	Н	Н	Н	Н	Н		\mbfitsansEta	mathematical sans-serif bold italic capital eta
U+1D797	Θ	Θ	Θ	Θ	Θ	Θ		\mbfitsansTheta	mathematical sans-serif bold italic capital theta

USV	M	S	Е	K	Р	L	G	Macro	Description
u+1D798	I	I	I	I	I	I		\mbfitsansIota	mathematical sans-serif bold italic capital iota
u+1D799	K	K	K	K	K	K		\mbfitsansKappa	mathematical sans-serif bold italic capital kappa
u+1D79A	Λ	Λ	Λ	Λ	Λ	Λ		\mbfitsansLambda	mathematical sans-serif bold italic capital lambda
u+1D79в	М	М	М	М	М	М		\mbfitsansMu	mathematical sans-serif bold italic capital mu
u+1D79C	N	N	N	N	N	N		\mbfitsansNu	mathematical sans-serif bold italic capital nu
u+1D79D	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ		\mbfitsansXi	mathematical sans-serif bold italic capital xi
u+1D79E	0	0	0	0	0	0		\mbfitsans0micron	mathematical sans-serif bold italic capital omicron
U+1D79F	П	П	П	П	П	П		\mbfitsansPi	mathematical sans-serif bold italic capital pi
U+1D7A0	P	P	P	P	P	P		\mbfitsansRho	mathematical sans-serif bold italic capital rho
U+1D7A1	θ	Θ	Θ	Θ	Θ	θ		\mbfitsansvarTheta	mathematical sans-serif bold italic capital theta symbol
U+1D7A2	Σ	Σ	Σ	Σ	Σ	Σ		\mbfitsansSigma	mathematical sans-serif bold italic capital sigma
U+1D7A3	<b>T</b>	Τ	Τ	Т	<b>T</b>	T		\mbfitsansTau	mathematical sans-serif bold italic capital tau
U+1D7A4	r	Y	r	Υ	Y	Y		\mbfitsansUpsilon	mathematical sans-serif bold italic capital upsilon
U+1D7A5	Φ	Φ	Φ	Φ	Φ	Φ		\mbfitsansPhi	mathematical sans-serif bold italic capital phi
u+1D7A6	X	X	X	X	X	X		\mbfitsansChi	mathematical sans-serif bold italic capital chi
U+1D7A7	Ψ	Ψ	ψ	Ψ	Ψ	Ψ		\mbfitsansPsi	mathematical sans-serif bold italic capital psi
u+1D7A8	Ω	Ω	Ω	Ω	Ω	Ω		\mbfitsansOmega	mathematical sans-serif bold italic capital omega

15.2.20 Bold italic sans serif Greek, lowercase

USV	M	S	Е	K	P	L	G	Macro	Description
U+1D7AA	α	α	α	α	α	α		\mbfitsansalpha	mathematical sans-serif bold italic small alpha
u+1D7AB	β	β	β	β	β	β		\mbfitsansbeta	mathematical sans-serif bold italic small beta
u+1d7ac	γ	γ	γ	γ	γ	γ		\mbfitsansgamma	mathematical sans-serif bold italic small gamma
u+1D7AD	δ	δ	δ	δ	δ	δ		\mbfitsansdelta	mathematical sans-serif bold italic small delta
u+1d7ae	ε	ε	ε	ε	ε	ε		\mbfitsansvarepsilon	mathematical sans-serif bold italic small varepsilon
u+1d7af	ζ	ζ	ζ	ζ	ζ	ζ		\mbfitsanszeta	mathematical sans-serif bold italic small zeta
u+1D <b>7</b> во	η	η	η	η	η	η		\mbfitsanseta	mathematical sans-serif bold italic small eta
u+1D7B1	θ	θ	θ	θ	θ	$\boldsymbol{\theta}$		\mbfitsanstheta	mathematical sans-serif bold italic small theta
U+1D7B2	L	ι	L	L	L	ι		\mbfitsansiota	mathematical sans-serif bold italic small iota
U+1D7B3	κ	K	κ	κ	K	K		\mbfitsanskappa	mathematical sans-serif bold italic small kappa
u+1D7B4	λ	λ	λ	λ	λ	λ		\mbfitsanslambda	mathematical sans-serif bold italic small lambda
U+1D7B5	μ	μ	μ	μ	μ	μ		\mbfitsansmu	mathematical sans-serif bold italic small mu
и+1D7в6	ν	ν	ν	ν	ν	v		\mbfitsansnu	mathematical sans-serif bold italic small nu
u+1D7B7	ξ	ξ	ξ	ξ	ξ	ξ		\mbfitsansxi	mathematical sans-serif bold italic small xi
u+1D7в8	0	0	0	0	0	0		\mbfitsansomicron	mathematical sans-serif bold italic small omicron
U+1D7B9	π	π	π	π	π	$\pi$		\mbfitsanspi	mathematical sans-serif bold italic small pi
U+1D7BA	ρ	ρ	ρ	ρ	ρ	ρ		\mbfitsansrho	mathematical sans-serif bold italic small rho
u+1D7вв	ς	ς	ς	ς	ς	S		\mbfitsansvarsigma	mathematical sans-serif bold italic small final sigma

USV	M	S	E	K	Р	L	G	Macro	Description
u+1D7вС	σ	σ	σ	σ	σ	σ		\mbfitsanssigma	mathematical sans-serif bold italic small sigma
U+1D7BD	τ	τ	τ	τ	τ	τ		\mbfitsanstau	mathematical sans-serif bold italic small tau
u+1D7ве	υ	υ	υ	υ	U	v		\mbfitsansupsilon	mathematical sans-serif bold italic small upsilon
u+1D7вғ	φ	φ	φ	φ	φ	φ		\mbfitsansvarphi	mathematical sans-serif bold italic small phi
u+1D7C0	x	X	x	χ	X	χ		\mbfitsanschi	mathematical sans-serif bold italic small chi
u+1D7C1	ψ	ψ	ψ	ψ	Ψ	ψ		\mbfitsanspsi	mathematical sans-serif bold italic small psi
U+1D7C2	ω	ω	ω	ω	ω	ω		\mbfitsansomega	mathematical sans-serif bold italic small omega
u+1D7C3	ð	д	9	д	9			\mbfitsanspartial	mathematical sans-serif bold italic partial differential
u+1D7C4	ε	ε	ε	$\epsilon$	€			\mbfitsansepsilon	mathematical sans-serif bold italic varepsilon symbol
u+1D7C5	ϑ	9	v	θ	9	Э		\mbfitsansvartheta	mathematical sans-serif bold italic theta symbol
u+1D7C6	и	x	и		×			\mbfitsansvarkappa	mathematical sans-serif bold italic kappa symbol
u+1D7C7	φ	φ	φ	φ	φ			\mbfitsansphi	mathematical sans-serif bold italic phi symbol
u+1D7c8	Q	ę	Q	ρ	6			\mbfitsansvarrho	mathematical sans-serif bold italic rho symbol
u+1D7C9	ω	$\omega$	ω	۵	W			\mbfitsansvarpi	mathematical sans-serif bold italic pi symbol

# 15.3 Miscellaneous

USV	M	S	Е	K	P	L	G	Macro	Description
U+000F0	ð	ð	ð	ð	ð	ð	ð	\matheth	eth
U+02010	_	_	_	-	_	-	-	\mathhyphen	hyphen

USV	M	S	Е	K	Р	L	G	Macro	Description
U+02102	$\mathbb{C}$	$\mathbb{C}$	C	$\mathbb{C}$	C	C	$\mathbb{C}$	\BbbC	/bbb c, open face c
U+0 <b>2</b> 10A		д	g		g	$\mathcal{Q}$	g	\mscrg	/scr g, script letter g
U+0210B	$\mathcal{H}$	$\mathcal{H}$	${\mathcal H}$	$\mathcal{H}$	$\mathcal{H}$	$\mathcal{H}$	$\mathcal{H}$	\mscrH	hamiltonian (script capital h)
U+0210C	H	5	H	Б	H	5	$\mathfrak{H}$	\mfrakH	/frak h, upper case h
U+0 <b>2</b> 10D	H	Н	Н	$\mathbb{H}$	H	$\mathbb{H}$	Н	\BbbH	/bbb h, open face h
U+0210F	$\hbar$	ħ	ħ	ħ	ħ	ħ	ħ	$\hslash^{(a)}$	/hslash - variant planck's over 2pi
U+02110	$\mathcal I$	$\mathcal I$	I	J	$\mathcal{I}$	J	$\mathcal{J}$	\mscrI	/scr i, script letter i
U+0 <b>2</b> 111	I	$\mathfrak{F}$	3	I	I	$\mathfrak{F}$	3	$\operatorname{Im}^{(p)}$	imaginary part
U+02112	$\mathcal{L}$	$\mathcal{L}$	$\mathscr{L}$	$\mathscr{L}$	L	$\mathscr{L}$	$\mathscr{L}$	\mscrL	lagrangian (script capital l)
U+02113	$\ell$	$\ell$	$\ell$	$\ell$	$\ell$	ł	$\ell$	$\mathbf{ar{ell}}^{(p)}$	cursive small l
U+02115	N	N	N	N	N	N	N	\BbbN	/bbb n, open face n
U+02118	B	80	ଚ	Ø	છ	Б	Ø	$\mathbf{/wp}^{(\mathrm{p})}$	weierstrass p
U+02119	$\mathbb{P}$	P	P	${ m I\!P}$	$\mathbb{P}$	$\mathbb{P}$	$\mathbb{P}$	\BbbP	/bbb p, open face p
U+0211A	Q	Q	Q	Q	Q	Q	Q	\BbbQ	/bbb q, open face q
U+0211B	$\mathcal{R}$	$\mathcal{R}$	${\mathscr R}$	R	$\mathcal{R}$	${\mathscr R}$	R	\mscrR	/scr r, script letter r
U+0 <b>2</b> 11C	R	R	R	R	R	R	R	<b>\Re</b> (p)	real part
U+0211D	$\mathbb{R}$	$\mathbb{R}$	$\mathbb{R}$	$ m I\!R$	$\mathbb{R}$	$\mathbb{R}$	$\mathbb{R}$	\BbbR	/bbb r, open face r
U+02124	Z	$\mathbb{Z}$	Z	$\mathbb{Z}$	$\mathbb{Z}$	$\mathbb{Z}$	$\mathbb{Z}$	\BbbZ	/bbb z, open face z
U+02128	3	3	3	3	3	3	3	\mfrakZ	/frak z, upper case z
U+02129		1						\turnediota	turned iota
U+0212B	Å	Å	Å	Å	Å		Å	\Angstrom	angstrom capital a, ring
U+0212C	$\mathcal{B}$	$\mathcal{B}$	$\mathscr{B}$	$\mathscr{B}$	$\mathcal{B}$	$\mathscr{B}$	B	\mscrB	bernoulli function (script capital b)

USV	M	S	E	K	P	L	G	Macro	Description
U+0212D	C	C	C	C	C	C	C	\mfrakC	black-letter capital c
U+0212F		e	e		e	e	e	\mscre	/scr e, script letter e
U+02130	$\mathcal{E}$	3	<i>&amp;</i>	8	$\mathcal{E}$	E	E	\mscrE	/scr e, script letter e
U+02131	$\mathcal{F}$	$\mathcal{F}$	F	F	$\mathcal{F}$	F	F	\mscrF	/scr f, script letter f
U+02133	$\mathcal{M}$	$\mathcal{M}$	M	M	$\mathcal{M}$	M	M	\mscrM	physics m-matrix (script capital m)
U+02134		o	O		O	0	0	\mscro	order of (script small o)
U+02135	×	×	×	8	N	8	8	$\alpha = \alpha = \$	aleph, hebrew
U+02136	コ	ב	コ	⊐	コ	ב	_	$\verb+\beth+^{(a)}$	beth, hebrew
U+02137	۵	٦	٦	٦	۵	٦	J	$\texttt{\colored}^{(a)}$	gimel, hebrew
U+02138	٦	7	٦	٦	٦	7	٦	$\verb \daleth ^{(a)}$	daleth, hebrew
U+0213D	Q	8	X		Y		γ	\Bbbgamma	double-struck small gamma
U+0213E	Γ	Γ	Γ		$\Gamma$		Γ	\BbbGamma	double-struck capital gamma
U+0213F	П	П	П		П		П	\BbbPi	double-struck capital pi
U+02202	6	9	6	9	9	9	9	$\texttt{\partial}^{(p)}$	partial differential
U+02207	$\nabla$	$\nabla$	$\nabla$	$\nabla$	$\nabla$	Δ	$\nabla$	$\mathbf{nabla}^{(p)}$	nabla, del, hamilton operator
u+1D6A4	$\imath$	ı	l	1	1	ı	ı	$\label{limit} \$	mathematical italic small dot- less i
U+1D6A5	J	J	J	J	J	J	J	$\label{eq:jmath} \$	mathematical italic small dot- less j
U+1D6C1	$\nabla$	$\nabla$	<b>\( \rac{\lambda}{\rac{\lambda}{\rac{\rac{\rac{\rac{\rac{\rac{\rac</b>	$\nabla$	$\nabla$	Δ	$\nabla$	\mbfnabla	mathematical bold nabla
u+1D6fb	$\nabla$	$\nabla$	$\nabla$	$\nabla$	$\nabla$	7	<b>V</b>	\mitnabla	mathematical italic nabla
U+1D735	$\nabla$	$\boldsymbol{\nabla}$	$oldsymbol{ abla}$	$oldsymbol{ abla}$	$\nabla$	<b>V</b>	<b>V</b>	\mbfitnabla	mathematical bold italic nabla
U+1D76F	<b>V</b>	∇	⊽	$\nabla$	<b>V</b>	Δ	Δ	\mbfsansnabla	mathematical sans-serif bold nabla

USV	M	S	E	K	P	L	G	Macro	Description
U+1D7A9	V	7	<b>V</b>	$\nabla$	7	7		\mbfitsansnabla	mathematical sans-serif bold italic nabla
U+1D7CA		F				F		\mbfDigamma	mathematical bold capital digamma
U+1D7CB		F				F		\mbfdigamma	mathematical bold small digamma