

# MdSymbol: A Math Symbol Font

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## 1 Introduction

MdSymbol is a font of mathematical symbols designed as a companion to Adobe Myriad Pro, but it might also fit well to other contemporary typefaces. To use this font in a  $\text{\LaTeX}$

document, add the command

```
\usepackage[{options}]{MdSymbol}
```

to the preamble of your document. With default settings, it redefines most of the standard mathematical symbols and makes available many new ones (see Section 5). With the `onlysansmath` option, the symbols are only defined for two new math versions, `sans` and `sansbold`. This allows to easily use two distinct math fonts in one document. For details and the other available options see section 3.1.

## Acknowledgements

The MdSymbol font is heavily based on FdSymbol<sup>1</sup>, another math symbol font, designed by Michael Ummels. All supporting scripts (to e.g. convert the MetaFont sources to Type 1 fonts) were written by him. I got a lot of help in `comp.text.tex` so basically the main code implementing the `onlysansmath` functionality is written by Bruno Le Floch, Enrico Gregorio, Lars Madsen and Heiko Oberdiek; the ugly parts and bugs by me.

## 2 Interferences with other packages

The MdSymbol package is incompatible with the `amssymb` and `amsfonts` packages. It automatically loads the `amsmath` and `textcomp` packages. If you want to pass options to these packages, you can either load these packages before MdSymbol or you can include the options in the `\documentclass` command.

## 3 Options

### 3.1 Font selection

MdSymbol comes in four weights, which are (in increasing order) Light, Regular, Semibold and Bold. Of these, Light and Regular are suitable for normal math typesetting, while Semibold and Bold can be used for bold math typesetting. Using the options **normalweight** and **boldweight**, you can select which weights are used. For example, to use the Light weight as the normal weight in math, add `normalweight=Light` to the package options. Analogously, to use the Bold weight with `\boldmath` or `\boldsymbol`, add `boldweight=Bold` to the package options. By default, Regular and Semibold are used. Additionally, it is possible to use a suitable weight automatically depending on the font size. By selecting `autolight` or `autoregular` for `normalweight`, Light or Regular weight, respectively, is used for font sizes larger than

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<sup>1</sup><http://www.ctan.org/pkg/fdsymbol/>

6pt and Regular or Semibold, respectively, for smaller sizes. Similarly, `autosemibold` for `boldweight` selects Semibold for bold symbols larger than 6pt and Bold below 6pt.

### 3.2 Math Symbols only in sans serif math

With the **`onlysansmath`** option, MdSymbol does not change already defined math symbols but declares two new math versions, `sans` and `sansbold`, and defines its symbols to be used within these math versions. Use the command `\mathversion{sans}` or `\mathversion{sansbold}` to switch to this math version. Also single input character symbols (e.g. `+`, `-`, `(`, `)`) adapt to the math version except when used with a delimiter size increasing command like `\big`.<sup>2</sup> As a workaround, use the corresponding full command instead (`\big\lparen`).

Furthermore with the **`onlysansmath`** option, MdSymbol defines the symbols that were not available before loading MdSymbol in all math versions, therefore allowing to complement but not substitute already defined symbols.

### 3.3 Miscellaneous

MdSymbol uses and combines some symbols of the text font (section 5.7). The option **`retainmissing`** prevents this.

In order to use MdSymbol with different text fonts, it is possible to scale the fonts by an arbitrary factor. This can be achieved with the option **`scale`**. For example, to use the fonts at 90 % of their original size, you can add `scale=0.9` to the package options. Finally, it is possible to increase the height of delimiters slightly (by 20 % in text size and by 25 % in `\big` size). This can be achieved by activating the option **`largedelims`**. Use this option if you want to combine MdSymbol with a text font that has rather tall delimiters.

The following table summarises all options (keys) that can be used with the MdSymbol package. Values that correspond to the default behaviour of the package are marked by an asterisk.

Key	Values
<code>normalweight</code>	Light, Regular*, <code>autolight</code> , <code>autoregular</code>
<code>boldweight</code>	Semibold*, Bold, <code>autosemibold</code>
<code>onlysansmath</code>	true, false*
<code>retainmissing</code>	true, false*
<code>scale</code>	$\langle factor \rangle$
<code>largedelims</code>	true, false*

<sup>2</sup>Any help to solve this problem is highly welcome!

## 4 Version history

Version 0.1: First version

Version 0.1a: Always declare `sansmathtabular` and `sansmathboldtabular` if only `sansmath` option is given

Version 0.2: Internal bugfixes

## 5 Symbols

The MdSymbol package provides the following symbols.

### 5.1 Ordinary symbols

...	<code>\hdots</code>	◊	<code>\medlozenge, \lozenge,</code>
:	<code>\vdots</code>		<code>\mdlghtlozenge,</code>
⋯	<code>\udots, \adots</code>		<code>\mdwhtlozenge</code>
⋯	<code>\ddots</code>	◆	<code>\medblacklozenge,</code>
∴	<code>\righttherefore</code>		<code>\blacklozenge,</code>
∴	<code>\uptherefore, \therefore</code>		<code>\mdlgbklozenge,</code>
∴	<code>\lefttherefore</code>		<code>\mdblklozenge</code>
∴	<code>\downtherefore, \because</code>	◊	<code>\lozengeminus</code>
∴	<code>\squaredots</code>	☆	<code>\largewhitestar</code>
¬	<code>\neg, \lnot</code>	★	<code>\largeblackstar, \bigstar</code>
¬	<code>\backneg, \invnot, \invneg</code>	∞	<code>\infty</code>
¬	<code>\turnedneg, \turnednot</code>	∠	<code>\angle</code>
¬	<code>\turnedbackneg</code>	∩	<code>\revangle</code>
△	<code>\largetriangleup</code>	∠	<code>\measuredangle</code>
▽	<code>\largetriangleleft</code>	∩	<code>\revmeasuredangle,</code>
∅	<code>\emptyset, \diameter,</code>		<code>\measuredangleleft</code>
	<code>\varnothing</code>	∠	<code>\sphericalangle</code>
∅	<code>\reemptyset</code>	∇	<code>\sphericalangleup</code>
○	<code>\largecircle, \lgwhtcircle</code>	∩	<code>\sphericalangleleft,</code>
●	<code>\largeblackcircle</code>		<code>\revsphericalangle,</code>
□	<code>\largesquare, \lgwhtsquare</code>		<code>\gtlpar</code>
■	<code>\largeblacksquare,</code>	⊥	<code>\sphericalangledown</code>
	<code>\lgblksquare</code>	⊥	<code>\rightangle</code>
◊	<code>\smalllozenge,</code>	⊥	<code>\measuredrightangle</code>
	<code>\smwhtlozenge</code>	⊥	<code>\rightanglesquare,</code>
◆	<code>\smallblacklozenge,</code>		<code>\rightanglesqr</code>
	<code>\smbklozenge</code>	⊥	<code>\measuredrightangledot,</code>
			<code>\rightanglemdot</code>

'	\prime	⊃	\Game
\	\backprime	⊂	\complement
✓	\checkmark	♭	\flat
⚡	\lightning,	ℏ	\natural
	\downzigzagarrow	#	\sharp
◇	\diamondsuit	ℵ	\aleph
◆	\vardiamondsuit	⊐	\beth
♡	\heartsuit	λ	\gimel
♥	\varheartsuit	⌈	\daleth
♠	\spadesuit	Ⓟ	\wp
♣	\clubsuit	∇	\nabla
♠	\maltese	⌞	\top
☆	\starofdavid	⊥	\bot
∇	\sector	/	/,\mathslash
∀	\forall	\	\backslash
∃	\exists		,\vert
∄	\nexists		\Vert
⊄	\Finv		\Vvert

## 5.2 Binary operators

·	\cdot	+	\plusdot
.	\centerdot	×	\dottimes
··	\hdotdot	⊗	\timesbar
:	\vdotdot	⋈	\divideontimes
·	\udotdot	⌋	\intprod
·	\ddotdot	⌌	\intprodr
-	-, \minus	⋈	\leftthreetimes
/	\medslash, \smalldivslash	⋈	\rightthreetimes
\	\medbackslash,	⋈	\dtimes, \btimes
	\smallsetminus	⋈	\rtimes
+	+, \plus	⋈	\utimes, \ttimes
×	\times	⋈	\ltimes
÷	\dotminus	⋈	\lrtimes
÷	\minusdot	⋈	\upbowtie, \hourglass
÷	\div	⋈	\rightY
÷	\minusfdots	⋈	\upY
÷	\minusrdots	⋈	\leftY
±	\pm	⋈	\downY
⊕	\mp	⋈	\wedge, \land
+	\dotplus	⋈	\vee, \lor

$\wedge$	<code>\wedgedot</code>	$\triangleleft$	<code>\medtriangleleft,</code> <code>\triangleleft</code>
$\vee$	<code>\veedot</code>	$\nabla$	<code>\medtriangledown,</code> <code>\triangledown</code>
$\measuredangle$	<code>\doublewedge, \wedgonwedge</code>	$\blacktriangleright$	<code>\medblacktriangleright,</code> <code>\blacktriangleright</code>
$\mathbb{W}$	<code>\doublevee, \veeonwee</code>	$\blacktriangle$	<code>\medblacktriangleup,</code> <code>\blacktriangle</code>
$\curlywedge$	<code>\curlywedge</code>	$\blacktriangleleft$	<code>\medblacktriangleleft,</code> <code>\blacktriangleleft</code>
$\curlyvee$	<code>\curlyvee</code>	$\blacktriangledown$	<code>\medblacktriangledown,</code> <code>\blacktriangledown</code>
$\bar{\wedge}$	<code>\barwedge</code>	$\bigtriangleup$	<code>\bigtriangleup</code>
$\bar{\vee}$	<code>\veebar</code>	$\bigtriangledown$	<code>\bigtriangledown</code>
$\overline{\wedge}$	<code>\doublebarwedge</code>	$\circ$	<code>\smallcircle, \circ,</code> <code>\smwhtcircle</code>
$\underline{\vee}$	<code>\veedoublebar</code>	$\bullet$	<code>\smallblackcircle, \bullet,</code> <code>\smbkcircle</code>
$\cup$	<code>\cup</code>	$\bigcirc$	<code>\medcircle, \mdlgwhtcircle,</code> <code>\mdwhtcircle</code>
$\cap$	<code>\cap</code>	$\bullet$	<code>\medblackcircle,</code> <code>\mdlgblkcircle,</code> <code>\mdblkcircle</code>
$\cupcupcup$	<code>\doublecup, \Cup</code>	$\ominus$	<code>\ominus</code>
$\capcapcap$	<code>\doublecap, \Cap</code>	$\oslash$	<code>\overt, \circledvert</code>
$\cup\dot{\cup}$	<code>\cupdot</code>	$\oslash$	<code>\oslash</code>
$\cap\dot{\cap}$	<code>\capdot</code>	$\oslash$	<code>\obackslash, \obslash</code>
$\cuppluscup$	<code>\cupplus, \uplus</code>	$\oplus$	<code>\oplus</code>
$\cappluscap$	<code>\capplus</code>	$\otimes$	<code>\otimes</code>
$\sqcup$	<code>\sqcup</code>	$\odot$	<code>\odot</code>
$\sqcap$	<code>\sqcap</code>	$\odot$	<code>\ocirc, \circledcirc</code>
$\sqcup\sqcup\sqcup$	<code>\doublesqcup, \Sqcup</code>	$\odot$	<code>\oast, \circledast</code>
$\sqcap\sqcap\sqcap$	<code>\doublesqcap, \Sqcap</code>	$\odot$	<code>\odash, \circleddash</code>
$\sqcup\dot{\sqcup}$	<code>\sqcupdot</code>	$\odot$	<code>\oequal, \circledequal</code>
$\sqcap\dot{\sqcap}$	<code>\sqcapdot</code>	$\bigcirc$	<code>\bigcirc</code>
$\sqcuppluscup$	<code>\sqcupplus</code>	$\square$	<code>\smallsquare, \smwhtsquare</code>
$\sqcappluscap$	<code>\sqcapplus</code>	$\blacksquare$	<code>\smallblacksquare,</code> <code>\smbklsquare</code>
$\lrcorner$	<code>\pullback</code>	$\square$	<code>\medsquare, \square, \Box,</code> <code>\mdlgwhtsquare,</code> <code>\mdwhtsquare</code>
$\rpushout$	<code>\pushout</code>		
$\smalltriangleright$	<code>\smalltriangleright</code>		
$\smalltriangleup$	<code>\smalltriangleup</code>		
$\smalltriangleleft$	<code>\smalltriangleleft</code>		
$\smalltriangledown$	<code>\smalltriangledown</code>		
$\smallblacktriangleright$	<code>\smallblacktriangleright</code>		
$\smallblacktriangleup$	<code>\smallblacktriangleup</code>		
$\smallblacktriangleleft$	<code>\smallblacktriangleleft</code>		
$\smallblacktriangledown$	<code>\smallblacktriangledown</code>		
$\medtriangleright$	<code>\medtriangleright,</code> <code>\triangleright</code>		
$\medtriangleup$	<code>\medtriangleup, \triangle,</code> <code>\vartriangle</code>		

■	<code>\medblacksquare,</code> <code>\mdlgblksquare,</code> <code>\mdblksquare</code>	◇	<code>\diamondvert</code>
▢	<code>\boxminus</code>	◇	<code>\diamondslash</code>
▣	<code>\boxvert,\boxbar</code>	◇	<code>\diamondbackslash,</code> <code>\diamondbslash</code>
▤	<code>\boxslash,\boxdiag</code>	◇	<code>\diamondplus</code>
▥	<code>\boxbackslash,\boxbslash</code>	◇	<code>\diamondtimes</code>
▦	<code>\boxplus</code>	◇	<code>\diamondddot,\diamondcdot</code>
▧	<code>\boxtimes</code>	◇	<code>\diamondddiamond</code>
▨	<code>\boxdot</code>	☆	<code>\smallwhitestar,</code> <code>\smwhitestar</code>
▩	<code>\boxbox</code>	★	<code>\smallblackstar,\star</code>
◇	<code>\smallldiamond,\diamond,</code> <code>\smwhtdiamond</code>	☆	<code>\medwhitestar</code>
◆	<code>\smallblackdiamond,</code> <code>\blackdiamond,</code> <code>\smbldiamond</code>	★	<code>\medblackstar,\medstar</code>
◇	<code>\meddiamond,\Diamond,</code> <code>\mdlgwhtdiamond,</code> <code>\mdwhtdiamond</code>	*	<code>*,\ast</code>
◆	<code>\medblackdiamond,</code> <code>\mdlgblkdiamond,</code> <code>\mdblkdiamond</code>	⌈	<code>\intercal</code>
◇	<code>\diamondminus</code>	⌋	<code>\wreath,\wr</code>
		⌌	<code>\amalg</code>
		◁	<code>\lhd</code>
		▷	<code>\rhd</code>
		⊆	<code>\unlhd</code>
		⊇	<code>\unrhd</code>
		/	<code>\divslash</code>
		\	<code>\setminus</code>

### 5.3 Relations





























=	<code>=,\equal,\Relbar</code>	⇔	<code>\Bumpeq</code>
≡	<code>\equiv</code>	⋮	<code>\doteq</code>
~	<code>\sim</code>	≐	<code>\eqdot</code>
↖	<code>\backsim</code>	≑	<code>\Doteq</code>
≈	<code>\approx</code>	≒	<code>\fallingdotseq</code>
≈	<code>\triplesim,\approxident</code>	≓	<code>\risingdotseq</code>
≈	<code>\simeq</code>	≔	<code>\coloneq,\coloneqq</code>
≈	<code>\backsimeq</code>	≕	<code>\eqcolon,\eqqcolon</code>
≈	<code>\eqsim</code>	☺	<code>\smile,\smallsmile</code>
≡	<code>\cong</code>	☹	<code>\frown,\smallfrown</code>
≡	<code>\backcong</code>	⋈	<code>\smilefrown,\asymp</code>
≡	<code>\dotcong</code>	⊂	<code>\frownsmile,\closure</code>
≈	<code>\approxeq</code>	≡	<code>\smileeq</code>
≈	<code>\bumpeq</code>	≡	<code>\frowneq,\arceq</code>
≈	<code>\bumpeq</code>	≡	<code>\eqcirc</code>

$\circ$	<code>\circeq</code>	$\succcurlyeq$	<code>\geqslcc, \gescc</code>
$\triangleq$	<code>\wedgeeq, \hateq</code>	$\sqsubset$	<code>\sqsubset</code>
$\vee$	<code>\veeeq</code>	$\sqsupset$	<code>\sqsupset</code>
$\star$	<code>\stareq</code>	$\sqsubseteq$	<code>\sqsubseteq</code>
$\trianglelefteq$	<code>\triangleleeq, \triangleleq</code>	$\sqsupseteq$	<code>\sqsupseteq</code>
$\in$	<code>\in</code>	$\sqsubseteqeq$	<code>\sqsubseteqeq</code>
$\owns$	<code>\owns, \ni</code>	$\sqsupseteqeq$	<code>\sqsupseteqeq</code>
$<$	<code>&lt;, \less</code>	$\Ssqsubset$	<code>\Ssqsubset</code>
$>$	<code>&gt;, \gtr</code>	$\Ssqsupset$	<code>\Ssqsupset</code>
$\leq$	<code>\leq, \le</code>	$\subset$	<code>\subset</code>
$\geq$	<code>\geq, \ge</code>	$\supset$	<code>\supset</code>
$\leqslant$	<code>\leqslant</code>	$\subseteq$	<code>\subseteq</code>
$\geqslant$	<code>\geqslant</code>	$\supseteq$	<code>\supseteq</code>
$\leqq$	<code>\leqq</code>	$\subseteqeq$	<code>\subseteqeq</code>
$\geqq$	<code>\geqq</code>	$\supseteqeq$	<code>\supseteqeq</code>
$\lesssim$	<code>\lesssim</code>	$\Subset$	<code>\Subset</code>
$\gtrsim$	<code>\gtrsim</code>	$\Supset$	<code>\Supset</code>
$\lessapprox$	<code>\lessapprox</code>	$\prec$	<code>\prec</code>
$\gtrapprox$	<code>\gtrapprox</code>	$\succ$	<code>\succ</code>
$\lessgtr$	<code>\lessgtr</code>	$\preceq$	<code>\preceq</code>
$\gtrless$	<code>\gtrless</code>	$\succeq$	<code>\succeq</code>
$\lesseqgtr$	<code>\lesseqgtr</code>	$\preccurlyeq$	<code>\preccurlyeq</code>
$\gtreqless$	<code>\gtreqless</code>	$\succcurlyeq$	<code>\succcurlyeq</code>
$\lesseqqgtr$	<code>\lesseqqgtr</code>	$\preceqq$	<code>\preceqq</code>
$\gtreqqless$	<code>\gtreqqless</code>	$\succeqq$	<code>\succeqq</code>
$\lesseqslantgtr, \lesq$	<code>\lesseqslantgtr, \lesq</code>	$\precsim$	<code>\precsim</code>
$\gtreqslantless, \gesl$	<code>\gtreqslantless, \gesl</code>	$\succsim$	<code>\succsim</code>
$\ll$	<code>\ll</code>	$\precapprox$	<code>\precapprox</code>
$\gg$	<code>\gg</code>	$\succapprox$	<code>\succapprox</code>
$\lll, \llless$	<code>\lll, \llless</code>	$\lessdot$	<code>\lessdot</code>
$\ggg, \gggtr$	<code>\ggg, \gggtr</code>	$\gtrdot$	<code>\gtrdot</code>
$\lessclosed,$	<code>\lessclosed,</code>	$\leqdot$	<code>\leqdot</code>
$\vartriangleleft$	<code>\vartriangleleft</code>	$\geqdot$	<code>\geqdot</code>
$\gtrclosed,$	<code>\gtrclosed,</code>	$\leqslantdot, \lesdot$	<code>\leqslantdot, \lesdot</code>
$\vartriangleright$	<code>\vartriangleright</code>	$\geqslantdot, \gesdot$	<code>\geqslantdot, \gesdot</code>
$\leqclosed, \trianglelefteq$	<code>\leqclosed, \trianglelefteq</code>	$\eqslantless$	<code>\eqslantless</code>
$\geqclosed,$	<code>\geqclosed,</code>	$\eqslantgtr$	<code>\eqslantgtr</code>
$\trianglerighteq$	<code>\trianglerighteq</code>	$\curlyeqprec$	<code>\curlyeqprec</code>
$\lesscc, \ltcc$	<code>\lesscc, \ltcc</code>	$\curlyeqsucc$	<code>\curlyeqsucc</code>
$\gtrcc, \gtcc$	<code>\gtrcc, \gtcc</code>	$\thicksim$	<code>\thicksim</code>
$\leqslcc, \lescc$	<code>\leqslcc, \lescc</code>	$\thickapprox$	<code>\thickapprox</code>



$\rightarrow$	<code>\rightarrow, \to</code>	$\Uparrow$	<code>\upmapsto, \mapsup</code>
$\uparrow$	<code>\uparrow</code>	$\Leftarrow$	<code>\leftmapsto, \mapsfrom</code>
$\leftarrow$	<code>\leftarrow, \gets</code>	$\Downarrow$	<code>\downmapsto, \mapsdown</code>
$\downarrow$	<code>\downarrow</code>	$\Rightarrow$	<code>\Rightmapsto, \Mapsto</code>
$\nearrow$	<code>\nearrow</code>	$\Uparrow$	<code>\Upmapsto, \Mapsup</code>
$\nwarrow$	<code>\nwarrow</code>	$\Leftarrow$	<code>\Leftmapsto, \Mapsfrom</code>
$\swarrow$	<code>\swarrow</code>	$\Downarrow$	<code>\Downmapsto, \Mapsdown</code>
$\searrow$	<code>\searrow</code>	$\hookrightarrow$	<code>\hookrightarrow</code>
$\Rightarrow$	<code>\Rightarrow</code>	$\hookrightarrow$	<code>\hookrightarrow</code>
$\Uparrow$	<code>\Uparrow</code>	$\Leftarrow$	<code>\varhookleftarrow</code>
$\Leftarrow$	<code>\Leftarrow</code>	$\Downarrow$	<code>\varhookdownarrow</code>
$\Downarrow$	<code>\Downarrow</code>	$\nearrow$	<code>\varhooknearrow</code>
$\nearrow$	<code>\Nearrow</code>	$\nwarrow$	<code>\hooknwarrow, \hknwarrow</code>
$\nwarrow$	<code>\Nwarrow</code>	$\swarrow$	<code>\varhookswarrow</code>
$\swarrow$	<code>\Swarrow</code>	$\searrow$	<code>\hooksearrow, \hksearrow</code>
$\searrow$	<code>\Searrow</code>	$\rightarrow$	<code>\varhookrightarrow</code>
$\leftrightarrow$	<code>\leftrightarrow</code>	$\Uparrow$	<code>\varhookuparrow</code>
$\updownarrow$	<code>\updownarrow</code>	$\Leftarrow$	<code>\hookleftarrow</code>
$\nearrow$	<code>\neswarrow</code>	$\Downarrow$	<code>\hookdownarrow</code>
$\nwarrow$	<code>\nwsearrow</code>	$\nearrow$	<code>\hooknearrow, \hknearrow</code>
$\Leftrightarrow$	<code>\Leftrightarrow</code>	$\nwarrow$	<code>\varhooknwarrow</code>
$\Updownarrow$	<code>\Updownarrow</code>	$\swarrow$	<code>\hookswarrow, \hkswarrow</code>
$\nearrow$	<code>\Neswarrow</code>	$\searrow$	<code>\varhooksearrow</code>
$\nwarrow$	<code>\Nwsearrow</code>	$\rightarrow$	<code>\rightharpoonup</code>
$\twoheadrightarrow$	<code>\twoheadrightarrow</code>	$\upharpoonleft$	<code>\upharpoonleft</code>
$\twoheaduparrow$	<code>\twoheaduparrow</code>	$\leftarrow$	<code>\leftharpoonup</code>
$\twoheadleftarrow$	<code>\twoheadleftarrow</code>	$\downarrow$	<code>\downharpoonright</code>
$\twoheaddownarrow$	<code>\twoheaddownarrow</code>	$\nearrow$	<code>\nearrow</code>
$\twoheadnearrow$	<code>\twoheadnearrow</code>	$\nwarrow$	<code>\nwarrow</code>
$\twoheadnwarrow$	<code>\twoheadnwarrow</code>	$\swarrow$	<code>\swarrow</code>
$\twoheadswarrow$	<code>\twoheadswarrow</code>	$\searrow$	<code>\searrow</code>
$\twoheadsearrow$	<code>\twoheadsearrow</code>	$\rightarrow$	<code>\rightarrow</code>
$\rightarrowtail$	<code>\rightarrowtail</code>	$\upharpoonright$	<code>\upharpoonright, \restriction</code>
$\uparrowtail$	<code>\uparrowtail</code>	$\leftarrow$	<code>\leftarrow</code>
$\leftarrowtail$	<code>\leftarrowtail</code>	$\Downarrow$	<code>\downharpoonleft</code>
$\downarrowtail$	<code>\downarrowtail</code>	$\nearrow$	<code>\nearrow</code>
$\nearrowtail$	<code>\nearrowtail</code>	$\nwarrow$	<code>\nwarrow</code>
$\nwarrowtail$	<code>\nwarrowtail</code>	$\swarrow$	<code>\swarrow</code>
$\swarrowtail$	<code>\swarrowtail</code>	$\searrow$	<code>\searrow</code>
$\searrowtail$	<code>\searrowtail</code>	$\hookrightarrow$	<code>\hookrightarrow</code>
$\mapsto$	<code>\mapsto, \mapsto</code>		

$\updownarrow$	<code>\updownharpoonleftright</code>	$\pitchfork$	<code>\uppitchfork,\pitchfork</code>
$\nearrow$	<code>\neswharpoonnwse</code>	$\leftharpoonup$	<code>\leftpitchfork</code>
$\nwarrow$	<code>\nwseharpoonnesw</code>	$\pitchfork$	<code>\downpitchfork</code>
$\rightleftharpoons$	<code>\leftrightharpoondownup</code>	$\Rightarrow$	<code>\rightrightarrows</code>
$\updownharpoonrightleft$	<code>\updownharpoonrightleft</code>	$\Uparrow$	<code>\upuparrows</code>
$\nearrow$	<code>\neswharpoonsenw</code>	$\Leftarrow$	<code>\leftleftarrows</code>
$\nwarrow$	<code>\nwseharpoonswne</code>	$\Downarrow$	<code>\downdownarrows</code>
$\rightleftharpoons$	<code>\rightleftharpoons</code>	$\nearrow$	<code>\nene arrows</code>
$\updownharpoons,$	<code>\updownharpoons,</code>	$\nwarrow$	<code>\nwnwarrows</code>
$\updownharpoonsleftright$	<code>\updownharpoonsleftright</code>	$\swarrow$	<code>\swswarrows</code>
$\nearrow$	<code>\neswharpoons</code>	$\searrow$	<code>\sesearrows</code>
$\nwarrow$	<code>\senwharpoons</code>	$\rightleftharpoons$	<code>\rightleftarrows</code>
$\rightleftharpoons$	<code>\leftrightharpoons</code>	$\Updownarrow$	<code>\updownarrows</code>
$\downupharpoons,$	<code>\downupharpoons,</code>	$\nearrow$	<code>\neswarrows</code>
$\downupharpoonsleftright$	<code>\downupharpoonsleftright</code>	$\nwarrow$	<code>\nwsearrows</code>
$\swarrow$	<code>\swneharpoons</code>	$\rightleftharpoons$	<code>\leftrightrightarrows</code>
$\nwarrow$	<code>\nwseharpoons</code>	$\downuparrows$	<code>\downuparrows</code>
$\rightarrow$	<code>\rightbkarrow,</code>	$\swarrow$	<code>\swnearrows</code>
	<code>\dashrightarrow,</code>	$\searrow$	<code>\senwarrows</code>
	<code>\dasharrow</code>	$\rightsquigarrow$	<code>\rightwavedarrow,\leadsto,</code>
$\upbkarrow$	<code>\upbkarrow</code>		<code>\rightsquigarrow,</code>
$\leftbkarrow,$	<code>\leftbkarrow,</code>		<code>\rightcurvedarrow</code>
	<code>\dashrightarrow</code>	$\upvarwavedarrow$	<code>\varupwavedarrow</code>
$\downbkarrow$	<code>\downbkarrow</code>	$\leftvarwavedarrow$	<code>\varleftwavedarrow</code>
$\nearrow$	<code>\nebkarrow</code>	$\downwavedarrow$	<code>\downwavedarrow</code>
$\nwarrow$	<code>\nwbkarrow</code>	$\rightarrow$	<code>\varrightwavedarrow</code>
$\swarrow$	<code>\swbkarrow</code>	$\upwavedarrow$	<code>\upwavedarrow</code>
$\searrow$	<code>\sebkarrow</code>	$\leftwavedarrow,$	<code>\leftwavedarrow,</code>
$\rightarrow$	<code>\rightspoon,\multimap</code>		<code>\leftsquigarrow,</code>
$\upspoon,\circ$	<code>\upspoon,\circ</code>		<code>\leftcurvedarrow</code>
$\leftspoon,\multimap$	<code>\leftspoon,\multimap</code>	$\downwavedarrow$	<code>\vardownwavedarrow</code>
$\downspoon,\circ$	<code>\downspoon,\circ</code>	$\leftrightarrow$	<code>\leftrightrightwavedarrow,</code>
$\rightarrow$	<code>\rightblackspoon</code>		<code>\leftrightsquigarrow</code>
$\upblackspoon$	<code>\upblackspoon</code>	$\updownwavedarrow$	<code>\updownwavedarrow</code>
$\leftblackspoon$	<code>\leftblackspoon</code>	$\leftrightarrow$	<code>\varleftrightrightwavedarrow</code>
$\downblackspoon$	<code>\downblackspoon</code>	$\downwavedarrow$	<code>\varupdownwavedarrow</code>
$\leftrightspoon,\circ$	<code>\leftrightspoon,\circ</code>	$\curvearrowright$	<code>\cwoverarcarrow,</code>
$\leftrightblackspoon$	<code>\leftrightblackspoon</code>		<code>\curvearrowright</code>
$\blackwhitespoon,\circ$	<code>\blackwhitespoon,\circ</code>	$\leftarcarrow$	<code>\cwleftarcarrow</code>
$\whiteblackspoon,\circ$	<code>\whiteblackspoon,\circ</code>	$\underarcarrow$	<code>\cwunderarcarrow</code>
$\rightarrow$	<code>\rightpitchfork</code>	$\rightarrow$	<code>\cwrightarcarrow</code>

	<code>\cwnwarcarrow,</code> <code>\rightupcurvedarrow</code>		<code>\cwcirculararrowright,</code> <code>\circlearrowright,</code> <code>\cwopencirculararrow</code>
	<code>\cswwarcarrow,</code> <code>\upleftcurvedarrow</code>		<code>\cwcirculararrowup</code>
	<code>\cwsearcarrow,</code> <code>\leftdowncurvedarrow</code>		<code>\cwcirculararrowleft</code>
	<code>\cwnearcarrow,</code> <code>\downrightcurvedarrow</code>	$\Rightarrow$	<code>\Rightarrow</code>
	<code>\acwunderarcarrow</code>	$\Uparrow$	<code>\Uparrow</code>
	<code>\acwrightarcarrow</code>	$\Leftarrow$	<code>\Lleftarrow</code>
	<code>\acwoverarcarrow,</code> <code>\curvearrowleft</code>	$\Downarrow$	<code>\Ddownarrow</code>
	<code>\acwleftarcarrow</code>	$\longrightarrow$	<code>\longrightarrow</code>
	<code>\acwsearcarrow,</code> <code>\uprightcurvearrow</code>	$\longleftarrow$	<code>\longleftarrow</code>
	<code>\acwnearcarrow,</code> <code>\leftupcurvedarrow</code>	$\Longrightarrow$	<code>\Longrightarrow</code>
	<code>\acwnwarcarrow,</code> <code>\downleftcurvedarrow</code>	$\Longleftarrow$	<code>\Longleftarrow</code>
	<code>\acswwarcarrow,</code> <code>\rightdowncurvedarrow</code>	$\longleftrightarrow$	<code>\longleftrightarrow</code>
	<code>\bdoverarcarrow</code>	$\Longleftrightarrow$	<code>\Longleftrightarrow</code>
	<code>\bdleftarcarrow</code>	$\mapsto$	<code>\longmapsto</code>
	<code>\bdunderarcarrow</code>	$\longleftarrow$	<code>\longmapsfrom</code>
	<code>\bdrightarcarrow</code>	$\Rightarrow$	<code>\Longmapsto</code>
	<code>\bdnwarcarrow</code>	$\Leftarrow$	<code>\Longmapsfrom</code>
	<code>\bdswarcarrow</code>	$\rightsquigarrow$	<code>\longrightwvearrow,</code> <code>\longleadsto,</code> <code>\longrightsquigarrow</code>
	<code>\bdsearcarrow</code>	$\rightsquigarrow$	<code>\longleftwvearrow,</code> <code>\longleftsquigarrow</code>
	<code>\bdnearcarrow</code>	$\longleftarrow$	<code>\longleftfootline,</code> <code>\vlongdash</code>
$\vdash$	<code>\leftfootline</code>	$\longrightarrow$	<code>\longrightfootline,</code> <code>\longdashv</code>
$\dashv$	<code>\rightfootline</code>	$\hookleftarrow$	<code>\Lsh</code>
	<code>\acwcirculararrowup</code>	$\hookrightarrow$	<code>\Rsh</code>
	<code>\acwcirculararrowleft,</code> <code>\circlearrowleft,</code> <code>\cwopencirculararrow</code>	$\hookleftarrow$	<code>\Ldsh</code>
	<code>\acwcirculararrowdown,</code> <code>\acwgapcirculararrow</code>	$\hookrightarrow$	<code>\Rdsh</code>
	<code>\acwcirculararrowright</code>	$\looparrowright$	<code>\looparrowright</code>
	<code>\cwcirculararrowdown,</code> <code>\cwgapcirculararrow</code>	$\looparrowleft$	<code>\looparrowleft</code>
		$\vdash$	<code>\rightvdash,\vdash</code>
		$\perp$	<code>\upvdash,\perp</code>
		$\dashv$	<code>\leftvdash,\dashv</code>
		$\top$	<code>\downvdash</code>
		$\vdash$	<code>\rightassert,\assert,</code> <code>\shortrighttack</code>
		$\perp$	<code>\upassert,\shortuptack</code>

$\dashv$	<code>\leftassert, \shortlefttack</code>	$\neq$	<code>\ndoteq</code>
$\top$	<code>\downassert, \shortdowntack</code>	$\neqdot$	<code>\neqdot</code>
$\models$	<code>\rightvDash, \vDash</code>	$\nDoteq$	<code>\nDoteq</code>
$\Uparrow$	<code>\upvDash, \Vbar</code>	$\nfallingdotseq$	<code>\nfallingdotseq</code>
$\Rightarrow$	<code>\leftvDash, \Dashv</code>	$\nrisingdotseq$	<code>\nrisingdotseq</code>
$\Downarrow$	<code>\downvDash, \barV</code>	$\nsmile$	<code>\nsmile</code>
$\models$	<code>\rightmodels, \models</code>	$\nfrown$	<code>\nfrown</code>
$\Uparrow$	<code>\upmodels</code>	$\nsmilefrown, \nasymp$	<code>\nsmilefrown, \nasymp</code>
$\Leftarrow$	<code>\leftmodels</code>	$\nfrownsmile, \nclosure$	<code>\nfrownsmile, \nclosure</code>
$\Downarrow$	<code>\downmodels</code>	$\nsmileeq$	<code>\nsmileeq</code>
$\Vdash$	<code>\rightVdash, \Vdash</code>	$\nfrowneq, \narceq$	<code>\nfrowneq, \narceq</code>
$\vdash$	<code>\upVdash</code>	$\neqcirc$	<code>\neqcirc</code>
$\dashv$	<code>\leftVdash, \dashV</code>	$\ncirceq$	<code>\ncirceq</code>
$\top$	<code>\downVdash</code>	$\nwedgeq, \nhateq$	<code>\nwedgeq, \nhateq</code>
$\Vdash$	<code>\rightAssert, \Assert</code>	$\nveeeq$	<code>\nveeeq</code>
$\vdash$	<code>\upAssert, \VBar</code>	$\nstareq$	<code>\nstareq</code>
$\dashv$	<code>\leftAssert</code>	$\ntriangleq$	<code>\ntriangleq</code>
$\top$	<code>\downAssert, \Barv</code>	$\nin, \notin$	<code>\nin, \notin</code>
$\models$	<code>\rightVDash, \VDash</code>	$\nowns, \nni$	<code>\nowns, \nni</code>
$\Uparrow$	<code>\upVDash</code>	$\nless$	<code>\nless</code>
$\Rightarrow$	<code>\leftVDash, \DashV</code>	$\ngtr$	<code>\ngtr</code>
$\Downarrow$	<code>\downVDash</code>	$\nleq$	<code>\nleq</code>
$\Vdash$	<code>\Vvdash</code>	$\ngeq$	<code>\ngeq</code>
$\dashv$	<code>\dashVv</code>	$\nleqslant$	<code>\nleqslant</code>
$\models$	<code>\vDdash</code>	$\ngeqslant$	<code>\ngeqslant</code>
$\models$	<code>\Ddashv</code>	$\nleqq$	<code>\nleqq</code>
$\neq$	<code>\nequal, \neq, \ne</code>	$\ngeqq$	<code>\ngeqq</code>
$\neq$	<code>\nequiv</code>	$\nlesssim$	<code>\nlesssim</code>
$\sim$	<code>\nsim</code>	$\ngtrsim$	<code>\ngtrsim</code>
$\sim$	<code>\nbacksim</code>	$\nlessapprox$	<code>\nlessapprox</code>
$\approx$	<code>\napprox</code>	$\ngtrapprox$	<code>\ngtrapprox</code>
$\approx$	<code>\ntriplesim, \napproxident</code>	$\nlessgtr$	<code>\nlessgtr</code>
$\approx$	<code>\nsimeq, \nsime</code>	$\ngtrless$	<code>\ngtrless</code>
$\approx$	<code>\nbacksimeq</code>	$\nlesseqgtr$	<code>\nlesseqgtr</code>
$\approx$	<code>\neqsim</code>	$\ngtreqlless$	<code>\ngtreqlless</code>
$\approx$	<code>\ncong</code>	$\nlesseqqgtr$	<code>\nlesseqqgtr</code>
$\approx$	<code>\nbackcong</code>	$\ngtreqqless$	<code>\ngtreqqless</code>
$\approx$	<code>\napproxeq</code>	$\nlesseqslantgtr, \nlesg$	<code>\nlesseqslantgtr, \nlesg</code>
$\approx$	<code>\nbumpeq</code>	$\ngtreqslantless, \ngesl$	<code>\ngtreqslantless, \ngesl</code>
$\approx$	<code>\nbumpeq</code>	$\nll$	<code>\nll</code>
$\approx$	<code>\nBumpeq</code>	$\ngg$	<code>\ngg</code>

$\lll$	<code>\nlll</code>	$\nsuccapprox$	<code>\nsuccapprox</code>
$\ggg$	<code>\nggg</code>	$\nlessdot$	<code>\nlessdot</code>
$\nlessclosed,$	<code>\nlessclosed,</code>	$\ngtrdot$	<code>\ngtrdot</code>
$\ntriangleleft$	<code>\ntriangleleft</code>	$\nleqdot$	<code>\nleqdot</code>
$\ngtrclosed,$	<code>\ngtrclosed,</code>	$\ngeqdot$	<code>\ngeqdot</code>
$\ntriangleright$	<code>\ntriangleright</code>	$\nleqslantdot, \nlesdot$	<code>\nleqslantdot, \nlesdot</code>
$\nleqclosed,$	<code>\nleqclosed,</code>	$\ngeqslantdot, \ngesdot$	<code>\ngeqslantdot, \ngesdot</code>
$\ntrianglelefteq$	<code>\ntrianglelefteq</code>	$\neqslantless$	<code>\neqslantless</code>
$\ngeqclosed,$	<code>\ngeqclosed,</code>	$\neqslantgtr$	<code>\neqslantgtr</code>
$\ntrianglerighteq$	<code>\ntrianglerighteq</code>	$\ncurlyeqprec$	<code>\ncurlyeqprec</code>
$\nlesscc, \nltcc$	<code>\nlesscc, \nltcc</code>	$\ncurlyeqsucc$	<code>\ncurlyeqsucc</code>
$\ngtrcc, \ngtcc$	<code>\ngtrcc, \ngtcc</code>	$\simneqq$	<code>\simneqq</code>
$\nleqslcc, \nlescc$	<code>\nleqslcc, \nlescc</code>	$\backsimneqq$	<code>\backsimneqq</code>
$\ngeqslcc, \ngescc$	<code>\ngeqslcc, \ngescc</code>	$\lneq$	<code>\lneq</code>
$\nsqsubset$	<code>\nsqsubset</code>	$\gneq$	<code>\gneq</code>
$\nsqsupset$	<code>\nsqsupset</code>	$\lneqq, \lvertneqq$	<code>\lneqq, \lvertneqq</code>
$\nsqsubseteq$	<code>\nsqsubseteq</code>	$\gneqq, \gvertneqq$	<code>\gneqq, \gvertneqq</code>
$\nsqsupseteq$	<code>\nsqsupseteq</code>	$\lnsim$	<code>\lnsim</code>
$\nsqsubseteqq$	<code>\nsqsubseteqq</code>	$\gnsim$	<code>\gnsim</code>
$\nsqsupseteqq$	<code>\nsqsupseteqq</code>	$\lnapprox$	<code>\lnapprox</code>
$\nSsqsubset$	<code>\nSsqsubset</code>	$\gnapprox$	<code>\gnapprox</code>
$\nSsqsupset$	<code>\nSsqsupset</code>	$\sqsubsetneq$	<code>\sqsubsetneq</code>
$\nsubset$	<code>\nsubset</code>	$\sqsupsetneq$	<code>\sqsupsetneq</code>
$\nsupset$	<code>\nsupset</code>	$\sqsubsetneqq$	<code>\sqsubsetneqq</code>
$\nsubseteq$	<code>\nsubseteq</code>	$\sqsupsetneqq$	<code>\sqsupsetneqq</code>
$\nsupseteq$	<code>\nsupseteq</code>	$\subsetneq, \varsubsetneq$	<code>\subsetneq, \varsubsetneq</code>
$\nsubseteqq$	<code>\nsubseteqq</code>	$\supsetneq, \varsupsetneq$	<code>\supsetneq, \varsupsetneq</code>
$\nsupseteqq$	<code>\nsupseteqq</code>	$\subsetneqq, \varsubsetneqq$	<code>\subsetneqq, \varsubsetneqq</code>
$\nSubset$	<code>\nSubset</code>	$\supsetneqq, \varsupsetneqq$	<code>\supsetneqq, \varsupsetneqq</code>
$\nSupset$	<code>\nSupset</code>	$\precneq$	<code>\precneq</code>
$\nprec$	<code>\nprec</code>	$\succneq$	<code>\succneq</code>
$\nsucc$	<code>\nsucc</code>	$\precneqq$	<code>\precneqq</code>
$\npreceq$	<code>\npreceq</code>	$\succneqq$	<code>\succneqq</code>
$\nsucceq$	<code>\nsucceq</code>	$\precnsim$	<code>\precnsim</code>
$\npreccurlyeq$	<code>\npreccurlyeq</code>	$\succnsim$	<code>\succnsim</code>
$\nsucccurlyeq$	<code>\nsucccurlyeq</code>	$\precnapprox$	<code>\precnapprox</code>
$\npreceqq$	<code>\npreceqq</code>	$\succnapprox$	<code>\succnapprox</code>
$\nsucceqq$	<code>\nsucceqq</code>	$\rightarrow, \nto$	<code>\rightarrow, \nto</code>
$\nprecsim$	<code>\nprecsim</code>	$\nuparrow$	<code>\nuparrow</code>
$\nsuccsim$	<code>\nsuccsim</code>	$\nleftarrow, \ngets$	<code>\nleftarrow, \ngets</code>
$\nprecapprox$	<code>\nprecapprox</code>	$\ndownarrow$	<code>\ndownarrow</code>

$\nearrow$	<code>\nrightarrow</code>	$\Uparrow$	<code>\nUpmapsto, \nMapsup</code>
$\nwarrow$	<code>\nnwarrow</code>	$\Leftarrow$	<code>\nLeftmapsto, \nMapsfrom</code>
$\searrow$	<code>\nswarrow</code>	$\Downarrow$	<code>\nDownmapsto, \nMapsdown</code>
$\xrightarrow{\hspace{1cm}}$	<code>\nsearrow</code>	$\hookrightarrow$	<code>\nhookrightarrow</code>
$\rightarrow$	<code>\nRightarrow</code>	$\hookuparrow$	<code>\nhookuparrow</code>
$\Uparrow$	<code>\nUparrow</code>	$\nvarhookleftarrow$	<code>\nvarhookleftarrow</code>
$\Leftarrow$	<code>\nLeftarrow</code>	$\nvarhookdownarrow$	<code>\nvarhookdownarrow</code>
$\Downarrow$	<code>\nDownarrow</code>	$\nearrow$	<code>\nvarhooknearrow</code>
$\nearrow$	<code>\nNearrow</code>	$\nwarrow$	<code>\nhooknwarrow, \nhknwarrow</code>
$\nwarrow$	<code>\nNwarrow</code>	$\searrow$	<code>\nvarhookswarrow</code>
$\searrow$	<code>\nSwarrow</code>	$\nearrow$	<code>\nhooksearrow, \nhksearrow</code>
$\searrow$	<code>\nSearrow</code>	$\rightarrow$	<code>\nvarhookrightarrow</code>
$\leftrightarrow$	<code>\nleftrightharrow</code>	$\uparrow$	<code>\nvarhookuparrow</code>
$\Updownarrow$	<code>\nupdownarrow</code>	$\hookleftarrow$	<code>\nhookleftarrow</code>
$\nearrow$	<code>\nneswarrow</code>	$\downarrow$	<code>\nhookdownarrow</code>
$\nwarrow$	<code>\nnwsearrow</code>	$\nearrow$	<code>\nhooknearrow, \nhknearrow</code>
$\leftrightarrow$	<code>\nLefttrightharrow</code>	$\nwarrow$	<code>\nvarhooknwarrow</code>
$\Updownarrow$	<code>\nUpdownarrow</code>	$\searrow$	<code>\nhookswarrow, \nhkswarrow</code>
$\nearrow$	<code>\nNeswarrow</code>	$\searrow$	<code>\nvarhooksearrow</code>
$\nwarrow$	<code>\nNwsearrow</code>	$\nearrow$	<code>\nrightharpoonup</code>
$\twoheadrightarrow$	<code>\ntwoheadrightarrow</code>	$\leftarrow$	<code>\nupharpoonleft</code>
$\twoheaduparrow$	<code>\ntwoheaduparrow</code>	$\nleftarrow$	<code>\nleftharpoondown</code>
$\twoheadleftarrow$	<code>\ntwoheadleftarrow</code>	$\downdownarrows$	<code>\ndownharpoonright</code>
$\twoheaddownarrow$	<code>\ntwoheaddownarrow</code>	$\nearrow$	<code>\nneharpoonnw</code>
$\nearrow$	<code>\ntwoheadnearrow</code>	$\nwarrow$	<code>\nnwharpoonsw</code>
$\nwarrow$	<code>\ntwoheadnwarrow</code>	$\searrow$	<code>\nswharpoonse</code>
$\searrow$	<code>\ntwoheadswarrow</code>	$\nwarrow$	<code>\nseharpoonse</code>
$\searrow$	<code>\ntwoheadsearrow</code>	$\nearrow$	<code>\nrightharpoondown</code>
$\rightarrowtail$	<code>\nrightarrowtail</code>	$\rightarrow$	<code>\nupharpoonright,</code> <code>\nrestriction</code>
$\uparrowtail$	<code>\nuparrowtail</code>	$\nearrow$	<code>\nleftharpoonup</code>
$\leftarrowtail$	<code>\nleftarrowtail</code>	$\downarrow$	<code>\ndownharpoonleft</code>
$\downarrowtail$	<code>\ndownarrowtail</code>	$\nearrow$	<code>\nneharpoonse</code>
$\nearrowtail$	<code>\nrightarrowtail</code>	$\nwarrow$	<code>\nnwharpoonse</code>
$\nwarrowtail$	<code>\nnwarrowtail</code>	$\searrow$	<code>\nswharpoonnw</code>
$\searrowtail$	<code>\nswarrowtail</code>	$\nwarrow$	<code>\nseharpoonsw</code>
$\searrowtail$	<code>\nsearrowtail</code>	$\rightarrow$	<code>\nleftrightharpoonupdown</code>
$\mapsto$	<code>\nrightmapsto, \nmapsto</code>	$\rightarrow$	<code>\nupdownharpoonleftright</code>
$\Uparrow$	<code>\nupmapsto, \nmapsup</code>	$\searrow$	<code>\nneswharpoonnwse</code>
$\Leftarrow$	<code>\nleftmapsto, \nmapsfrom</code>	$\nwarrow$	<code>\nnwseharpoonnesw</code>
$\Downarrow$	<code>\ndownmapsto, \nmapsdown</code>	$\rightarrow$	<code>\nleftrightharpoondownup</code>
$\Rightarrow$	<code>\nRightmapsto, \nMapsto</code>		

$\downdownarrows$	<code>\nupdownharpoonrightleft</code>	$\rightrightarrows$	<code>\nrightrightarrows</code>
$\nrightarrow$	<code>\nneswharpoonsenw</code>	$\nrightarrow$	<code>\nupuparrows</code>
$\nwarrow$	<code>\nnwseharpoonswne</code>	$\nleftrightarrow$	<code>\nleftleftarrows</code>
$\rightleftharpoons$	<code>\nrightharpoonleft</code>	$\downdownarrows$	<code>\ndowndownarrows</code>
$\nrightarrow$	<code>\nupdownharpoons, \nupdown-</code> <code>harpoonsleftright</code>	$\nearrow$	<code>\nnenearrows</code>
$\nrightarrow$	<code>\nneswharpoons</code>	$\nwarrow$	<code>\nnwnwarrows</code>
$\nrightarrow$	<code>\nsenwharpoons</code>	$\nwarrow$	<code>\nswswarrows</code>
$\nleftrightarrow$	<code>\nleftharpoonright</code>	$\nwarrow$	<code>\nsesearrows</code>
$\nrightarrow$	<code>\ndownupharpoons,</code> <code>\ndownupharpoonsleft-</code> <code>right</code>	$\nleftrightarrow$	<code>\nrightrightarrows</code>
$\nrightarrow$	<code>\nswneharpoons</code>	$\nrightarrow$	<code>\nupdownarrows</code>
$\nwarrow$	<code>\nnwseharpoons</code>	$\nrightarrow$	<code>\nneswarrows</code>
$\rightarrow$	<code>\nrightrightarrow, \ndasharrow,</code> <code>\ndashrightarrow</code>	$\nrightarrow$	<code>\nnwsearrows</code>
$\rightarrow$	<code>\nupbrightarrow</code>	$\nrightarrow$	<code>\nleftrightarrows</code>
$\leftarrow$	<code>\nleftbrightarrow,</code> <code>\ndashleftarrow</code>	$\nrightarrow$	<code>\ndownuparrows</code>
$\rightarrow$	<code>\ndownbrightarrow</code>	$\nrightarrow$	<code>\nswnearrows</code>
$\rightarrow$	<code>\nnebbrightarrow</code>	$\nrightarrow$	<code>\nsenwarrows</code>
$\rightarrow$	<code>\nnwbrightarrow</code>	$\rightarrow$	<code>\nrightharpoonright, \nleadsto,</code> <code>\nrightrightarrow,</code> <code>\rightcurvedarrow</code>
$\rightarrow$	<code>\nswbrightarrow</code>	$\rightarrow$	<code>\nvarupwavearrow</code>
$\rightarrow$	<code>\nsebbrightarrow</code>	$\leftarrow$	<code>\nvarleftwavearrow</code>
$\rightarrow$	<code>\nrightharpoonright, \nmultimap</code>	$\rightarrow$	<code>\ndownwavearrow</code>
$\rightarrow$	<code>\nupspoon, \ncirmid</code>	$\rightarrow$	<code>\nvarrightwavearrow</code>
$\rightarrow$	<code>\nleftspoon, \nmultimapinv</code>	$\rightarrow$	<code>\nupwavearrow</code>
$\rightarrow$	<code>\ndownspoon, \nmidcir</code>	$\leftarrow$	<code>\nleftwavearrow,</code> <code>\nleftsquigarrow,</code> <code>\nleftcurvedarrow</code>
$\rightarrow$	<code>\nrightharpoonright</code>	$\rightarrow$	<code>\nvardownwavearrow</code>
$\rightarrow$	<code>\nupblackspoon</code>	$\rightarrow$	<code>\nleftrightwavearrow,</code> <code>\nleftrightsquigarrow</code>
$\rightarrow$	<code>\nleftblackspoon</code>	$\rightarrow$	<code>\nupdownwavearrow</code>
$\rightarrow$	<code>\ndownblackspoon</code>	$\rightarrow$	<code>\nvarleftrightwavearrow</code>
$\rightarrow$	<code>\nleftrightspoon, \ndualmap</code>	$\rightarrow$	<code>\nvarupdownwavearrow</code>
$\rightarrow$	<code>\nleftrightblackspoon</code>	$\rightarrow$	<code>\ncwoverarcarrow,</code> <code>\ncurvearrowright</code>
$\rightarrow$	<code>\nblackwhitespoon,</code> <code>\nimageof</code>	$\rightarrow$	<code>\ncwleftarcarrow</code>
$\rightarrow$	<code>\nwhiteblackspoon, \norigof</code>	$\rightarrow$	<code>\ncwunderarcarrow</code>
$\rightarrow$	<code>\nrightharpoonright</code>	$\rightarrow$	<code>\ncwrightarcarrow</code>
$\rightarrow$	<code>\nuppitchfork, \npitchfork</code>	$\rightarrow$	<code>\ncwnwarcarrow,</code> <code>\nrightharpoonright</code>
$\rightarrow$	<code>\nleftpitchfork</code>		
$\rightarrow$	<code>\ndownpitchfork</code>		

	<code>\ncwswarcarrow,</code>		<code>\ncwcirculararrowup</code>
	<code>\nupleftcurvedarrow</code>		<code>\ncwcirculararrowleft</code>
	<code>\ncwsearcarrow,</code>		<code>\nRrightarrow</code>
	<code>\nleftdowncurvedarrow</code>		<code>\nUparrow</code>
	<code>\ncwnearcarrow,</code>		<code>\nLleftarrow</code>
	<code>\ndownrightcurvedarrow</code>		<code>\nDdownarrow</code>
	<code>\nacwunderarcarrow</code>		<code>\nlongrightarrow</code>
	<code>\nacwrightarcarrow</code>		<code>\nlongleftarrow</code>
	<code>\nacwoverarcarrow,</code>		<code>\nLongrightarrow</code>
	<code>\ncurvearrowleft</code>		<code>\nLongleftarrow</code>
	<code>\nacwleftarcarrow</code>		<code>\nlongleftrightarrow</code>
	<code>\nacwsearcarrow,</code>		<code>\nLongleftrightarrow</code>
	<code>\nuprightcurvearrow</code>		<code>\nlongmapsto</code>
	<code>\nacwnearcarrow,</code>		<code>\nlongmapsfrom</code>
	<code>\nleftupcurvedarrow</code>		<code>\nLongmapsto</code>
	<code>\nacwnwarcarrow,</code>		<code>\nLongmapsfrom</code>
	<code>\ndownleftcurvedarrow</code>		<code>\nlongrightwvearrow,</code>
	<code>\nacwswarcarrow,</code>		<code>\nlongleadsto,</code>
	<code>\nrightdowncurvedarrow</code>		<code>\nlongrightsquigarrow</code>
	<code>\nbdoverarcarrow</code>		<code>\nlongleftwvearrow,</code>
	<code>\nbdleftarcarrow</code>		<code>\nlongleftsquigarrow</code>
	<code>\nbdunderarcarrow</code>		<code>\nlongleftfootline,</code>
	<code>\nbdrightarcarrow</code>		<code>\nvlongdash</code>
	<code>\nbdnwarcarrow</code>		<code>\nlongrightfootline,</code>
	<code>\nbdswarcarrow</code>		<code>\nlongdashv</code>
	<code>\nbdsearcarrow</code>		<code>\nrightvdash,\nvdash</code>
	<code>\nbdnearcarrow</code>		<code>\nupvdash,\nperp</code>
	<code>\nleftfootline</code>		<code>\nleftvdash,\ndashv</code>
	<code>\nrightfootline</code>		<code>\ndownvdash</code>
	<code>\nacwcirculararrowup</code>		<code>\nrightassert,\nassert,</code>
	<code>\nacwcirculararrowleft,</code>		<code>\nshortrighttack</code>
	<code>\ncirculararrowleft,</code>		<code>\nupassert,\nshortuptack</code>
	<code>\nacwopencirculararrow</code>		<code>\nleftassert,</code>
	<code>\nacwcirculararrowdown,</code>		<code>\nshortlefttack</code>
	<code>\nacwgapcirculararrow</code>		<code>\ndownassert,</code>
	<code>\nacwcirculararrowright</code>		<code>\nshortdowntack</code>
	<code>\ncwcirculararrowdown,</code>		<code>\nrightvDash,\nvDash</code>
	<code>\ncwgapcirculararrow</code>		<code>\nupvDash,\nVbar</code>
	<code>\ncwcirculararrowright,</code>		<code>\nleftvDash,\nDashv</code>
	<code>\ncirculararrowright,</code>		<code>\ndownvDash,\nbarV</code>
	<code>\ncwopencirculararrow</code>		<code>\nrightmodels,\nmodels</code>





$\bigotimes$	$\bigotimes$	<code>\bigotimes</code>	$\int\!\!\!\int$	$\int\!\!\!\int$	<code>\intBar</code>
$\bigodot$	$\bigodot$	<code>\bigodot</code>	$\oint$	$\oint$	<code>\fint</code>
$\bigoplus$	$\bigoplus$	<code>\bigoplus</code>	$\oint$	$\oint$	<code>\oint</code>
$\prod$	$\prod$	<code>\prod</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\oiint</code>
$\coprod$	$\coprod$	<code>\coprod</code>	$\oint\!\!\!\oint\!\!\!\oint$	$\oint\!\!\!\oint\!\!\!\oint$	<code>\oiint</code>
$\sum$	$\sum$	<code>\sum</code>	$\oint\!\!\!\oint\!\!\!\oint\!\!\!\oint$	$\oint\!\!\!\oint\!\!\!\oint\!\!\!\oint$	<code>\oiint</code>
$\sum\limits_{\text{mod } 2}$	$\sum\limits_{\text{mod } 2}$	<code>\osum, \modtwosum</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\rcircclerightint,</code>
$\int$	$\int$	<code>\int</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\ointctr-clockwise</code>
$\iint$	$\iint$	<code>\iint</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\lcircclerightint,</code>
$\iiint$	$\iiint$	<code>\iiint</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\varointclockwise</code>
$\iiint$	$\iiint$	<code>\iiint</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\rcircleleftint,</code>
$\iiint$	$\iiint$	<code>\iiint</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\varointctr-clockwise</code>
$\int\!\!\!\int\!\!\!\int$	$\int\!\!\!\int\!\!\!\int$	<code>\idotsint, \dotsint</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\lcircleleftint,</code>
$\int\!\!\!\int$	$\int\!\!\!\int$	<code>\landupint,</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\ointclockwise</code>
$\int\!\!\!\int$	$\int\!\!\!\int$	<code>\intclockwise</code>	$\oint\!\!\!\oint$	$\oint\!\!\!\oint$	<code>\sumint</code>
$\int\!\!\!\int$	$\int\!\!\!\int$	<code>\landdownint, \awint,</code>	$\prod$	$\prod$	<code>\smallprod</code>
$\int\!\!\!\int$	$\int\!\!\!\int$	<code>\intctr-clockwise</code>	$\prod$	$\prod$	<code>\smallcoprod</code>
$\int\!\!\!\int$	$\int\!\!\!\int$	<code>\intbar</code>	$\int$	$\int$	<code>\smallint</code>
			$\sqrt{\phantom{x}}$	$\sqrt{\phantom{x}}$	<code>\surd</code>

## 5.6 Delimiters and accents

$((((($	<code>(, \lparen</code>	$\lceil\lceil\lceil$	<code>\lceil</code>
$)))))$	<code>), \rparen</code>	$\rceil\rceil\rceil$	<code>\rceil</code>
$[[[[[$	<code>[, \lbrack</code>	$\ulcorner\ulcorner\ulcorner$	<code>\ulcorner</code>
$]]]]]$	<code>], \rbrack</code>	$\urcorner\urcorner\urcorner$	<code>\urcorner</code>
$\lfloor\lfloor\lfloor$	<code>\lfloor</code>	$\llcorner\llcorner\llcorner$	<code>\llcorner</code>
$\rfloor\rfloor\rfloor$	<code>\rfloor</code>	$\lrcorner\lrcorner\lrcorner$	<code>\lrcorner</code>

	<code>\ullcorner</code>		<code>\lVert</code>
	<code>\ulrcorner</code>		<code>\rVert</code>
	<code>\lsem, \lBrack</code>		<code>\Vvert</code>
	<code>\rsem, \rBrack</code>		<code>\lVvert</code>
	<code>\lbrace, \{</code>		<code>\rVvert</code>
	<code>\rbrace, \}</code>		<code>\arrowvert</code>
	<code>\langle</code>		<code>\Arrowvert</code>
	<code>\rangle</code>		<code>\lgroup</code>
	<code>\langle\langle</code>		<code>\rgroup</code>
	<code>\rangle\rangle</code>		<code>\lmoustache</code>
	<code>\langle\langle\langle</code>		<code>\rmoustache</code>
	<code>\rangle\rangle\rangle</code>		<code>\bracevert</code>
	<code>\langle\langle\langle\langle</code>		<code>\uparrow</code>
	<code>\rangle\rangle\rangle\rangle</code>		<code>\downarrow</code>
	<code>\mathslash</code>		<code>\updownarrow</code>
	<code>\backslash</code>		<code>\Uparrow</code>
	<code>\lvert</code>		<code>\Downarrow</code>
	<code>\rvert</code>		<code>\Updownarrow</code>
	<code>\Vert, \lVert</code>		

$\overbrace{xxx}$	<code>\overbrace</code>	$\overline{xxx}$	<code>\overlinesegment</code>
$\underbrace{xxx}$	<code>\underbrace</code>	$\overleftarrow{xxx}$	<code>\overleftharpoon</code>
$\overgroup{xxx}$	<code>\overgroup</code>	$\overrightarrow{xxx}$	<code>\overrightharpoon</code>
$\undergroup{xxx}$	<code>\undergroup</code>	$\underline{xxx}$	<code>\underlinesegment</code>
$\sqrt{b}$	<code>\sqrt</code>	$\vec{b}$	<code>\vec</code>
$\widehat{xxx}$	<code>\widehat</code>	$\bar{b}$	<code>\middlebar</code>
$\widetilde{xxx}$	<code>\widetilde</code>	$\backslash b$	<code>\middleslash</code>
$\wideparen{xxx}$	<code>\wideparen</code>	$\cancel{b}$	<code>\strokethrough</code>

## 5.7 Faked symbols

The following symbols are taken from the text font.

$\dagger$	<code>\dagger</code>	$\hbar$	<code>\hbar</code>
$\ddagger$	<code>\ddagger</code>	$\hslash$	<code>\hslash</code>
$\P$	<code>\mathparagraph</code>	$\textcircled{R}$	<code>\circledR</code>
$\S$	<code>\mathsection</code>	$\textcircled{S}$	<code>\circledS</code>
$\$$	<code>\mathdollar</code>	$\lambda$	<code>\lambdabar</code>
$\pounds$	<code>\mathsterling</code>	$\lambda$	<code>\lambdaslash</code>
$\yen$	<code>\yen</code>		

## 5.8 Missing symbols

The following symbols from Computer Modern or the AMS fonts are missing in MdSymbol. If available, they should be taken from the text font.

<code>\mho</code>	<code>\backepsilon</code>	<code>\diagup</code>
<code>\eth</code>	<code>\mapstochar</code>	<code>\diagdown</code>
<code>\digamma</code>	<code>\lhook</code>	<code>\Bbbk</code>
<code>\varkappa</code>	<code>\rhook</code>	

## 6 Implementation

```

1 \{*style}
2 \RequirePackage{xkeyval}
3 \newcommand*{\mdsy@choicekey}[3]{%
4   \define@choicekey*{MdSymbol.sty}{#1}[\@tempa\@tempb]{#2}{#3}%
5 }

```

We use xkeyval's key mechanism to declare all options. The first options determines the size of delimiters.

```
6 \define@boolkey{MdSymbol.sty}[mdsy@]{largedelims}[true]{}

```

The following option determines whether faked symbols should be defined.

```
7 \define@boolkey{MdSymbol.sty}[mdsy@]{retainmissing}[true]{}

```

The next option allows to scale the fonts by an arbitrary factor.

```
8 \newcommand{\mdsy@scale}{1.0}
9 \define@key{MdSymbol.sty}{scale}{\renewcommand\mdsy@scale{#1}}

```

The next option controls whether only the sans and sansbold mathversions are modified.

```
10 \define@boolkey{MdSymbol.sty}[mdsy@]{onlysansmath}[true]{}

```

The following two options control which weights are used for which math version and font size.

```
11 \newcommand\mdsy@mweight@normal{Regular}
12 \newcommand\mdsy@mweight@small{Regular}
13 \newcommand\mdsy@bweight@normal{Semibold}
14 \newcommand\mdsy@bweight@small{Semibold}
15 \mdsy@choicekey{normalweight}{light,regular,autolight,autoregular}{%
16   \ifcase \@tempb\relax
17     \renewcommand\mdsy@mweight@normal{Light}%
18     \renewcommand\mdsy@mweight@small{Light}%
19   \or
20     \renewcommand\mdsy@mweight@normal{Regular}%
21     \renewcommand\mdsy@mweight@small{Regular}%
22   \or
23     \renewcommand\mdsy@mweight@normal{Light}%
24     \renewcommand\mdsy@mweight@small{Regular}%
25   \or
26     \renewcommand\mdsy@mweight@normal{Regular}%
27     \renewcommand\mdsy@mweight@small{Semibold}%
28   \fi
29 }
30 \mdsy@choicekey{boldweight}{semibold,bold,autosemibold}{%
31   \ifcase \@tempb\relax
32     \renewcommand\mdsy@bweight@normal{Semibold}%
33     \renewcommand\mdsy@bweight@small{Semibold}%
34   \or
35     \renewcommand\mdsy@bweight@normal{Bold}%
36     \renewcommand\mdsy@bweight@small{Bold}%
37   \or
38     \renewcommand\mdsy@bweight@normal{Semibold}%
39     \renewcommand\mdsy@bweight@small{Bold}%
40   \fi
41 }
42 \ExecuteOptionsX{largedelims=false,onlysansmath=false,retainmissing=false}
43 \ProcessOptionsX

```

Load external packages, but only if they are not already loaded in order to avoid warning messages about loading a package twice with different options.

```
44 \@ifpackageloaded{amsmath}{\RequirePackage{amsmath}}
45 \@ifpackageloaded{textcomp}{\RequirePackage{textcomp}}
```

Command to check whether tabular math version is available

```
46 \newcommand*{\mdsy@if@tabular@math[1]{%
47   #1%
48 }
```

Add an additional switch into the mathversion command to indicate sans or sansbold math. Putting this into the `\ifmathversionsans` command does not work with the delimiter definition below.

```
49 \ifmdsy@onlysansmath
50   \DeclareMathVersion{sans}
51   \DeclareMathVersion{sansbold}
52   \mdsy@if@tabular@math{%
53     \DeclareMathVersion{sanstabular}%
54     \DeclareMathVersion{sansboldtabular}}
55
56 \newif\if@mdsy@sans@
57
58 \let\mathversion@old\mathversion
59 \def\sans@version{sans}
60 \def\sans@version@bold{sansbold}
61 \def\sans@version@tab{sanstabular}
62 \def\sans@version@bold@tab{sansboldtabular}
63 \renewcommand{\mathversion}[1]{%
64   \mathversion@old{#1}%
65   \@mdsy@sans@false%
66   \ifx\math@version\sans@version%
67     \@mdsy@sans@true%
68   \fi%
69   \ifx\math@version\sans@version@bold%
70     \@mdsy@sans@true%
71   \fi%
72   \ifx\math@version\sans@version@tab%
73     \@mdsy@sans@true%
74   \fi%
75   \ifx\math@version\sans@version@bold@tab%
76     \@mdsy@sans@true%
77   \fi%
78 }
79 \fi
80 \def\ifmathversionsans{%
81   \if@mdsy@sans@
```

```

82   \expandafter\@firstoftwo
83   \else
84     \expandafter\@secondoftwo
85   \fi
86 }

```

The following shorthands simplify the definition of commands which have different output depending on the mathversion in the case of `onlysansmath`. Without that option, they just normally define the commands.

```

87 \RequirePackage{etoolbox}
88
89 \newcommand\mdsy@setslot[1]{\@tempcnta #1\relax}
90 \newcommand\mdsy@nextslot{\advance\@tempcnta 1\relax}
91 \newcommand\mdsy@prevslot{\advance\@tempcnta-1\relax}
92
93 \newcommand\mdsy@@DeclareSymbol[4]{\expandafter\DeclareMathSymbol\expandafter{\csname
94
95 \ifmdsy@onlysansmath
96   \newcommand\mdsy@DeclareSymbol[3]{%
97     \ifcsdef{#1}{%
98       \csletcs{#1@old}{#1}%
99     }\expandafter\mdsy@@DeclareSymbol\expandafter{\the\@tempcnta}{#1}{#3}{#2}%
100     \csletcs{#1@old}{#1}}
101     \expandafter\mdsy@@DeclareSymbol\expandafter{\the\@tempcnta}{sans#1}{#3}{#2}%
102 %   \csletcs{#1@new}{sans#1}
103     \csundef{#1}%
104     \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
105     \mdsy@nextslot
106   }
107   \newcommand\mdsy@DeclareDelimiter[4]{%
108     \ifcsdef{#1}{%
109       \csletcs{#1@old}{#1}%
110     }\expandafter\DeclareMathDelimiter\expandafter{\csname#1\endcsname}{#2}{#3}{#4}{%
111       \csletcs{#1@old}{#1}}%
112     \expandafter\DeclareMathDelimiter\expandafter{\csname sans#1\endcsname}{#2}{#3}{#%
113 %   \csletcs{#1@new}{sans#1}
114     \csundef{#1}%
115     \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
116   }
117   \newcommand\mdsy@DeclareOperator[3]{%
118     \ifcsdef{#1}{%
119       \csletcs{#1@old}{#1}%
120     }\csdef{#1}{\DOTSB#3\slimits@}
121     \csletcs{#1@old}{#1}}%
122     \csdef{sans#1}{\DOTSB#3\slimits@}
123 %   \csletcs{#1@new}{sans#1}

```

```

124   \csundef{#1}%
125   \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
126 }
127 \newcommand\mdsy@DeclareIntegral[3]{%
128   \ifcsdef{#1}{%
129     \csletcs{#1@old}{#1}%
130   }\csdef{#1}{\DOTSI#3\ilimits@}
131   \csletcs{#1@old}{#1}%
132   \csdef{sans#1}{\DOTSI#3\ilimits@}%
133 %   \csletcs{#1@new}{sans#1}
134   \csundef{#1}%
135   \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
136 }
137 \newcommand\mdsy@DeclareMathSymbol[4]{%
138   \ifcsdef{#1}{%
139     \csletcs{#1@old}{#1}%
140   }\expandafter\DeclareMathSymbol\expandafter{\csname#1\endcsname}{#2}{#3}{#4}%
141   \csletcs{#1@old}{#1}%
142   \expandafter\DeclareMathSymbol\expandafter{\csname sans#1\endcsname}{#2}{#3}{#4}%
143 %   \csletcs{#1@new}{sans#1}
144   \csundef{#1}%
145   \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
146 }
147 \newcommand\mdsy@DeclareMathDelimiter[6]{%
148   \ifcsdef{#1}{%
149     \csletcs{#1@old}{#1}%
150   }\expandafter\DeclareMathDelimiter\expandafter{\csname#1\endcsname}{#2}{#3}{#4}{#5}{#6}%
151   \csletcs{#1@old}{#1}%
152   \expandafter\DeclareMathDelimiter\expandafter{\csname sans#1\endcsname}{#2}{#3}{#4}{#5}{#6}%
153 %   \csletcs{#1@new}{sans#1}
154   \csundef{#1}%
155   \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
156 }
157 \newcommand\mdsy@DeclareMathAccent[4]{%
158   \ifcsdef{#1}{%
159     \csletcs{#1@old}{#1}%
160   }\expandafter\DeclareMathAccent\expandafter{\csname#1\endcsname}{#2}{#3}{#4}%
161   \csletcs{#1@old}{#1}%
162   \expandafter\DeclareMathAccent\expandafter{\csname sans#1\endcsname}{#2}{#3}{#4}%
163 %   \csletcs{#1@new}{sans#1}
164   \csundef{#1}%
165   \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
166 }
167 \newcommand\mdsy@DeclareMathRadical[5]{%
168   \ifcsdef{#1}{%

```



```

169     \csletcs{#1@old}{#1}%
170   }{\expandafter\DeclareMathRadical\expandafter{\csname#1\endcsname}{#2}{#3}{#4}{#5}
171     \csletcs{#1@old}{#1}}%
172   \expandafter\DeclareMathRadical\expandafter{\csname sans#1\endcsname}{#2}{#3}{#4}
173 %   \csletcs{#1@new}{sans#1}
174   \csundef{#1}%
175   \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
176 }
177 \newcommand{\mdsy@DeclareActiveMathSymbol}[4]{%
178   \ifnum\mathcode'#1="8000 %
179     \errmessage{'#1' is already active}%
180   \fi
181   \expandafter\mathchardef\csname#1@old\endcsname=\mathcode'#1 %
182   \expandafter\DeclareMathSymbol\csname#1@new\endcsname{#2}{#3}{#4}
183   \begingroup
184   \lccode'\~='#1 %
185   \lowercase{\endgroup
186     \def~%
187   }{\ifmathversionsans{\csname#1@new\endcsname}{\csname#1@old\endcsname}}%
188   \mathcode'#1="8000 %
189 }
190 \newcommand{\mdsy@DeclareActiveMathDelimiter}[4]{%
191   % don't know how to implement an active math delimiter; so de-
192   % clare
193   % it as an active math symbol instead
194   \mdsy@DeclareActiveMathSymbol{#1}{#2}{#3}{#4}
195 }
196 \newcommand{\mdsy@renewcommand}[2]{%
197   \ifcsdef{#1}{%
198     \csletcs{#1@old}{#1}%
199   }{%
200     \expandafter\newcommand\csname #1@old\endcsname{#2}%
201   }%
202   \expandafter\newcommand\csname sans#1\endcsname{#2}%
203   \csundef{#1}%
204   \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
205 }
206 \newcommand{\mdsy@DeclareRobustCommandArg}[3]{%
207   \ifcsdef{#1}{%
208     \csletcs{#1@old}{#1}%
209   }{%
210     \expandafter\DeclareRobustCommand\csname#1\endcsname[#2]{#3}%
211   }%
212   \csletcs{#1@old}{#1}%
213   \expandafter\DeclareRobustCommand\csname sans#1\endcsname[#2]{#3}%

```

```

213 \csundef{#1}%
214 \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
215 }
216 \newcommand{\mdsy@DeclareRobustCommand}[2]{%
217 \ifcsdef{#1}{%
218 \csletcs{#1@old}{#1}%
219 }{%
220 \expandafter\DeclareRobustCommand\csname#1\endcsname{#2}%
221 \csletcs{#1@old}{#1}%
222 }%
223 \expandafter\DeclareRobustCommand\csname sans#1\endcsname{#2}%
224 \csundef{#1}%
225 \csdef{#1}{\ifmathversionsans{\csname sans#1\endcsname}{\csname#1@old\endcsname}}
226 }
227 \else
228 \let\ifmathversionsans\undefined
229 \newcommand{\mdsy@DeclareSymbol}[3]{%
230 \csundef{#1}%
231 \expandafter\mdsy@@DeclareSymbol\expandafter{\the\@tempcnta}{#1}{#3}{#2}%
232 \mdsy@nextslot
233 }
234 \newcommand{\mdsy@DeclareDelimiter}[4]{%
235 \csundef{#1}%
236 \expandafter\DeclareMathDelimiter\expandafter{\csname#1\endcsname}{#2}{#3}{#4}{#3}
237 }
238 \newcommand{\mdsy@DeclareOperator}[3]{%
239 \csdef{#1}{\DOTSB#3\slimits@}%
240 }
241 \newcommand{\mdsy@DeclareIntegral}[3]{%
242 \csdef{#1}{\DOTSI#3\ilimits@}%
243 }
244 \newcommand{\mdsy@DeclareMathSymbol}[4]{%
245 \expandafter\DeclareMathSymbol\expandafter{\csname#1\endcsname}{#2}{#3}{#4}%
246 }
247 \newcommand{\mdsy@DeclareMathDelimiter}[6]{%
248 \expandafter\DeclareMathDelimiter\expandafter{\csname#1\endcsname}{#2}{#3}{#4}{#5}
249 }
250 \newcommand{\mdsy@DeclareMathAccent}[4]{%
251 \expandafter\DeclareMathAccent\expandafter{\csname#1\endcsname}{#2}{#3}{#4}%
252 }
253 \newcommand{\mdsy@DeclareMathRadical}[5]{%
254 \expandafter\DeclareMathRadical\expandafter{\csname#1\endcsname}{#2}{#3}{#4}{#5}%
255 }
256 \newcommand{\mdsy@DeclareActiveMathSymbol}[4]{%
257 \DeclareMathSymbol{#1}{#2}{#3}{#4}%

```

```

258 }
259 \newcommand\mdsy@DeclareActiveMathDelimiter[4]{%
260   \DeclareMathDelimiter{#1}{#2}{#3}{#4}{#3}{#4}%
261 }
262 \newcommand{\mdsy@renewcommand}[2]{%
263   \expandafter\providecommand\csname #1\endcsname{#2}%
264 }
265 \newcommand{\mdsy@DeclareRobustCommand}[2]{%
266   \expandafter\DeclareRobustCommand\csname#1\endcsname{#2}%
267 }
268 \newcommand{\mdsy@DeclareRobustCommandArg}[3]{%
269   \expandafter\DeclareRobustCommand\csname#1\endcsname[#2]{#3}%
270 }
271 \fi
272
273 \newcommand\mdsy@DeclareAlias[3]{\mdsy@prevslot\mdsy@DeclareSymbol{#1}{#2}{#3}}
274
275 \newcommand\mdsy@DeclareOpen[3]{\mdsy@DeclareDelimiter{#1}{\mathopen}{#2}{#3}}
276 \newcommand\mdsy@DeclareClose[3]{\mdsy@DeclareDelimiter{#1}{\mathclose}{#2}{#3}}

```

If the option `largedelims` has been selected, we readjust the scaling factors of big delimiters, so that `\Big`, `\bigg` and `\Bigg` do not change their size.

```

277 \ifmdsy@largedelims
278   \mdsy@renewcommand{\Big}{\bBigg@{1.25}}
279   \mdsy@renewcommand{\bigg}{\bBigg@{1.66}}
280   \mdsy@renewcommand{\Bigg}{\bBigg@{2.08}}
281 \fi

```

Some symbols missing from `MdSymbol` can be obtained from other fonts or by combining several other symbols.

```

282 \ifmdsy@retainmissing
283 \else
284   \mdsy@DeclareRobustCommand{\dagger}{\mdsy@text{\textdagger}}
285   \mdsy@DeclareRobustCommand{\ddagger}{\mdsy@text{\textdaggerdbl}}
286   \mdsy@DeclareRobustCommand{\mathparagraph}{\mdsy@text{\textparagraph}}
287   \mdsy@DeclareRobustCommand{\mathsection}{\mdsy@text{\textsection}}
288   \mdsy@DeclareRobustCommand{\mathdollar}{\mdsy@text{\textdollar}}
289   \mdsy@DeclareRobustCommand{\mathsterling}{\mdsy@text{\textsterling}}
290   \mdsy@DeclareRobustCommand{\yen}{\mdsy@text{\textyen}}
291   \mdsy@DeclareRobustCommand{\circledR}{\mdsy@text{\textcircled{%
292     \check@mathfonts\fontsize\sf@size\z@\math@fontsfalse\selectfont R}}}
293   \mdsy@DeclareRobustCommand{\circledS}{\mdsy@text{\textcircled{%
294     \check@mathfonts\fontsize\sf@size\z@\math@fontsfalse\selectfont S}}}
295   \mdsy@DeclareRobustCommand{\Re}{\mathfrak{R}}
296   \mdsy@DeclareRobustCommand{\Im}{\mathfrak{I}}
297   \mdsy@DeclareRobustCommand{\dotcong}{\mathrel{\dot{\cong}}}

```

```

298 \mdsy@DeclareRobustCommand{thicksim}{\mathrel{\text{\boldmath$\m@th\sim$}}}
299 \mdsy@DeclareRobustCommand{thickapprox}{\mathrel{\text{\boldmath$\m@th\approx$}}}
300 \mdsy@DeclareRobustCommand{hslash}{\middleslash h}
301 \mdsy@DeclareRobustCommand{centerdot}{\mathbin{\rule{0.15em}{0.15em}}}
302 \mdsy@DeclareRobustCommand{lambdabar}{\middlebar\lambda}
303 \mdsy@DeclareRobustCommand{lambdaslash}{\middleslash\lambda}
304 \@ifpackageloaded{MyriadPro}{\%
305 \mdsy@DeclareRobustCommand{hbar}{\middlebar h}\%
306 }
307 \fi

```

Unneeded partial symbols.

```

308 \ifmdsy@onlysansmath
309 \else
310 \let\mapstochar\undefined
311 \let\lhook\undefined
312 \let\rhook\undefined
313 \fi

```

Font definitions.

```

314 \DeclareFontFamily{U}{MdSymbolA}{}
315 \DeclareFontFamily{U}{MdSymbolB}{}
316 \DeclareFontFamily{U}{MdSymbolC}{}
317 \DeclareFontFamily{U}{MdSymbolD}{}
318 \DeclareFontFamily{U}{MdSymbolE}{}
319 \DeclareFontFamily{U}{MdSymbolF}{}
320
321 \RequirePackage{fltpoint}
322 \fpDecimalSign{.}
323 \newcommand*{\mdsy@calc@bsize}[2]{\fpDiv{#1}{#2}{\mdsy@scale}}
324
325 \mdsy@calc@bsize{\mdsy@s@medium}{6}
326 \mdsy@calc@bsize{\mdsy@s@bold}{6}
327
328 \DeclareFontShape{U}{MdSymbolA}{m}{n}{
329     < -\mdsy@s@medium> s * [\mdsy@scale] MdSymbolA-\mdsy@mweight@small
330     <\mdsy@s@medium- > s * [\mdsy@scale] MdSymbolA-\mdsy@mweight@normal
331 }{}
332 \DeclareFontShape{U}{MdSymbolA}{b}{n}{
333     < - \mdsy@s@bold> s * [\mdsy@scale] MdSymbolA-\mdsy@bweight@small
334     <\mdsy@s@bold - > s * [\mdsy@scale] MdSymbolA-\mdsy@bweight@normal
335 }{}
336 \DeclareFontShape{U}{MdSymbolB}{m}{n}{
337     < -\mdsy@s@medium> s * [\mdsy@scale] MdSymbolB-\mdsy@mweight@small
338     <\mdsy@s@medium- > s * [\mdsy@scale] MdSymbolB-\mdsy@mweight@normal
339 }{}
340 \DeclareFontShape{U}{MdSymbolB}{b}{n}{

```

```

341 < - \mdsy@s@bold> s * [\mdsy@scale] MdSymbolB-\mdsy@bweight@small
342 <\mdsy@s@bold - > s * [\mdsy@scale] MdSymbolB-\mdsy@bweight@normal
343 }{}
344 \DeclareFontShape{U}{MdSymbolC}{m}{n}{
345 < -\mdsy@s@medium> s * [\mdsy@scale] MdSymbolC-\mdsy@mweight@small
346 <\mdsy@s@medium- > s * [\mdsy@scale] MdSymbolC-\mdsy@mweight@normal
347 }{}
348 \DeclareFontShape{U}{MdSymbolC}{b}{n}{
349 < - \mdsy@s@bold> s * [\mdsy@scale] MdSymbolC-\mdsy@bweight@small
350 <\mdsy@s@bold - > s * [\mdsy@scale] MdSymbolC-\mdsy@bweight@normal
351 }{}
352 \DeclareFontShape{U}{MdSymbolD}{m}{n}{
353 < -\mdsy@s@medium> s * [\mdsy@scale] MdSymbolD-\mdsy@mweight@small
354 <\mdsy@s@medium- > s * [\mdsy@scale] MdSymbolD-\mdsy@mweight@normal
355 }{}
356 \DeclareFontShape{U}{MdSymbolD}{b}{n}{
357 < - \mdsy@s@bold> s * [\mdsy@scale] MdSymbolD-\mdsy@bweight@small
358 <\mdsy@s@bold - > s * [\mdsy@scale] MdSymbolD-\mdsy@bweight@normal
359 }{}
360 \DeclareFontShape{U}{MdSymbolE}{m}{n}{
361 < -\mdsy@s@medium> s * [\mdsy@scale] MdSymbolE-\mdsy@mweight@small
362 <\mdsy@s@medium- > s * [\mdsy@scale] MdSymbolE-\mdsy@mweight@normal
363 }{}
364 \DeclareFontShape{U}{MdSymbolE}{b}{n}{
365 < - \mdsy@s@bold> s * [\mdsy@scale] MdSymbolE-\mdsy@bweight@small
366 <\mdsy@s@bold - > s * [\mdsy@scale] MdSymbolE-\mdsy@bweight@normal
367 }{}
368 \DeclareFontShape{U}{MdSymbolF}{m}{n}{
369 < -\mdsy@s@medium> s * [\mdsy@scale] MdSymbolF-\mdsy@mweight@small
370 <\mdsy@s@medium- > s * [\mdsy@scale] MdSymbolF-\mdsy@mweight@normal
371 }{}
372 \DeclareFontShape{U}{MdSymbolF}{b}{n}{
373 < - \mdsy@s@bold> s * [\mdsy@scale] MdSymbolF-\mdsy@bweight@small
374 <\mdsy@s@bold - > s * [\mdsy@scale] MdSymbolF-\mdsy@bweight@normal
375 }{}
376
377 %\newcommand\IfUndefSymbolFont[3]{\@ifundefined{sym#1}{#2}{#3}}
378 \newcommand{\mdsy@DeclareSymbolFont}[3]{%
379 % \IfUndefSymbolFont{#1}{%
380 \DeclareSymbolFont{#1}{#2}{#3}{m}{n}
381 % }{%
382 % \ifmdsy@onlysansmath%
383 % \SetSymbolFont{#1}{sans}{#2}{#3}{m}{n}%
384 % \mdsy@if@tabular@math{\SetSymbolFont{#1}{sanstabular}{#2}{#3}{m}{n}}%
385 % \else%

```

```

386 % \SetSymbolFont{#1}{normal}{#2}{#3}{m}{n}%
387 % \mdsy@if@tabular@math{\SetSymbolFont{#1}{tabular}{#2}{#3}{m}{n}}%
388 % \fi%
389 % }
390 % \ifmdsy@onlysansmath%
391 % \SetSymbolFont{#1}{sansbold}{#2}{#3}{b}{n}%
392 % \mdsy@if@tabular@math{\SetSymbolFont{#1}{sansboldtabular}{#2}{#3}{b}{n}}%
393 % \else%
394 % \SetSymbolFont{#1}{bold}{#2}{#3}{b}{n}%
395 % \mdsy@if@tabular@math{\SetSymbolFont{#1}{boldtabular}{#2}{#3}{b}{n}}%
396 % \fi%
397 }
398
399 \mdsy@DeclareSymbolFont{MdSymbols}{U}{MdSymbolA}
400 \mdsy@DeclareSymbolFont{MdRelations}{U}{MdSymbolB}
401 \mdsy@DeclareSymbolFont{MdArrows}{U}{MdSymbolC}
402 \mdsy@DeclareSymbolFont{MdNarrows}{U}{MdSymbolD}
403 \mdsy@DeclareSymbolFont{MdLargesymbols}{U}{MdSymbolE}
404 \mdsy@DeclareSymbolFont{MdDelimiters}{U}{MdSymbolF}
405

```

A command for taking math symbols from the text font.

```

406 \def\mdsy@bold{bold}
407 \newcommand*\mdsy@text[1]{%
408   \ifx\mdsy@bold\math@version
409     \text{\sffamily\bfseries#1}%
410   \else
411     \text{\sffamily\mdseries#1}%
412   \fi
413 }

```

MdSymbolA: binary operators and ordinary symbols

```

414 \mdsy@setslot{0}
415 \mdsy@DeclareSymbol{cdot}{MdSymbols}{\mathbin}
416 \mdsy@DeclareAlias{cdotp}{MdSymbols}{\mathpunct}
417 \mdsy@DeclareSymbol{hdotdot}{MdSymbols}{\mathbin}
418 \mdsy@DeclareSymbol{vdotdot}{MdSymbols}{\mathbin}
419 \mdsy@DeclareAlias{colon}{MdSymbols}{\mathpunct}
420 \mdsy@DeclareAlias{mathcolon}{MdSymbols}{\mathpunct}
421 \mdsy@DeclareAlias{mathratio}{MdSymbols}{\mathrel}
422 \mdsy@DeclareSymbol{udotdot}{MdSymbols}{\mathbin}
423 \mdsy@DeclareSymbol{ddotdot}{MdSymbols}{\mathbin}
424 \mdsy@DeclareSymbol{hdots}{MdSymbols}{\mathord}
425 \mdsy@DeclareAlias{cdots}{MdSymbols}{\mathinner}
426 \mdsy@DeclareAlias{cdots}{MdSymbols}{\mathinner}
427 \mdsy@DeclareSymbol{vdots}{MdSymbols}{\mathord}
428 \mdsy@DeclareRobustCommand{vdots}{\ifmmode\@vdots\else\hbox{$\@vdots$}\fi}

```

```

429 \mdsy@DeclareSymbol{udots}{MdSymbols}{\mathord}
430 \mdsy@DeclareAlias{adots}{MdSymbols}{\mathord}
431 \mdsy@DeclareSymbol{ddots}{MdSymbols}{\mathord}
432 \mdsy@DeclareSymbol{righttherefore}{MdSymbols}{\mathord}
433 \mdsy@DeclareSymbol{uptherefore}{MdSymbols}{\mathord}
434 \mdsy@DeclareAlias{therefore}{MdSymbols}{\mathord}
435 \mdsy@DeclareSymbol{lefttherefore}{MdSymbols}{\mathord}
436 \mdsy@DeclareSymbol{downtherefore}{MdSymbols}{\mathord}
437 \mdsy@DeclareAlias{because}{MdSymbols}{\mathord}
438 \mdsy@DeclareSymbol{squaredots}{MdSymbols}{\mathord}
439 \mdsy@DeclareAlias{Colon}{MdSymbols}{\mathrel}
440 \mdsy@DeclareSymbol{minus}{MdSymbols}{\mathbin}
441 \mdsy@DeclareSymbol{medslash}{MdSymbols}{\mathbin}
442 \mdsy@DeclareAlias{smalldivslash}{MdSymbols}{\mathbin}
443 \mdsy@DeclareSymbol{medbackslash}{MdSymbols}{\mathbin}
444 \mdsy@DeclareAlias{smallsetminus}{MdSymbols}{\mathbin}
445 \mdsy@DeclareSymbol{plus}{MdSymbols}{\mathbin}
446 \mdsy@DeclareSymbol{times}{MdSymbols}{\mathbin}
447 \mdsy@DeclareSymbol{dotminus}{MdSymbols}{\mathbin}
448 \mdsy@DeclareSymbol{minusdot}{MdSymbols}{\mathbin}
449 \mdsy@DeclareSymbol{div}{MdSymbols}{\mathbin}
450 \mdsy@DeclareSymbol{minusfdots}{MdSymbols}{\mathbin}
451 \mdsy@DeclareSymbol{minusrdots}{MdSymbols}{\mathbin}
452 \mdsy@DeclareSymbol{dotsminusdots}{MdSymbols}{\mathrel}
453 \mdsy@DeclareSymbol{pm}{MdSymbols}{\mathbin}
454 \mdsy@DeclareSymbol{mp}{MdSymbols}{\mathbin}
455 \mdsy@DeclareSymbol{dotplus}{MdSymbols}{\mathbin}
456 \mdsy@DeclareSymbol{plusdot}{MdSymbols}{\mathbin}
457 \mdsy@DeclareSymbol{dottimes}{MdSymbols}{\mathbin}
458 \mdsy@DeclareSymbol{timesbar}{MdSymbols}{\mathbin}
459 \mdsy@DeclareSymbol{divideontimes}{MdSymbols}{\mathbin}
460 \mdsy@DeclareSymbol{neg}{MdSymbols}{\mathord}
461 \mdsy@DeclareAlias{lnot}{MdSymbols}{\mathord}
462 \mdsy@DeclareAlias{minushookdown}{MdSymbols}{\mathbin}
463 \mdsy@DeclareSymbol{backneg}{MdSymbols}{\mathord}
464 \mdsy@DeclareAlias{hookdownminus}{MdSymbols}{\mathbin}
465 \mdsy@DeclareAlias{invneg}{MdSymbols}{\mathord}
466 \mdsy@DeclareAlias{invnot}{MdSymbols}{\mathord}
467 \mdsy@DeclareSymbol{intprod}{MdSymbols}{\mathbin}
468 \mdsy@DeclareAlias{minushookup}{MdSymbols}{\mathbin}
469 \mdsy@DeclareAlias{turnedneg}{MdSymbols}{\mathord}
470 \mdsy@DeclareAlias{turnednot}{MdSymbols}{\mathord}
471 \mdsy@DeclareSymbol{intprodr}{MdSymbols}{\mathbin}
472 \mdsy@DeclareAlias{hookupminus}{MdSymbols}{\mathbin}
473 \mdsy@DeclareAlias{turnedbackneg}{MdSymbols}{\mathord}

```

```

474 \mdsy@DeclareSymbol{leftthreetimes}{MdSymbols}{\mathbin}
475 \mdsy@DeclareSymbol{rightthreetimes}{MdSymbols}{\mathbin}
476 \mdsy@DeclareSymbol{dtimes}{MdSymbols}{\mathbin}
477 \mdsy@DeclareAlias{btimes}{MdSymbols}{\mathbin}
478 \mdsy@DeclareSymbol{rtimes}{MdSymbols}{\mathbin}
479 \mdsy@DeclareAlias{rJoin}{MdSymbols}{\mathrel}
480 \mdsy@DeclareSymbol{utimes}{MdSymbols}{\mathbin}
481 \mdsy@DeclareAlias{ttimes}{MdSymbols}{\mathbin}
482 \mdsy@DeclareSymbol{ltimes}{MdSymbols}{\mathbin}
483 \mdsy@DeclareAlias{lJoin}{MdSymbols}{\mathrel}
484 \mdsy@DeclareSymbol{bowtie}{MdSymbols}{\mathrel}
485 \mdsy@DeclareAlias{Join}{MdSymbols}{\mathrel}
486 \mdsy@DeclareAlias{lrtimes}{MdSymbols}{\mathbin}
487 \mdsy@DeclareSymbol{upbowtie}{MdSymbols}{\mathbin}
488 \mdsy@DeclareAlias{hourglass}{MdSymbols}{\mathbin}
489 \mdsy@DeclareSymbol{rightY}{MdSymbols}{\mathbin}
490 \mdsy@DeclareSymbol{upY}{MdSymbols}{\mathbin}
491 \mdsy@DeclareSymbol{leftY}{MdSymbols}{\mathbin}
492 \mdsy@DeclareSymbol{downY}{MdSymbols}{\mathbin}
493 \mdsy@DeclareSymbol{wedge}{MdSymbols}{\mathbin}
494 \mdsy@DeclareAlias{land}{MdSymbols}{\mathbin}
495 \mdsy@DeclareSymbol{vee}{MdSymbols}{\mathbin}
496 \mdsy@DeclareAlias{lor}{MdSymbols}{\mathbin}
497 \mdsy@DeclareSymbol{wedgedot}{MdSymbols}{\mathbin}
498 \mdsy@DeclareSymbol{veedot}{MdSymbols}{\mathbin}
499 \mdsy@DeclareSymbol{doublewedge}{MdSymbols}{\mathbin}
500 \mdsy@DeclareAlias{wedgeonwedge}{MdSymbols}{\mathbin}
501 \mdsy@DeclareSymbol{doublevee}{MdSymbols}{\mathbin}
502 \mdsy@DeclareAlias{veeonvee}{MdSymbols}{\mathbin}
503 \mdsy@DeclareSymbol{curlywedge}{MdSymbols}{\mathbin}
504 \mdsy@DeclareSymbol{curlyvee}{MdSymbols}{\mathbin}
505 \mdsy@DeclareSymbol{barwedge}{MdSymbols}{\mathbin}
506 \mdsy@DeclareSymbol{veebar}{MdSymbols}{\mathbin}
507 \mdsy@DeclareSymbol{doublebarwedge}{MdSymbols}{\mathbin}
508 \mdsy@DeclareSymbol{veedoublebar}{MdSymbols}{\mathbin}
509 \mdsy@DeclareSymbol{cup}{MdSymbols}{\mathbin}
510 \mdsy@DeclareSymbol{cap}{MdSymbols}{\mathbin}
511 \mdsy@DeclareSymbol{doublecup}{MdSymbols}{\mathbin}
512 \mdsy@DeclareAlias{Cup}{MdSymbols}{\mathbin}
513 \mdsy@DeclareSymbol{doublecap}{MdSymbols}{\mathbin}
514 \mdsy@DeclareAlias{Cap}{MdSymbols}{\mathbin}
515 \mdsy@DeclareSymbol{cupdot}{MdSymbols}{\mathbin}
516 \mdsy@DeclareSymbol{capdot}{MdSymbols}{\mathbin}
517 \mdsy@DeclareSymbol{cupplus}{MdSymbols}{\mathbin}
518 \mdsy@DeclareAlias{uplus}{MdSymbols}{\mathbin}

```



```

519 \mdsy@DeclareSymbol{capplus}{MdSymbols}{\mathbin}
520 \mdsy@DeclareSymbol{sqcup}{MdSymbols}{\mathbin}
521 \mdsy@DeclareSymbol{sqcap}{MdSymbols}{\mathbin}
522 \mdsy@DeclareSymbol{doublesqcup}{MdSymbols}{\mathbin}
523 \mdsy@DeclareAlias{Sqcup}{MdSymbols}{\mathbin}
524 \mdsy@DeclareSymbol{doublesqcap}{MdSymbols}{\mathbin}
525 \mdsy@DeclareAlias{Sqcap}{MdSymbols}{\mathbin}
526 \mdsy@DeclareSymbol{sqcupdot}{MdSymbols}{\mathbin}
527 \mdsy@DeclareSymbol{sqcapdot}{MdSymbols}{\mathbin}
528 \mdsy@DeclareSymbol{sqcupplus}{MdSymbols}{\mathbin}
529 \mdsy@DeclareSymbol{sqcapplus}{MdSymbols}{\mathbin}
530 \mdsy@DeclareSymbol{pullback}{MdSymbols}{\mathbin}
531 \mdsy@DeclareSymbol{pushout}{MdSymbols}{\mathbin}
532 \mdsy@DeclareSymbol{smalltriangleright}{MdSymbols}{\mathbin}
533 \mdsy@DeclareSymbol{smalltriangleup}{MdSymbols}{\mathbin}
534 \mdsy@DeclareSymbol{smalltriangleleft}{MdSymbols}{\mathbin}
535 \mdsy@DeclareSymbol{smalltriangledown}{MdSymbols}{\mathbin}
536 \mdsy@DeclareSymbol{smallblacktriangleright}{MdSymbols}{\mathbin}
537 \mdsy@DeclareSymbol{smallblacktriangleup}{MdSymbols}{\mathbin}
538 \mdsy@DeclareSymbol{smallblacktriangleleft}{MdSymbols}{\mathbin}
539 \mdsy@DeclareSymbol{smallblacktriangledown}{MdSymbols}{\mathbin}
540 \mdsy@DeclareSymbol{medtriangleright}{MdSymbols}{\mathbin}
541 \mdsy@DeclareAlias{triangleright}{MdSymbols}{\mathbin}
542 \mdsy@DeclareSymbol{medtriangleup}{MdSymbols}{\mathbin}
543 \mdsy@DeclareAlias{triangle}{MdSymbols}{\mathbin}
544 \mdsy@DeclareAlias{vartriangle}{MdSymbols}{\mathbin}
545 \mdsy@DeclareSymbol{medtriangleleft}{MdSymbols}{\mathbin}
546 \mdsy@DeclareAlias{triangleleft}{MdSymbols}{\mathbin}
547 \mdsy@DeclareSymbol{medtriangledown}{MdSymbols}{\mathbin}
548 \mdsy@DeclareAlias{triangledown}{MdSymbols}{\mathbin}
549 \mdsy@DeclareSymbol{medblacktriangleright}{MdSymbols}{\mathbin}
550 \mdsy@DeclareAlias{blacktriangleright}{MdSymbols}{\mathbin}
551 \mdsy@DeclareSymbol{medblacktriangleup}{MdSymbols}{\mathbin}
552 \mdsy@DeclareAlias{blacktriangle}{MdSymbols}{\mathbin}
553 \mdsy@DeclareSymbol{medblacktriangleleft}{MdSymbols}{\mathbin}
554 \mdsy@DeclareAlias{blacktriangleleft}{MdSymbols}{\mathbin}
555 \mdsy@DeclareSymbol{medblacktriangledown}{MdSymbols}{\mathbin}
556 \mdsy@DeclareAlias{blacktriangledown}{MdSymbols}{\mathbin}
557 \mdsy@DeclareSymbol{largetriangleup}{MdSymbols}{\mathord}
558 \mdsy@DeclareAlias{bigtriangleup}{MdSymbols}{\mathbin}
559 \mdsy@DeclareSymbol{largetriangledown}{MdSymbols}{\mathord}
560 \mdsy@DeclareAlias{bigtriangledown}{MdSymbols}{\mathbin}
561 \mdsy@DeclareSymbol{smallcircle}{MdSymbols}{\mathbin}
562 \mdsy@DeclareAlias{circ}{MdSymbols}{\mathbin}
563 \mdsy@DeclareAlias{smwhtcircle}{MdSymbols}{\mathbin}

```

```

564 \mdsy@DeclareSymbol{smallblackcircle}{MdSymbols}{\mathbin}
565 \mdsy@DeclareAlias{bullet}{MdSymbols}{\mathbin}
566 \mdsy@DeclareAlias{smbllkcicle}{MdSymbols}{\mathbin}
567 \mdsy@DeclareSymbol{medcircle}{MdSymbols}{\mathbin}
568 \mdsy@DeclareAlias{mdlgwhtcircle}{MdSymbols}{\mathbin}
569 \mdsy@DeclareSymbol{medblackcircle}{MdSymbols}{\mathbin}
570 \mdsy@DeclareAlias{mdlglbkcircle}{MdSymbols}{\mathbin}
571 \mdsy@DeclareSymbol{ominus}{MdSymbols}{\mathbin}
572 \mdsy@DeclareSymbol{overt}{MdSymbols}{\mathbin}
573 \mdsy@DeclareAlias{circledvert}{MdSymbols}{\mathbin}
574 \mdsy@DeclareSymbol{oslash}{MdSymbols}{\mathbin}
575 \mdsy@DeclareSymbol{obackslash}{MdSymbols}{\mathbin}
576 \mdsy@DeclareAlias{obslash}{MdSymbols}{\mathbin}
577 \mdsy@DeclareSymbol{oplus}{MdSymbols}{\mathbin}
578 \mdsy@DeclareSymbol{otimes}{MdSymbols}{\mathbin}
579 \mdsy@DeclareSymbol{odot}{MdSymbols}{\mathbin}
580 \mdsy@DeclareSymbol{ocirc}{MdSymbols}{\mathbin}
581 \mdsy@DeclareAlias{circledcirc}{MdSymbols}{\mathbin}
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#### MdSymbolB: relations

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926 \mdsy@DeclareSymbol{nlessapprox}{MdRelations}{\mathrel}
927 \mdsy@DeclareSymbol{ngtrapprox}{MdRelations}{\mathrel}
928 \mdsy@DeclareSymbol{nlessgtr}{MdRelations}{\mathrel}
929 \mdsy@DeclareSymbol{ngtrless}{MdRelations}{\mathrel}
930 \mdsy@DeclareSymbol{nlesseqgtr}{MdRelations}{\mathrel}
931 \mdsy@DeclareSymbol{ngtreqlless}{MdRelations}{\mathrel}
932 \mdsy@DeclareSymbol{nlesseqqgtr}{MdRelations}{\mathrel}
933 \mdsy@DeclareSymbol{ngtreqqless}{MdRelations}{\mathrel}
934 \mdsy@DeclareSymbol{nlesseqslantgtr}{MdRelations}{\mathrel}
935 \mdsy@DeclareAlias{nlesg}{MdRelations}{\mathrel}
936 \mdsy@DeclareAlias{nlesseqgtrslant}{MdRelations}{\mathrel}
937 \mdsy@DeclareSymbol{ngtreqlslantless}{MdRelations}{\mathrel}
938 \mdsy@DeclareAlias{ngesl}{MdRelations}{\mathrel}
939 \mdsy@DeclareAlias{ngtreqllessslant}{MdRelations}{\mathrel}
940 \mdsy@DeclareSymbol{nll}{MdRelations}{\mathrel}
941 \mdsy@DeclareSymbol{ngg}{MdRelations}{\mathrel}
942 \mdsy@DeclareSymbol{nlll}{MdRelations}{\mathrel}
943 \mdsy@DeclareSymbol{nggg}{MdRelations}{\mathrel}
944 \mdsy@DeclareSymbol{nlessclosed}{MdRelations}{\mathrel}
945 \mdsy@DeclareAlias{ntriangleleft}{MdRelations}{\mathrel}
946 \mdsy@DeclareSymbol{ngtrclosed}{MdRelations}{\mathrel}
947 \mdsy@DeclareAlias{ntriangleright}{MdRelations}{\mathrel}
948 \mdsy@DeclareSymbol{nleqclosed}{MdRelations}{\mathrel}
949 \mdsy@DeclareAlias{ntrianglelefteq}{MdRelations}{\mathrel}
950 \mdsy@DeclareSymbol{ngeqclosed}{MdRelations}{\mathrel}
951 \mdsy@DeclareAlias{ntrianglerighteq}{MdRelations}{\mathrel}
952 \mdsy@DeclareSymbol{nlesscc}{MdRelations}{\mathrel}
953 \mdsy@DeclareAlias{nltcc}{MdRelations}{\mathrel}
954 \mdsy@DeclareSymbol{ngtrcc}{MdRelations}{\mathrel}
955 \mdsy@DeclareAlias{ngtcc}{MdRelations}{\mathrel}
956 \mdsy@DeclareSymbol{nleqslcc}{MdRelations}{\mathrel}
957 \mdsy@DeclareAlias{nlescc}{MdRelations}{\mathrel}
958 \mdsy@DeclareSymbol{ngeqslcc}{MdRelations}{\mathrel}
959 \mdsy@DeclareAlias{ngescc}{MdRelations}{\mathrel}
960 \mdsy@DeclareSymbol{nsqsubset}{MdRelations}{\mathrel}
961 \mdsy@DeclareSymbol{nsqsupset}{MdRelations}{\mathrel}
962 \mdsy@DeclareSymbol{nsqsubseteq}{MdRelations}{\mathrel}
963 \mdsy@DeclareSymbol{nsqsupseteq}{MdRelations}{\mathrel}
964 \mdsy@DeclareSymbol{nsqsubseteqq}{MdRelations}{\mathrel}
965 \mdsy@DeclareSymbol{nsqsupseteqq}{MdRelations}{\mathrel}
966 \mdsy@DeclareSymbol{nSqsubset}{MdRelations}{\mathrel}
967 \mdsy@DeclareSymbol{nSqsupset}{MdRelations}{\mathrel}

```

```

968 \mdsy@DeclareSymbol{nsubset}{MdRelations}{\mathrel}
969 \mdsy@DeclareSymbol{nsupset}{MdRelations}{\mathrel}
970 \mdsy@DeclareSymbol{nsubseteq}{MdRelations}{\mathrel}
971 \mdsy@DeclareSymbol{nsupseteq}{MdRelations}{\mathrel}
972 \mdsy@DeclareSymbol{nsubseteqq}{MdRelations}{\mathrel}
973 \mdsy@DeclareSymbol{nsupseteqq}{MdRelations}{\mathrel}
974 \mdsy@DeclareSymbol{nSubset}{MdRelations}{\mathrel}
975 \mdsy@DeclareSymbol{nSupset}{MdRelations}{\mathrel}
976 \mdsy@DeclareSymbol{nprec}{MdRelations}{\mathrel}
977 \mdsy@DeclareSymbol{nsucc}{MdRelations}{\mathrel}
978 \mdsy@DeclareSymbol{npreceq}{MdRelations}{\mathrel}
979 \mdsy@DeclareSymbol{nsucceq}{MdRelations}{\mathrel}
980 \mdsy@DeclareSymbol{npreccurlyeq}{MdRelations}{\mathrel}
981 \mdsy@DeclareSymbol{nsucccurlyeq}{MdRelations}{\mathrel}
982 \mdsy@DeclareSymbol{npreceqq}{MdRelations}{\mathrel}
983 \mdsy@DeclareSymbol{nsucceqq}{MdRelations}{\mathrel}
984 \mdsy@DeclareSymbol{nprecsim}{MdRelations}{\mathrel}
985 \mdsy@DeclareSymbol{nsuccsim}{MdRelations}{\mathrel}
986 \mdsy@DeclareSymbol{nprecapprox}{MdRelations}{\mathrel}
987 \mdsy@DeclareSymbol{nsuccapprox}{MdRelations}{\mathrel}
988 \mdsy@DeclareSymbol{nlessdot}{MdRelations}{\mathrel}
989 \mdsy@DeclareSymbol{ngtrdot}{MdRelations}{\mathrel}
990 \mdsy@DeclareSymbol{nleqdot}{MdRelations}{\mathrel}
991 \mdsy@DeclareSymbol{ngeqdot}{MdRelations}{\mathrel}
992 \mdsy@DeclareSymbol{nleqslantdot}{MdRelations}{\mathrel}
993 \mdsy@DeclareAlias{nlesdot}{MdRelations}{\mathrel}
994 \mdsy@DeclareSymbol{ngeqslantdot}{MdRelations}{\mathrel}
995 \mdsy@DeclareAlias{ngesdot}{MdRelations}{\mathrel}
996 \mdsy@DeclareSymbol{neqslantless}{MdRelations}{\mathrel}
997 \mdsy@DeclareSymbol{neqslantgtr}{MdRelations}{\mathrel}
998 \mdsy@DeclareSymbol{ncurlyeqprec}{MdRelations}{\mathrel}
999 \mdsy@DeclareSymbol{ncurlyeqsucc}{MdRelations}{\mathrel}
1000 \mdsy@DeclareSymbol{simneqq}{MdRelations}{\mathrel}
1001 \mdsy@DeclareSymbol{backsimneqq}{MdRelations}{\mathrel}
1002 \mdsy@DeclareSymbol{lneq}{MdRelations}{\mathrel}
1003 \mdsy@DeclareSymbol{gneq}{MdRelations}{\mathrel}
1004 \mdsy@DeclareSymbol{lneqq}{MdRelations}{\mathrel}
1005 \mdsy@DeclareAlias{lvertneqq}{MdRelations}{\mathrel}
1006 \mdsy@DeclareSymbol{gneqq}{MdRelations}{\mathrel}
1007 \mdsy@DeclareAlias{gvertneqq}{MdRelations}{\mathrel}
1008 \mdsy@DeclareSymbol{lnsim}{MdRelations}{\mathrel}
1009 \mdsy@DeclareSymbol{gnsim}{MdRelations}{\mathrel}
1010 \mdsy@DeclareSymbol{lnapprox}{MdRelations}{\mathrel}
1011 \mdsy@DeclareSymbol{gnapprox}{MdRelations}{\mathrel}
1012 \mdsy@DeclareSymbol{sqsubsetneq}{MdRelations}{\mathrel}

```

```

1013 \mdsy@DeclareSymbol{sqsupsetneq}{MdRelations}{\mathrel}
1014 \mdsy@DeclareSymbol{sqsubsetneqq}{MdRelations}{\mathrel}
1015 \mdsy@DeclareSymbol{sqsupsetneqq}{MdRelations}{\mathrel}
1016 \mdsy@DeclareSymbol{subsetneq}{MdRelations}{\mathrel}
1017 \mdsy@DeclareAlias{varsubsetneq}{MdRelations}{\mathrel}
1018 \mdsy@DeclareSymbol{supsetneq}{MdRelations}{\mathrel}
1019 \mdsy@DeclareAlias{varsupsetneq}{MdRelations}{\mathrel}
1020 \mdsy@DeclareSymbol{subsetneqq}{MdRelations}{\mathrel}
1021 \mdsy@DeclareAlias{varsubsetneqq}{MdRelations}{\mathrel}
1022 \mdsy@DeclareSymbol{supsetneqq}{MdRelations}{\mathrel}
1023 \mdsy@DeclareAlias{varsupsetneqq}{MdRelations}{\mathrel}
1024 \mdsy@DeclareSymbol{precneq}{MdRelations}{\mathrel}
1025 \mdsy@DeclareSymbol{succneq}{MdRelations}{\mathrel}
1026 \mdsy@DeclareSymbol{precneqq}{MdRelations}{\mathrel}
1027 \mdsy@DeclareSymbol{succneqq}{MdRelations}{\mathrel}
1028 \mdsy@DeclareSymbol{precnsim}{MdRelations}{\mathrel}
1029 \mdsy@DeclareSymbol{succnsim}{MdRelations}{\mathrel}
1030 \mdsy@DeclareSymbol{precnapprox}{MdRelations}{\mathrel}
1031 \mdsy@DeclareSymbol{succnapprox}{MdRelations}{\mathrel}

```

MdSymbolC: arrows and turnstile symbols

```

1032 \mdsy@setslot{0}
1033 \mdsy@DeclareSymbol{rightarrow}{MdArrows}{\mathrel}
1034 \mdsy@DeclareAlias{to}{MdArrows}{\mathrel}
1035 % \mdsy@DeclareSymbol{uparrow}{MdArrows}{\mathrel}
1036 \mdsy@nextslot %uparrow defined below
1037 \mdsy@DeclareSymbol{leftarrow}{MdArrows}{\mathrel}
1038 \mdsy@DeclareAlias{gets}{MdArrows}{\mathrel}
1039 % \mdsy@DeclareSymbol{downarrow}{MdArrows}{\mathrel}
1040 \mdsy@nextslot %downarrow defined below
1041 \mdsy@DeclareSymbol{nearrow}{MdArrows}{\mathrel}
1042 \mdsy@DeclareSymbol{nwarrow}{MdArrows}{\mathrel}
1043 \mdsy@DeclareSymbol{swarrow}{MdArrows}{\mathrel}
1044 \mdsy@DeclareSymbol{searrow}{MdArrows}{\mathrel}
1045 \mdsy@DeclareSymbol{Rightarrow}{MdArrows}{\mathrel}
1046 % \mdsy@DeclareSymbol{Uparrow}{MdArrows}{\mathrel}
1047 \mdsy@nextslot %Uparrow defined below
1048 \mdsy@DeclareSymbol{Leftarrow}{MdArrows}{\mathrel}
1049 % \mdsy@DeclareSymbol{Downarrow}{MdArrows}{\mathrel}
1050 \mdsy@nextslot %Downarrow defined below
1051 \mdsy@DeclareSymbol{Nearrow}{MdArrows}{\mathrel}
1052 \mdsy@DeclareSymbol{Nwarrow}{MdArrows}{\mathrel}
1053 \mdsy@DeclareSymbol{Swarrow}{MdArrows}{\mathrel}
1054 \mdsy@DeclareSymbol{Searrow}{MdArrows}{\mathrel}
1055 \mdsy@DeclareSymbol{leftrightarrow}{MdArrows}{\mathrel}
1056 % \mdsy@DeclareSymbol{updownarrow}{MdArrows}{\mathrel}

```

```

1057 \mdsy@nextslot %updownarrow defined below
1058 \mdsy@DeclareSymbol{neswarrow}{MdArrows}{\mathrel}
1059 \mdsy@DeclareSymbol{nwsearrow}{MdArrows}{\mathrel}
1060 \mdsy@DeclareSymbol{Leftrightarrow}{MdArrows}{\mathrel}
1061 % \mdsy@DeclareSymbol{Updownarrow}{MdArrows}{\mathrel}
1062 \mdsy@nextslot %Updownarrow defined below
1063 \mdsy@DeclareSymbol{Neswarrow}{MdArrows}{\mathrel}
1064 \mdsy@DeclareSymbol{Nwsearrow}{MdArrows}{\mathrel}
1065 \mdsy@DeclareSymbol{twoheadrightarrow}{MdArrows}{\mathrel}
1066 \mdsy@DeclareSymbol{twoheaduparrow}{MdArrows}{\mathrel}
1067 \mdsy@DeclareSymbol{twoheadleftarrow}{MdArrows}{\mathrel}
1068 \mdsy@DeclareSymbol{twoheaddownarrow}{MdArrows}{\mathrel}
1069 \mdsy@DeclareSymbol{twoheadnearrow}{MdArrows}{\mathrel}
1070 \mdsy@DeclareSymbol{twoheadnwarrow}{MdArrows}{\mathrel}
1071 \mdsy@DeclareSymbol{twoheadswarrow}{MdArrows}{\mathrel}
1072 \mdsy@DeclareSymbol{twoheadsearrow}{MdArrows}{\mathrel}
1073 \mdsy@DeclareSymbol{rightarrowtail}{MdArrows}{\mathrel}
1074 \mdsy@DeclareSymbol{uparrowtail}{MdArrows}{\mathrel}
1075 \mdsy@DeclareSymbol{leftarrowtail}{MdArrows}{\mathrel}
1076 \mdsy@DeclareSymbol{downarrowtail}{MdArrows}{\mathrel}
1077 \mdsy@DeclareSymbol{nearrowtail}{MdArrows}{\mathrel}
1078 \mdsy@DeclareSymbol{nwarrowtail}{MdArrows}{\mathrel}
1079 \mdsy@DeclareSymbol{swarrowtail}{MdArrows}{\mathrel}
1080 \mdsy@DeclareSymbol{searrowtail}{MdArrows}{\mathrel}
1081 \mdsy@DeclareSymbol{rightmapsto}{MdArrows}{\mathrel}
1082 \mdsy@DeclareAlias{mapsto}{MdArrows}{\mathrel}
1083 \mdsy@DeclareSymbol{upmapsto}{MdArrows}{\mathrel}
1084 \mdsy@DeclareAlias{mapsup}{MdArrows}{\mathrel}
1085 \mdsy@DeclareSymbol{leftmapsto}{MdArrows}{\mathrel}
1086 \mdsy@DeclareAlias{mapsfrom}{MdArrows}{\mathrel}
1087 \mdsy@DeclareSymbol{downmapsto}{MdArrows}{\mathrel}
1088 \mdsy@DeclareAlias{mapsdown}{MdArrows}{\mathrel}
1089 \mdsy@DeclareSymbol{Rightmapsto}{MdArrows}{\mathrel}
1090 \mdsy@DeclareAlias{Mapsto}{MdArrows}{\mathrel}
1091 \mdsy@DeclareSymbol{Upmapsto}{MdArrows}{\mathrel}
1092 \mdsy@DeclareAlias{Mapsup}{MdArrows}{\mathrel}
1093 \mdsy@DeclareSymbol{Leftmapsto}{MdArrows}{\mathrel}
1094 \mdsy@DeclareAlias{Mapsfrom}{MdArrows}{\mathrel}
1095 \mdsy@DeclareSymbol{Downmapsto}{MdArrows}{\mathrel}
1096 \mdsy@DeclareAlias{Mapsdown}{MdArrows}{\mathrel}
1097 \mdsy@DeclareSymbol{hookrightarrow}{MdArrows}{\mathrel}
1098 \mdsy@DeclareAlias{lhookrightarrow}{MdArrows}{\mathrel}
1099 \mdsy@DeclareSymbol{hookuparrow}{MdArrows}{\mathrel}
1100 \mdsy@DeclareAlias{lhookuparrow}{MdArrows}{\mathrel}
1101 \mdsy@DeclareSymbol{varhookleftarrow}{MdArrows}{\mathrel}

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```

1102 \mdsy@DeclareAlias{lhookleftarrow}{MdArrows}{\mathrel}
1103 \mdsy@DeclareSymbol{varhookdownarrow}{MdArrows}{\mathrel}
1104 \mdsy@DeclareAlias{lhookdownarrow}{MdArrows}{\mathrel}
1105 \mdsy@DeclareSymbol{varhooknearrow}{MdArrows}{\mathrel}
1106 \mdsy@DeclareAlias{lhooknearrow}{MdArrows}{\mathrel}
1107 \mdsy@DeclareSymbol{hooknwarrow}{MdArrows}{\mathrel}
1108 \mdsy@DeclareAlias{hknwarrow}{MdArrows}{\mathrel}
1109 \mdsy@DeclareAlias{lhooknwarrow}{MdArrows}{\mathrel}
1110 \mdsy@DeclareSymbol{varhookswarrow}{MdArrows}{\mathrel}
1111 \mdsy@DeclareAlias{lhookswarrow}{MdArrows}{\mathrel}
1112 \mdsy@DeclareSymbol{hooksearrow}{MdArrows}{\mathrel}
1113 \mdsy@DeclareAlias{hksearrow}{MdArrows}{\mathrel}
1114 \mdsy@DeclareAlias{lhooksearrow}{MdArrows}{\mathrel}
1115 \mdsy@DeclareSymbol{varhookrightarrow}{MdArrows}{\mathrel}
1116 \mdsy@DeclareAlias{rhookrightarrow}{MdArrows}{\mathrel}
1117 \mdsy@DeclareSymbol{varhookuparrow}{MdArrows}{\mathrel}
1118 \mdsy@DeclareAlias{rhookuparrow}{MdArrows}{\mathrel}
1119 \mdsy@DeclareSymbol{hookleftarrow}{MdArrows}{\mathrel}
1120 \mdsy@DeclareAlias{rhookleftarrow}{MdArrows}{\mathrel}
1121 \mdsy@DeclareSymbol{hookdownarrow}{MdArrows}{\mathrel}
1122 \mdsy@DeclareAlias{rhookdownarrow}{MdArrows}{\mathrel}
1123 \mdsy@DeclareSymbol{hooknearrow}{MdArrows}{\mathrel}
1124 \mdsy@DeclareAlias{hknearrow}{MdArrows}{\mathrel}
1125 \mdsy@DeclareAlias{rhooknearrow}{MdArrows}{\mathrel}
1126 \mdsy@DeclareSymbol{varhooknwarrow}{MdArrows}{\mathrel}
1127 \mdsy@DeclareAlias{rhooknwarrow}{MdArrows}{\mathrel}
1128 \mdsy@DeclareSymbol{hookswarrow}{MdArrows}{\mathrel}
1129 \mdsy@DeclareAlias{hkswarrow}{MdArrows}{\mathrel}
1130 \mdsy@DeclareAlias{rhookswarrow}{MdArrows}{\mathrel}
1131 \mdsy@DeclareSymbol{varhooksearrow}{MdArrows}{\mathrel}
1132 \mdsy@DeclareAlias{rhooksearrow}{MdArrows}{\mathrel}
1133 \mdsy@DeclareSymbol{rightharpoonup}{MdArrows}{\mathrel}
1134 \mdsy@DeclareSymbol{upharpoonleft}{MdArrows}{\mathrel}
1135 \mdsy@DeclareSymbol{leftharpoondown}{MdArrows}{\mathrel}
1136 \mdsy@DeclareSymbol{downharpoonright}{MdArrows}{\mathrel}
1137 \mdsy@DeclareSymbol{neharpoonnw}{MdArrows}{\mathrel}
1138 \mdsy@DeclareSymbol{nwharpoonsw}{MdArrows}{\mathrel}
1139 \mdsy@DeclareSymbol{swharpoonse}{MdArrows}{\mathrel}
1140 \mdsy@DeclareSymbol{seharpoonne}{MdArrows}{\mathrel}
1141 \mdsy@DeclareSymbol{rightharpoondown}{MdArrows}{\mathrel}
1142 \mdsy@DeclareSymbol{upharpoonright}{MdArrows}{\mathrel}
1143 \mdsy@DeclareAlias{restriction}{MdArrows}{\mathrel}
1144 \mdsy@DeclareSymbol{leftharpoonup}{MdArrows}{\mathrel}
1145 \mdsy@DeclareSymbol{downharpoonleft}{MdArrows}{\mathrel}
1146 \mdsy@DeclareSymbol{neharpoonse}{MdArrows}{\mathrel}

```

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1147 \mdsy@DeclareSymbol{nwharpoonne}{MdArrows}{\mathrel}
1148 \mdsy@DeclareSymbol{swharpoonnw}{MdArrows}{\mathrel}
1149 \mdsy@DeclareSymbol{seharpoonsw}{MdArrows}{\mathrel}
1150 \mdsy@DeclareSymbol{leftrightharpoonupdown}{MdArrows}{\mathrel}
1151 \mdsy@DeclareSymbol{updownharpoonleftright}{MdArrows}{\mathrel}
1152 \mdsy@DeclareSymbol{neswharpoonnwse}{MdArrows}{\mathrel}
1153 \mdsy@DeclareSymbol{nwseharpoonnesw}{MdArrows}{\mathrel}
1154 \mdsy@DeclareSymbol{leftrightharpoondownup}{MdArrows}{\mathrel}
1155 \mdsy@DeclareSymbol{updownharpoonrightleft}{MdArrows}{\mathrel}
1156 \mdsy@DeclareSymbol{neswharpoonsenw}{MdArrows}{\mathrel}
1157 \mdsy@DeclareSymbol{nwseharpoonswne}{MdArrows}{\mathrel}
1158 \mdsy@DeclareSymbol{rightleftharpoons}{MdArrows}{\mathrel}
1159 \mdsy@DeclareSymbol{updownharpoons}{MdArrows}{\mathrel}
1160 \mdsy@DeclareAlias{updownharpoonsleftright}{MdArrows}{\mathrel}
1161 \mdsy@DeclareSymbol{neswharpoons}{MdArrows}{\mathrel}
1162 \mdsy@DeclareSymbol{senwharpoons}{MdArrows}{\mathrel}
1163 \mdsy@DeclareSymbol{leftrightharpoons}{MdArrows}{\mathrel}
1164 \mdsy@DeclareSymbol{downupharpoons}{MdArrows}{\mathrel}
1165 \mdsy@DeclareAlias{downupharpoonsleftright}{MdArrows}{\mathrel}
1166 \mdsy@DeclareSymbol{swneharpoons}{MdArrows}{\mathrel}
1167 \mdsy@DeclareSymbol{nwseharpoons}{MdArrows}{\mathrel}
1168 \mdsy@DeclareSymbol{rightbkarrow}{MdArrows}{\mathrel}
1169 \mdsy@DeclareAlias{dashedarrow}{MdArrows}{\mathrel}
1170 \mdsy@DeclareAlias{dashrightarrow}{MdArrows}{\mathrel}
1171 \mdsy@DeclareSymbol{upbkarrow}{MdArrows}{\mathrel}
1172 \mdsy@DeclareSymbol{leftbkarrow}{MdArrows}{\mathrel}
1173 \mdsy@DeclareAlias{dashleftarrow}{MdArrows}{\mathrel}
1174 \mdsy@DeclareSymbol{downbkarrow}{MdArrows}{\mathrel}
1175 \mdsy@DeclareSymbol{nebkarrow}{MdArrows}{\mathrel}
1176 \mdsy@DeclareSymbol{nwbkarrow}{MdArrows}{\mathrel}
1177 \mdsy@DeclareSymbol{swbkarrow}{MdArrows}{\mathrel}
1178 \mdsy@DeclareSymbol{sebkarrow}{MdArrows}{\mathrel}
1179 \mdsy@DeclareSymbol{rightspoon}{MdArrows}{\mathrel}
1180 \mdsy@DeclareAlias{multimap}{MdArrows}{\mathrel}
1181 \mdsy@DeclareSymbol{upspoon}{MdArrows}{\mathrel}
1182 \mdsy@DeclareAlias{cirmid}{MdArrows}{\mathrel}
1183 \mdsy@DeclareSymbol{leftspoon}{MdArrows}{\mathrel}
1184 \mdsy@DeclareAlias{multimapinv}{MdArrows}{\mathrel}
1185 \mdsy@DeclareSymbol{downspoon}{MdArrows}{\mathrel}
1186 \mdsy@DeclareAlias{midcir}{MdArrows}{\mathrel}
1187 \mdsy@DeclareSymbol{rightblackspoon}{MdArrows}{\mathrel}
1188 \mdsy@DeclareSymbol{upblackspoon}{MdArrows}{\mathrel}
1189 \mdsy@DeclareSymbol{leftblackspoon}{MdArrows}{\mathrel}
1190 \mdsy@DeclareSymbol{downblackspoon}{MdArrows}{\mathrel}
1191 \mdsy@DeclareSymbol{leftrightspoon}{MdArrows}{\mathrel}

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1192 \mdsy@DeclareAlias{dualmap}{MdArrows}{\mathrel}
1193 \mdsy@DeclareSymbol{leftrightblackspoon}{MdArrows}{\mathrel}
1194 \mdsy@DeclareSymbol{blackwhitespoon}{MdArrows}{\mathrel}
1195 \mdsy@DeclareAlias{imageof}{MdArrows}{\mathrel}
1196 \mdsy@DeclareSymbol{whiteblackspoon}{MdArrows}{\mathrel}
1197 \mdsy@DeclareAlias{origof}{MdArrows}{\mathrel}
1198 \mdsy@DeclareSymbol{rightpitchfork}{MdArrows}{\mathrel}
1199 \mdsy@DeclareSymbol{uppitchfork}{MdArrows}{\mathrel}
1200 \mdsy@DeclareAlias{pitchfork}{MdArrows}{\mathrel}
1201 \mdsy@DeclareSymbol{leftpitchfork}{MdArrows}{\mathrel}
1202 \mdsy@DeclareSymbol{downpitchfork}{MdArrows}{\mathrel}
1203 \mdsy@DeclareSymbol{rightrightarrows}{MdArrows}{\mathrel}
1204 \mdsy@DeclareSymbol{upuparrows}{MdArrows}{\mathrel}
1205 \mdsy@DeclareSymbol{leftleftarrows}{MdArrows}{\mathrel}
1206 \mdsy@DeclareSymbol{downdownarrows}{MdArrows}{\mathrel}
1207 \mdsy@DeclareSymbol{nene arrows}{MdArrows}{\mathrel}
1208 \mdsy@DeclareSymbol{nw nwarrows}{MdArrows}{\mathrel}
1209 \mdsy@DeclareSymbol{swswarrows}{MdArrows}{\mathrel}
1210 \mdsy@DeclareSymbol{sese arrows}{MdArrows}{\mathrel}
1211 \mdsy@DeclareSymbol{rightleftarrows}{MdArrows}{\mathrel}
1212 \mdsy@DeclareSymbol{updownarrows}{MdArrows}{\mathrel}
1213 \mdsy@DeclareSymbol{neswarrows}{MdArrows}{\mathrel}
1214 \mdsy@DeclareSymbol{nwsearrows}{MdArrows}{\mathrel}
1215 \mdsy@DeclareSymbol{leftrightharrows}{MdArrows}{\mathrel}
1216 \mdsy@DeclareSymbol{downuparrows}{MdArrows}{\mathrel}
1217 \mdsy@DeclareSymbol{swnearrows}{MdArrows}{\mathrel}
1218 \mdsy@DeclareSymbol{senwarrows}{MdArrows}{\mathrel}
1219 \mdsy@DeclareSymbol{rightwve arrow}{MdArrows}{\mathrel}
1220 \mdsy@DeclareAlias{leadsto}{MdArrows}{\mathrel}
1221 \mdsy@DeclareAlias{rightsquigarrow}{MdArrows}{\mathrel}
1222 \mdsy@DeclareAlias{rightcurvedarrow}{MdArrows}{\mathrel}
1223 \mdsy@DeclareAlias{rightlsquigarrow}{MdArrows}{\mathrel}
1224 \mdsy@DeclareSymbol{varupwve arrow}{MdArrows}{\mathrel}
1225 \mdsy@DeclareAlias{uplsquigarrow}{MdArrows}{\mathrel}
1226 \mdsy@DeclareSymbol{varleftwve arrow}{MdArrows}{\mathrel}
1227 \mdsy@DeclareAlias{leftlsquigarrow}{MdArrows}{\mathrel}
1228 \mdsy@DeclareSymbol{downwve arrow}{MdArrows}{\mathrel}
1229 \mdsy@DeclareAlias{downlsquigarrow}{MdArrows}{\mathrel}
1230 \mdsy@DeclareSymbol{varrightwve arrow}{MdArrows}{\mathrel}
1231 \mdsy@DeclareAlias{righttrsquigarrow}{MdArrows}{\mathrel}
1232 \mdsy@DeclareSymbol{upwve arrow}{MdArrows}{\mathrel}
1233 \mdsy@DeclareAlias{uprsquigarrow}{MdArrows}{\mathrel}
1234 \mdsy@DeclareSymbol{leftwve arrow}{MdArrows}{\mathrel}
1235 \mdsy@DeclareAlias{leftsquigarrow}{MdArrows}{\mathrel}
1236 \mdsy@DeclareAlias{leftcurvedarrow}{MdArrows}{\mathrel}

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1237 \mdsy@DeclareAlias{leftrsquigarrow}{MdArrows}{\mathrel}
1238 \mdsy@DeclareSymbol{vardownwavedarrow}{MdArrows}{\mathrel}
1239 \mdsy@DeclareAlias{downrsquigarrow}{MdArrows}{\mathrel}
1240 \mdsy@DeclareSymbol{leftrightwavedarrow}{MdArrows}{\mathrel}
1241 \mdsy@DeclareAlias{leftrightsquigarrow}{MdArrows}{\mathrel}
1242 \mdsy@DeclareSymbol{updownwavedarrow}{MdArrows}{\mathrel}
1243 \mdsy@DeclareAlias{updownsquigarrow}{MdArrows}{\mathrel}
1244 \mdsy@DeclareSymbol{varleftrightwavedarrow}{MdArrows}{\mathrel}
1245 \mdsy@DeclareAlias{rightleftsquigarrow}{MdArrows}{\mathrel}
1246 \mdsy@DeclareSymbol{varupdownwavedarrow}{MdArrows}{\mathrel}
1247 \mdsy@DeclareAlias{downupsquigarrow}{MdArrows}{\mathrel}
1248 \mdsy@DeclareSymbol{cwoverarcarrow}{MdArrows}{\mathrel}
1249 \mdsy@DeclareAlias{curvearrowright}{MdArrows}{\mathrel}
1250 \mdsy@DeclareAlias{rightlcurvearrow}{MdArrows}{\mathrel}
1251 \mdsy@DeclareSymbol{cwleftarcarrow}{MdArrows}{\mathrel}
1252 \mdsy@DeclareAlias{uplcurvearrow}{MdArrows}{\mathrel}
1253 \mdsy@DeclareSymbol{cwunderarcarrow}{MdArrows}{\mathrel}
1254 \mdsy@DeclareAlias{leftlcurvearrow}{MdArrows}{\mathrel}
1255 \mdsy@DeclareSymbol{cwrightarcarrow}{MdArrows}{\mathrel}
1256 \mdsy@DeclareAlias{downlcurvearrow}{MdArrows}{\mathrel}
1257 \mdsy@DeclareSymbol{cwnwarcarrow}{MdArrows}{\mathrel}
1258 \mdsy@DeclareAlias{rightupcurvedarrow}{MdArrows}{\mathrel}
1259 \mdsy@DeclareAlias{nelcurvearrow}{MdArrows}{\mathrel}
1260 \mdsy@DeclareSymbol{cswarcarrow}{MdArrows}{\mathrel}
1261 \mdsy@DeclareAlias{upleftcurvedarrow}{MdArrows}{\mathrel}
1262 \mdsy@DeclareAlias{nwlccurvearrow}{MdArrows}{\mathrel}
1263 \mdsy@DeclareSymbol{cwsearcarrow}{MdArrows}{\mathrel}
1264 \mdsy@DeclareAlias{leftdowncurvedarrow}{MdArrows}{\mathrel}
1265 \mdsy@DeclareAlias{swlccurvearrow}{MdArrows}{\mathrel}
1266 \mdsy@DeclareSymbol{cwnearcarrow}{MdArrows}{\mathrel}
1267 \mdsy@DeclareAlias{downrightcurvedarrow}{MdArrows}{\mathrel}
1268 \mdsy@DeclareAlias{selcurvearrow}{MdArrows}{\mathrel}
1269 \mdsy@DeclareSymbol{acwunderarcarrow}{MdArrows}{\mathrel}
1270 \mdsy@DeclareAlias{rightrcurvearrow}{MdArrows}{\mathrel}
1271 \mdsy@DeclareSymbol{acwrightarcarrow}{MdArrows}{\mathrel}
1272 \mdsy@DeclareAlias{uprccurvearrow}{MdArrows}{\mathrel}
1273 \mdsy@DeclareSymbol{acwoverarcarrow}{MdArrows}{\mathrel}
1274 \mdsy@DeclareAlias{curvearrowleft}{MdArrows}{\mathrel}
1275 \mdsy@DeclareAlias{leftrcurvearrow}{MdArrows}{\mathrel}
1276 \mdsy@DeclareSymbol{acwleftarcarrow}{MdArrows}{\mathrel}
1277 \mdsy@DeclareAlias{downrccurvearrow}{MdArrows}{\mathrel}
1278 \mdsy@DeclareSymbol{acwsearcarrow}{MdArrows}{\mathrel}
1279 \mdsy@DeclareAlias{uprightcurvearrow}{MdArrows}{\mathrel}
1280 \mdsy@DeclareAlias{nercurvearrow}{MdArrows}{\mathrel}
1281 \mdsy@DeclareSymbol{acwnearcarrow}{MdArrows}{\mathrel}

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1282 \mdsy@DeclareAlias{leftupcurvedarrow}{MdArrows}{\mathrel}
1283 \mdsy@DeclareAlias{nwrcurvearrow}{MdArrows}{\mathrel}
1284 \mdsy@DeclareSymbol{acwnwarcarrow}{MdArrows}{\mathrel}
1285 \mdsy@DeclareAlias{downleftcurvedarrow}{MdArrows}{\mathrel}
1286 \mdsy@DeclareAlias{swrcurvearrow}{MdArrows}{\mathrel}
1287 \mdsy@DeclareSymbol{acwswarcarrow}{MdArrows}{\mathrel}
1288 \mdsy@DeclareAlias{rightdowncurvedarrow}{MdArrows}{\mathrel}
1289 \mdsy@DeclareAlias{sercurvearrow}{MdArrows}{\mathrel}
1290 \mdsy@DeclareSymbol{bdoverarcarrow}{MdArrows}{\mathrel}
1291 \mdsy@DeclareAlias{leftrightcurvearrow}{MdArrows}{\mathrel}
1292 \mdsy@DeclareSymbol{bdleftarcarrow}{MdArrows}{\mathrel}
1293 \mdsy@DeclareAlias{updowncurvearrow}{MdArrows}{\mathrel}
1294 \mdsy@DeclareSymbol{bdunderarcarrow}{MdArrows}{\mathrel}
1295 \mdsy@DeclareAlias{rightleftcurvearrow}{MdArrows}{\mathrel}
1296 \mdsy@DeclareSymbol{bdrigharcarrow}{MdArrows}{\mathrel}
1297 \mdsy@DeclareAlias{downupcurvearrow}{MdArrows}{\mathrel}
1298 \mdsy@DeclareSymbol{bdnwarcarrow}{MdArrows}{\mathrel}
1299 \mdsy@DeclareAlias{neswcurvearrow}{MdArrows}{\mathrel}
1300 \mdsy@DeclareSymbol{bdswarcarrow}{MdArrows}{\mathrel}
1301 \mdsy@DeclareAlias{nwsecurvearrow}{MdArrows}{\mathrel}
1302 \mdsy@DeclareSymbol{bdsearcarrow}{MdArrows}{\mathrel}
1303 \mdsy@DeclareAlias{swnecurvearrow}{MdArrows}{\mathrel}
1304 \mdsy@DeclareSymbol{bdnearcarrow}{MdArrows}{\mathrel}
1305 \mdsy@DeclareAlias{senwcurvearrow}{MdArrows}{\mathrel}
1306 \mdsy@DeclareSymbol{leftfootline}{MdArrows}{\mathrel}
1307 \mdsy@DeclareSymbol{rightfootline}{MdArrows}{\mathrel}
1308 \mdsy@DeclareSymbol{acwcircularrowup}{MdArrows}{\mathrel}
1309 \mdsy@DeclareSymbol{acwcircularrowleft}{MdArrows}{\mathrel}
1310 \mdsy@DeclareAlias{circularrowleft}{MdArrows}{\mathrel}
1311 \mdsy@DeclareAlias{acwopencircularrow}{MdArrows}{\mathrel}
1312 \mdsy@DeclareSymbol{acwcircularrowdown}{MdArrows}{\mathrel}
1313 \mdsy@DeclareAlias{acwgapcircularrow}{MdArrows}{\mathrel}
1314 \mdsy@DeclareSymbol{acwcircularrowright}{MdArrows}{\mathrel}
1315 \mdsy@DeclareSymbol{cwcircularrowdown}{MdArrows}{\mathrel}
1316 \mdsy@DeclareAlias{cwgapcircularrow}{MdArrows}{\mathrel}
1317 \mdsy@DeclareSymbol{cwcircularrowright}{MdArrows}{\mathrel}
1318 \mdsy@DeclareAlias{circularrowright}{MdArrows}{\mathrel}
1319 \mdsy@DeclareAlias{cwopencircularrow}{MdArrows}{\mathrel}
1320 \mdsy@DeclareSymbol{cwcircularrowup}{MdArrows}{\mathrel}
1321 \mdsy@DeclareSymbol{cwcircularrowleft}{MdArrows}{\mathrel}
1322 \mdsy@DeclareSymbol{Rrightarrow}{MdArrows}{\mathrel}
1323 \mdsy@DeclareSymbol{Uparrow}{MdArrows}{\mathrel}
1324 \mdsy@DeclareSymbol{Lleftarrow}{MdArrows}{\mathrel}
1325 \mdsy@DeclareSymbol{Ddownarrow}{MdArrows}{\mathrel}
1326 \mdsy@DeclareSymbol{longrightarrow}{MdArrows}{\mathrel}

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1327 \mdsy@DeclareSymbol{longleftarrow}{MdArrows}{\mathrel}
1328 \mdsy@DeclareSymbol{Longrightarrow}{MdArrows}{\mathrel}
1329 \mdsy@DeclareSymbol{Longleftarrow}{MdArrows}{\mathrel}
1330 \mdsy@DeclareSymbol{longleftrightarrow}{MdArrows}{\mathrel}
1331 \mdsy@DeclareSymbol{Longleftrightarrow}{MdArrows}{\mathrel}
1332 \mdsy@DeclareSymbol{longmapsto}{MdArrows}{\mathrel}
1333 \mdsy@DeclareSymbol{longmapsfrom}{MdArrows}{\mathrel}
1334 \mdsy@DeclareSymbol{Longmapsto}{MdArrows}{\mathrel}
1335 \mdsy@DeclareSymbol{Longmapsfrom}{MdArrows}{\mathrel}
1336 \mdsy@DeclareSymbol{longrightwavedarrow}{MdArrows}{\mathrel}
1337 \mdsy@DeclareAlias{longleadsto}{MdArrows}{\mathrel}
1338 \mdsy@DeclareAlias{longrightsquigarrow}{MdArrows}{\mathrel}
1339 \mdsy@DeclareSymbol{longleftwavedarrow}{MdArrows}{\mathrel}
1340 \mdsy@DeclareAlias{longleftsquigarrow}{MdArrows}{\mathrel}
1341 \mdsy@DeclareSymbol{longleftfootline}{MdArrows}{\mathrel}
1342 \mdsy@DeclareAlias{vlongdash}{MdArrows}{\mathrel}
1343 \mdsy@DeclareSymbol{longrightfootline}{MdArrows}{\mathrel}
1344 \mdsy@DeclareAlias{longdashv}{MdArrows}{\mathrel}
1345 \mdsy@DeclareSymbol{Lsh}{MdArrows}{\mathrel}
1346 \mdsy@DeclareSymbol{Rsh}{MdArrows}{\mathrel}
1347 \mdsy@DeclareSymbol{Ldsh}{MdArrows}{\mathrel}
1348 \mdsy@DeclareSymbol{Rdsh}{MdArrows}{\mathrel}
1349 \mdsy@DeclareSymbol{looparrowright}{MdArrows}{\mathrel}
1350 \mdsy@DeclareSymbol{looparrowleft}{MdArrows}{\mathrel}
1351 \mdsy@setslot{224}
1352 \mdsy@DeclareSymbol{rightvdash}{MdArrows}{\mathrel}
1353 \mdsy@DeclareAlias{vdash}{MdArrows}{\mathrel}
1354 \mdsy@DeclareSymbol{upvdash}{MdArrows}{\mathrel}
1355 \mdsy@DeclareAlias{perp}{MdArrows}{\mathrel}
1356 \mdsy@DeclareAlias{bot}{MdArrows}{\mathord}
1357 \mdsy@DeclareSymbol{leftvdash}{MdArrows}{\mathrel}
1358 \mdsy@DeclareAlias{dashv}{MdArrows}{\mathrel}
1359 \mdsy@DeclareSymbol{downvdash}{MdArrows}{\mathrel}
1360 \mdsy@DeclareAlias{top}{MdArrows}{\mathord}
1361 \mdsy@DeclareSymbol{rightassert}{MdArrows}{\mathrel}
1362 \mdsy@DeclareAlias{assert}{MdArrows}{\mathrel}
1363 \mdsy@DeclareAlias{shorttrighttack}{MdArrows}{\mathrel}
1364 \mdsy@DeclareSymbol{upassert}{MdArrows}{\mathrel}
1365 \mdsy@DeclareAlias{shortuptack}{MdArrows}{\mathrel}
1366 \mdsy@DeclareSymbol{leftassert}{MdArrows}{\mathrel}
1367 \mdsy@DeclareAlias{shortlefttack}{MdArrows}{\mathrel}
1368 \mdsy@DeclareSymbol{downassert}{MdArrows}{\mathrel}
1369 \mdsy@DeclareAlias{shortdowntack}{MdArrows}{\mathrel}
1370 \mdsy@DeclareSymbol{rightvDash}{MdArrows}{\mathrel}
1371 \mdsy@DeclareAlias{vDash}{MdArrows}{\mathrel}

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1372 \mdsy@DeclareSymbol{upvDash}{MdArrows}{\mathrel}
1373 \mdsy@DeclareAlias{Vbar}{MdArrows}{\mathrel}
1374 \mdsy@DeclareSymbol{leftvDash}{MdArrows}{\mathrel}
1375 \mdsy@DeclareAlias{Dashv}{MdArrows}{\mathrel}
1376 \mdsy@DeclareSymbol{downvDash}{MdArrows}{\mathrel}
1377 \mdsy@DeclareAlias{barV}{MdArrows}{\mathrel}
1378 \mdsy@DeclareSymbol{rightmodels}{MdArrows}{\mathrel}
1379 \mdsy@DeclareAlias{models}{MdArrows}{\mathrel}
1380 \mdsy@DeclareSymbol{upmodels}{MdArrows}{\mathrel}
1381 \mdsy@DeclareSymbol{leftmodels}{MdArrows}{\mathrel}
1382 \mdsy@DeclareSymbol{downmodels}{MdArrows}{\mathrel}
1383 \mdsy@DeclareSymbol{rightVdash}{MdArrows}{\mathrel}
1384 \mdsy@DeclareAlias{Vdash}{MdArrows}{\mathrel}
1385 \mdsy@DeclareSymbol{upVdash}{MdArrows}{\mathrel}
1386 \mdsy@DeclareSymbol{leftVdash}{MdArrows}{\mathrel}
1387 \mdsy@DeclareAlias{dashV}{MdArrows}{\mathrel}
1388 \mdsy@DeclareSymbol{downVdash}{MdArrows}{\mathrel}
1389 \mdsy@DeclareSymbol{rightAssert}{MdArrows}{\mathrel}
1390 \mdsy@DeclareAlias{Assert}{MdArrows}{\mathrel}
1391 \mdsy@DeclareSymbol{upAssert}{MdArrows}{\mathrel}
1392 \mdsy@DeclareAlias{vBar}{MdArrows}{\mathrel}
1393 \mdsy@DeclareSymbol{leftAssert}{MdArrows}{\mathrel}
1394 \mdsy@DeclareSymbol{downAssert}{MdArrows}{\mathrel}
1395 \mdsy@DeclareAlias{Barv}{MdArrows}{\mathrel}
1396 \mdsy@DeclareSymbol{rightVDash}{MdArrows}{\mathrel}
1397 \mdsy@DeclareAlias{VDash}{MdArrows}{\mathrel}
1398 \mdsy@DeclareSymbol{upVDash}{MdArrows}{\mathrel}
1399 \mdsy@DeclareSymbol{leftVDash}{MdArrows}{\mathrel}
1400 \mdsy@DeclareAlias{DashV}{MdArrows}{\mathrel}
1401 \mdsy@DeclareSymbol{downVDash}{MdArrows}{\mathrel}
1402 \mdsy@DeclareSymbol{Vvdash}{MdArrows}{\mathrel}
1403 \mdsy@DeclareSymbol{dashVv}{MdArrows}{\mathrel}
1404 \mdsy@DeclareSymbol{vDdash}{MdArrows}{\mathrel}
1405 \mdsy@DeclareSymbol{Ddashv}{MdArrows}{\mathrel}
1406
1407 \mdsy@DeclareRobustCommand{relbar}{\mathrel{\smash{-}}}
1408 \mdsy@DeclareRobustCommand{Relbar}{\mathrel{=}}
1409 \mdsy@DeclareRobustCommand{joinrel}{\mathrel{\mkern-4mu}}

MdSymbolD: stroked arrows
1410 \mdsy@setslot{0}
1411 \mdsy@DeclareSymbol{nrightarrow}{MdNarrows}{\mathrel}
1412 \mdsy@DeclareAlias{nto}{MdNarrows}{\mathrel}
1413 \mdsy@DeclareSymbol{nuparrow}{MdNarrows}{\mathrel}
1414 \mdsy@DeclareSymbol{nleftarrow}{MdNarrows}{\mathrel}
1415 \mdsy@DeclareAlias{ngets}{MdNarrows}{\mathrel}

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1416 \mdsy@DeclareSymbol{ndownarrow}{MdNarrows}{\mathrel}
1417 \mdsy@DeclareSymbol{nnearrow}{MdNarrows}{\mathrel}
1418 \mdsy@DeclareSymbol{nnwarrow}{MdNarrows}{\mathrel}
1419 \mdsy@DeclareSymbol{nswarrow}{MdNarrows}{\mathrel}
1420 \mdsy@DeclareSymbol{nsearrow}{MdNarrows}{\mathrel}
1421 \mdsy@DeclareSymbol{nRrightarrow}{MdNarrows}{\mathrel}
1422 \mdsy@DeclareSymbol{nUparrow}{MdNarrows}{\mathrel}
1423 \mdsy@DeclareSymbol{nLeftarrow}{MdNarrows}{\mathrel}
1424 \mdsy@DeclareSymbol{nDownarrow}{MdNarrows}{\mathrel}
1425 \mdsy@DeclareSymbol{nNearrow}{MdNarrows}{\mathrel}
1426 \mdsy@DeclareSymbol{nNwarrow}{MdNarrows}{\mathrel}
1427 \mdsy@DeclareSymbol{nSwarrow}{MdNarrows}{\mathrel}
1428 \mdsy@DeclareSymbol{nSearrow}{MdNarrows}{\mathrel}
1429 \mdsy@DeclareSymbol{nlefttrightharpoonrightarrow}{MdNarrows}{\mathrel}
1430 \mdsy@DeclareSymbol{nupdownarrow}{MdNarrows}{\mathrel}
1431 \mdsy@DeclareSymbol{nneswarrow}{MdNarrows}{\mathrel}
1432 \mdsy@DeclareSymbol{nnwsearrow}{MdNarrows}{\mathrel}
1433 \mdsy@DeclareSymbol{nLefttrightharpoonrightarrow}{MdNarrows}{\mathrel}
1434 \mdsy@DeclareSymbol{nUpdownarrow}{MdNarrows}{\mathrel}
1435 \mdsy@DeclareSymbol{nNeswarrow}{MdNarrows}{\mathrel}
1436 \mdsy@DeclareSymbol{nNwsearrow}{MdNarrows}{\mathrel}
1437 \mdsy@DeclareSymbol{ntwoheadrightarrow}{MdNarrows}{\mathrel}
1438 \mdsy@DeclareSymbol{ntwoheaduparrow}{MdNarrows}{\mathrel}
1439 \mdsy@DeclareSymbol{ntwoheadleftarrow}{MdNarrows}{\mathrel}
1440 \mdsy@DeclareSymbol{ntwoheaddownarrow}{MdNarrows}{\mathrel}
1441 \mdsy@DeclareSymbol{ntwoheadnearrow}{MdNarrows}{\mathrel}
1442 \mdsy@DeclareSymbol{ntwoheadnwarrow}{MdNarrows}{\mathrel}
1443 \mdsy@DeclareSymbol{ntwoheadswarrow}{MdNarrows}{\mathrel}
1444 \mdsy@DeclareSymbol{ntwoheadsearrow}{MdNarrows}{\mathrel}
1445 \mdsy@DeclareSymbol{nrightarrowtail}{MdNarrows}{\mathrel}
1446 \mdsy@DeclareSymbol{nuparrowtail}{MdNarrows}{\mathrel}
1447 \mdsy@DeclareSymbol{nleftarrowtail}{MdNarrows}{\mathrel}
1448 \mdsy@DeclareSymbol{ndownarrowtail}{MdNarrows}{\mathrel}
1449 \mdsy@DeclareSymbol{nnearrowtail}{MdNarrows}{\mathrel}
1450 \mdsy@DeclareSymbol{nnwarrowtail}{MdNarrows}{\mathrel}
1451 \mdsy@DeclareSymbol{nswarrowtail}{MdNarrows}{\mathrel}
1452 \mdsy@DeclareSymbol{nsearrowtail}{MdNarrows}{\mathrel}
1453 \mdsy@DeclareSymbol{nrightmapsto}{MdNarrows}{\mathrel}
1454 \mdsy@DeclareAlias{nmapsto}{MdNarrows}{\mathrel}
1455 \mdsy@DeclareSymbol{nupmapsto}{MdNarrows}{\mathrel}
1456 \mdsy@DeclareAlias{nmapsup}{MdNarrows}{\mathrel}
1457 \mdsy@DeclareSymbol{nleftmapsto}{MdNarrows}{\mathrel}
1458 \mdsy@DeclareAlias{nmapsfrom}{MdNarrows}{\mathrel}
1459 \mdsy@DeclareSymbol{ndownmapsto}{MdNarrows}{\mathrel}
1460 \mdsy@DeclareAlias{nmapsdown}{MdNarrows}{\mathrel}

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1461 \mdsy@DeclareSymbol{nRightmapsto}{MdNarrows}{\mathrel}
1462 \mdsy@DeclareAlias{nMapsto}{MdNarrows}{\mathrel}
1463 \mdsy@DeclareSymbol{nUpmapsto}{MdNarrows}{\mathrel}
1464 \mdsy@DeclareAlias{nMapsup}{MdNarrows}{\mathrel}
1465 \mdsy@DeclareSymbol{nLeftmapsto}{MdNarrows}{\mathrel}
1466 \mdsy@DeclareAlias{nMapsfrom}{MdNarrows}{\mathrel}
1467 \mdsy@DeclareSymbol{nDownmapsto}{MdNarrows}{\mathrel}
1468 \mdsy@DeclareAlias{nMapsdown}{MdNarrows}{\mathrel}
1469 \mdsy@DeclareSymbol{nhookrightarrow}{MdNarrows}{\mathrel}
1470 \mdsy@DeclareSymbol{nhookuparrow}{MdNarrows}{\mathrel}
1471 \mdsy@DeclareSymbol{nvarhookleftarrow}{MdNarrows}{\mathrel}
1472 \mdsy@DeclareSymbol{nvarhookdownarrow}{MdNarrows}{\mathrel}
1473 \mdsy@DeclareSymbol{nvarhooknearrow}{MdNarrows}{\mathrel}
1474 \mdsy@DeclareSymbol{nhooknearrow}{MdNarrows}{\mathrel}
1475 \mdsy@DeclareAlias{nhknnarrow}{MdNarrows}{\mathrel}
1476 \mdsy@DeclareSymbol{nvarhookswarrow}{MdNarrows}{\mathrel}
1477 \mdsy@DeclareSymbol{nhooksearrow}{MdNarrows}{\mathrel}
1478 \mdsy@DeclareAlias{nhksearrow}{MdNarrows}{\mathrel}
1479 \mdsy@DeclareSymbol{nvarhookrightarrow}{MdNarrows}{\mathrel}
1480 \mdsy@DeclareSymbol{nvarhookuparrow}{MdNarrows}{\mathrel}
1481 \mdsy@DeclareSymbol{nhookleftarrow}{MdNarrows}{\mathrel}
1482 \mdsy@DeclareSymbol{nhookdownarrow}{MdNarrows}{\mathrel}
1483 \mdsy@DeclareSymbol{nhooknearrow}{MdNarrows}{\mathrel}
1484 \mdsy@DeclareAlias{nhknnearrow}{MdNarrows}{\mathrel}
1485 \mdsy@DeclareSymbol{nvarhooknarrow}{MdNarrows}{\mathrel}
1486 \mdsy@DeclareSymbol{nhookswarrow}{MdNarrows}{\mathrel}
1487 \mdsy@DeclareAlias{nhkswarrow}{MdNarrows}{\mathrel}
1488 \mdsy@DeclareSymbol{nvarhooksearrow}{MdNarrows}{\mathrel}
1489 \mdsy@DeclareSymbol{nrightharpoonup}{MdNarrows}{\mathrel}
1490 \mdsy@DeclareSymbol{nupharpoonleft}{MdNarrows}{\mathrel}
1491 \mdsy@DeclareSymbol{nleftharpoondown}{MdNarrows}{\mathrel}
1492 \mdsy@DeclareSymbol{ndownharpoonright}{MdNarrows}{\mathrel}
1493 \mdsy@DeclareSymbol{nneharpoonnw}{MdNarrows}{\mathrel}
1494 \mdsy@DeclareSymbol{nnwharpoonsw}{MdNarrows}{\mathrel}
1495 \mdsy@DeclareSymbol{nswharpoonse}{MdNarrows}{\mathrel}
1496 \mdsy@DeclareSymbol{nseharpoonne}{MdNarrows}{\mathrel}
1497 \mdsy@DeclareSymbol{nrightharpoondown}{MdNarrows}{\mathrel}
1498 \mdsy@DeclareSymbol{nupharpoonright}{MdNarrows}{\mathrel}
1499 \mdsy@DeclareAlias{nrestriction}{MdNarrows}{\mathrel}
1500 \mdsy@DeclareSymbol{nleftharpoonup}{MdNarrows}{\mathrel}
1501 \mdsy@DeclareSymbol{ndownharpoonleft}{MdNarrows}{\mathrel}
1502 \mdsy@DeclareSymbol{nneharpoonse}{MdNarrows}{\mathrel}
1503 \mdsy@DeclareSymbol{nnwharpoonne}{MdNarrows}{\mathrel}
1504 \mdsy@DeclareSymbol{nswharpoonnw}{MdNarrows}{\mathrel}
1505 \mdsy@DeclareSymbol{nseharpoonsw}{MdNarrows}{\mathrel}

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1506 \mdsy@DeclareSymbol{nlefttrightharpoonupdown}{MdNarrows}{\mathrel}
1507 \mdsy@DeclareSymbol{nupdownharpoonleftright}{MdNarrows}{\mathrel}
1508 \mdsy@DeclareSymbol{nneswharpoonnwse}{MdNarrows}{\mathrel}
1509 \mdsy@DeclareSymbol{nnwseharpoonnesw}{MdNarrows}{\mathrel}
1510 \mdsy@DeclareSymbol{nlefttrightharpoondownup}{MdNarrows}{\mathrel}
1511 \mdsy@DeclareSymbol{nupdownharpoonrightleft}{MdNarrows}{\mathrel}
1512 \mdsy@DeclareSymbol{nneswharpoonsenw}{MdNarrows}{\mathrel}
1513 \mdsy@DeclareSymbol{nnwseharpoonswne}{MdNarrows}{\mathrel}
1514 \mdsy@DeclareSymbol{nrightleftharpoons}{MdNarrows}{\mathrel}
1515 \mdsy@DeclareSymbol{nupdownharpoons}{MdNarrows}{\mathrel}
1516 \mdsy@DeclareAlias{nupdownharpoonsleftright}{MdNarrows}{\mathrel}
1517 \mdsy@DeclareSymbol{nneswharpoons}{MdNarrows}{\mathrel}
1518 \mdsy@DeclareSymbol{nsenwharpoons}{MdNarrows}{\mathrel}
1519 \mdsy@DeclareSymbol{nlefttrightharpoons}{MdNarrows}{\mathrel}
1520 \mdsy@DeclareSymbol{ndownupharpoons}{MdNarrows}{\mathrel}
1521 \mdsy@DeclareAlias{ndownupharpoonsleftright}{MdNarrows}{\mathrel}
1522 \mdsy@DeclareSymbol{nswnharpoons}{MdNarrows}{\mathrel}
1523 \mdsy@DeclareSymbol{nnwseharpoons}{MdNarrows}{\mathrel}
1524 \mdsy@DeclareSymbol{nrightbkarrow}{MdNarrows}{\mathrel}
1525 \mdsy@DeclareAlias{ndasharrow}{MdNarrows}{\mathrel}
1526 \mdsy@DeclareAlias{ndashrightarrow}{MdNarrows}{\mathrel}
1527 \mdsy@DeclareSymbol{nupbkarrow}{MdNarrows}{\mathrel}
1528 \mdsy@DeclareSymbol{nleftbkarrow}{MdNarrows}{\mathrel}
1529 \mdsy@DeclareAlias{ndashleftarrow}{MdNarrows}{\mathrel}
1530 \mdsy@DeclareSymbol{ndownbkarrow}{MdNarrows}{\mathrel}
1531 \mdsy@DeclareSymbol{nnebkarow}{MdNarrows}{\mathrel}
1532 \mdsy@DeclareSymbol{nnwbkarow}{MdNarrows}{\mathrel}
1533 \mdsy@DeclareSymbol{nswbkarow}{MdNarrows}{\mathrel}
1534 \mdsy@DeclareSymbol{nsebkarrow}{MdNarrows}{\mathrel}
1535 \mdsy@DeclareSymbol{nrightspoon}{MdNarrows}{\mathrel}
1536 \mdsy@DeclareAlias{nmultimap}{MdNarrows}{\mathrel}
1537 \mdsy@DeclareSymbol{nupspoon}{MdNarrows}{\mathrel}
1538 \mdsy@DeclareAlias{ncirmid}{MdNarrows}{\mathrel}
1539 \mdsy@DeclareSymbol{nleftspoon}{MdNarrows}{\mathrel}
1540 \mdsy@DeclareAlias{nmultimapinv}{MdNarrows}{\mathrel}
1541 \mdsy@DeclareSymbol{ndownspoon}{MdNarrows}{\mathrel}
1542 \mdsy@DeclareAlias{nmidcir}{MdNarrows}{\mathrel}
1543 \mdsy@DeclareSymbol{nrightblackspoon}{MdNarrows}{\mathrel}
1544 \mdsy@DeclareSymbol{nupblackspoon}{MdNarrows}{\mathrel}
1545 \mdsy@DeclareSymbol{nleftblackspoon}{MdNarrows}{\mathrel}
1546 \mdsy@DeclareSymbol{ndownblackspoon}{MdNarrows}{\mathrel}
1547 \mdsy@DeclareSymbol{nleftrightspoon}{MdNarrows}{\mathrel}
1548 \mdsy@DeclareAlias{ndualmap}{MdNarrows}{\mathrel}
1549 \mdsy@DeclareSymbol{nleftrightblackspoon}{MdNarrows}{\mathrel}
1550 \mdsy@DeclareSymbol{nblackwhitespoon}{MdNarrows}{\mathrel}

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1551 \mdsy@DeclareAlias{nimageof}{MdNarrows}{\mathrel}
1552 \mdsy@DeclareSymbol{nwhiteblackspace}{MdNarrows}{\mathrel}
1553 \mdsy@DeclareAlias{norigof}{MdNarrows}{\mathrel}
1554 \mdsy@DeclareSymbol{nrightpitchfork}{MdNarrows}{\mathrel}
1555 \mdsy@DeclareSymbol{nuppitchfork}{MdNarrows}{\mathrel}
1556 \mdsy@DeclareAlias{npitchfork}{MdNarrows}{\mathrel}
1557 \mdsy@DeclareSymbol{nleftpitchfork}{MdNarrows}{\mathrel}
1558 \mdsy@DeclareSymbol{ndownpitchfork}{MdNarrows}{\mathrel}
1559 \mdsy@DeclareSymbol{nrightarrows}{MdNarrows}{\mathrel}
1560 \mdsy@DeclareSymbol{nuparrows}{MdNarrows}{\mathrel}
1561 \mdsy@DeclareSymbol{nleftarrows}{MdNarrows}{\mathrel}
1562 \mdsy@DeclareSymbol{ndownarrows}{MdNarrows}{\mathrel}
1563 \mdsy@DeclareSymbol{nnearrows}{MdNarrows}{\mathrel}
1564 \mdsy@DeclareSymbol{nnwnarrows}{MdNarrows}{\mathrel}
1565 \mdsy@DeclareSymbol{nswnarrows}{MdNarrows}{\mathrel}
1566 \mdsy@DeclareSymbol{nsenarrows}{MdNarrows}{\mathrel}
1567 \mdsy@DeclareSymbol{nrightleftarrows}{MdNarrows}{\mathrel}
1568 \mdsy@DeclareSymbol{nupdownarrows}{MdNarrows}{\mathrel}
1569 \mdsy@DeclareSymbol{nneswarrows}{MdNarrows}{\mathrel}
1570 \mdsy@DeclareSymbol{nnwsearrows}{MdNarrows}{\mathrel}
1571 \mdsy@DeclareSymbol{nleftrightharrows}{MdNarrows}{\mathrel}
1572 \mdsy@DeclareSymbol{ndownuparrows}{MdNarrows}{\mathrel}
1573 \mdsy@DeclareSymbol{nswnearrows}{MdNarrows}{\mathrel}
1574 \mdsy@DeclareSymbol{nsenwarrows}{MdNarrows}{\mathrel}
1575 \mdsy@DeclareSymbol{nrightwvearrow}{MdNarrows}{\mathrel}
1576 \mdsy@DeclareAlias{nleadsto}{MdNarrows}{\mathrel}
1577 \mdsy@DeclareAlias{nrightsquigarrow}{MdNarrows}{\mathrel}
1578 \mdsy@DeclareAlias{nrightcurvedarrow}{MdArrows}{\mathrel}
1579 \mdsy@DeclareAlias{nrightlsquigarrow}{MdNarrows}{\mathrel}
1580 \mdsy@DeclareSymbol{nvarupwvearrow}{MdNarrows}{\mathrel}
1581 \mdsy@DeclareAlias{nuplsquigarrow}{MdNarrows}{\mathrel}
1582 \mdsy@DeclareSymbol{nvarleftwvearrow}{MdNarrows}{\mathrel}
1583 \mdsy@DeclareAlias{nleftlsquigarrow}{MdNarrows}{\mathrel}
1584 \mdsy@DeclareSymbol{ndownwvearrow}{MdNarrows}{\mathrel}
1585 \mdsy@DeclareAlias{ndownlsquigarrow}{MdNarrows}{\mathrel}
1586 \mdsy@DeclareSymbol{nvarrightwvearrow}{MdNarrows}{\mathrel}
1587 \mdsy@DeclareAlias{nrightrsquigarrow}{MdNarrows}{\mathrel}
1588 \mdsy@DeclareSymbol{nupwvearrow}{MdNarrows}{\mathrel}
1589 \mdsy@DeclareAlias{nuprsquigarrow}{MdNarrows}{\mathrel}
1590 \mdsy@DeclareSymbol{nleftwvearrow}{MdNarrows}{\mathrel}
1591 \mdsy@DeclareAlias{nleftsquigarrow}{MdNarrows}{\mathrel}
1592 \mdsy@DeclareAlias{nleftcurvedarrow}{MdArrows}{\mathrel}
1593 \mdsy@DeclareAlias{nlefttrsquigarrow}{MdNarrows}{\mathrel}
1594 \mdsy@DeclareSymbol{nvardownwvearrow}{MdNarrows}{\mathrel}
1595 \mdsy@DeclareAlias{ndownrsquigarrow}{MdNarrows}{\mathrel}

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1596 \mdsy@DeclareSymbol{nleftrightwavearrow}{MdNarrows}{\mathrel}
1597 \mdsy@DeclareAlias{nleftrightsquigarrow}{MdNarrows}{\mathrel}
1598 \mdsy@DeclareSymbol{nupdownwavearrow}{MdNarrows}{\mathrel}
1599 \mdsy@DeclareAlias{nupdownsquigarrow}{MdNarrows}{\mathrel}
1600 \mdsy@DeclareSymbol{nvarleftrightwavearrow}{MdNarrows}{\mathrel}
1601 \mdsy@DeclareAlias{nrightleftsquigarrow}{MdNarrows}{\mathrel}
1602 \mdsy@DeclareSymbol{nvarupdownwavearrow}{MdNarrows}{\mathrel}
1603 \mdsy@DeclareAlias{ndownupsquigarrow}{MdNarrows}{\mathrel}
1604 \mdsy@DeclareSymbol{ncwoverarcarrow}{MdNarrows}{\mathrel}
1605 \mdsy@DeclareAlias{ncurvearrowright}{MdNarrows}{\mathrel}
1606 \mdsy@DeclareAlias{nrightlcurvearrow}{MdNarrows}{\mathrel}
1607 \mdsy@DeclareSymbol{ncwleftarcarrow}{MdNarrows}{\mathrel}
1608 \mdsy@DeclareAlias{nuplcurvearrow}{MdNarrows}{\mathrel}
1609 \mdsy@DeclareSymbol{ncwunderarcarrow}{MdNarrows}{\mathrel}
1610 \mdsy@DeclareAlias{nleftlcurvearrow}{MdNarrows}{\mathrel}
1611 \mdsy@DeclareSymbol{ncwrightarcarrow}{MdNarrows}{\mathrel}
1612 \mdsy@DeclareAlias{ndownlcurvearrow}{MdNarrows}{\mathrel}
1613 \mdsy@DeclareSymbol{ncwnwarcarrow}{MdNarrows}{\mathrel}
1614 \mdsy@DeclareAlias{nrightupcurvedarrow}{MdNarrows}{\mathrel}
1615 \mdsy@DeclareAlias{nnelcurvearrow}{MdNarrows}{\mathrel}
1616 \mdsy@DeclareSymbol{ncwswarcarrow}{MdNarrows}{\mathrel}
1617 \mdsy@DeclareAlias{nupleftcurvedarrow}{MdNarrows}{\mathrel}
1618 \mdsy@DeclareAlias{nnwlcurvearrow}{MdNarrows}{\mathrel}
1619 \mdsy@DeclareSymbol{ncwsearcarrow}{MdNarrows}{\mathrel}
1620 \mdsy@DeclareAlias{nleftdowncurvedarrow}{MdNarrows}{\mathrel}
1621 \mdsy@DeclareAlias{nswlcurvearrow}{MdNarrows}{\mathrel}
1622 \mdsy@DeclareSymbol{ncwnearcarrow}{MdNarrows}{\mathrel}
1623 \mdsy@DeclareAlias{ndownrightcurvedarrow}{MdNarrows}{\mathrel}
1624 \mdsy@DeclareAlias{nse1curvearrow}{MdNarrows}{\mathrel}
1625 \mdsy@DeclareSymbol{nacwunderarcarrow}{MdNarrows}{\mathrel}
1626 \mdsy@DeclareAlias{nrightrcurvearrow}{MdNarrows}{\mathrel}
1627 \mdsy@DeclareSymbol{nacwrightarcarrow}{MdNarrows}{\mathrel}
1628 \mdsy@DeclareAlias{nuprcurvearrow}{MdNarrows}{\mathrel}
1629 \mdsy@DeclareSymbol{nacwoverarcarrow}{MdNarrows}{\mathrel}
1630 \mdsy@DeclareAlias{ncurvearrowleft}{MdNarrows}{\mathrel}
1631 \mdsy@DeclareAlias{nleftrcurvearrow}{MdNarrows}{\mathrel}
1632 \mdsy@DeclareSymbol{nacwleftarcarrow}{MdNarrows}{\mathrel}
1633 \mdsy@DeclareAlias{ndownrcurvearrow}{MdNarrows}{\mathrel}
1634 \mdsy@DeclareSymbol{nacwsearcarrow}{MdNarrows}{\mathrel}
1635 \mdsy@DeclareAlias{nuprightcurvedarrow}{MdNarrows}{\mathrel}
1636 \mdsy@DeclareAlias{nnercurvearrow}{MdNarrows}{\mathrel}
1637 \mdsy@DeclareSymbol{nacwnearcarrow}{MdNarrows}{\mathrel}
1638 \mdsy@DeclareAlias{nleftupcurvedarrow}{MdNarrows}{\mathrel}
1639 \mdsy@DeclareAlias{nnwrcurvearrow}{MdNarrows}{\mathrel}
1640 \mdsy@DeclareSymbol{nacwnwarcarrow}{MdNarrows}{\mathrel}

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1641 \mdsy@DeclareAlias{ndownleftcurvedarrow}{MdNarrows}{\mathrel}
1642 \mdsy@DeclareAlias{nsrcurvearrow}{MdNarrows}{\mathrel}
1643 \mdsy@DeclareSymbol{nacswarcarrow}{MdNarrows}{\mathrel}
1644 \mdsy@DeclareAlias{nrightdowncurvedarrow}{MdNarrows}{\mathrel}
1645 \mdsy@DeclareAlias{nsercurvearrow}{MdNarrows}{\mathrel}
1646 \mdsy@DeclareSymbol{nbdoverarcarrow}{MdNarrows}{\mathrel}
1647 \mdsy@DeclareAlias{nleftrightcurvearrow}{MdNarrows}{\mathrel}
1648 \mdsy@DeclareSymbol{nbdleftarccarrow}{MdNarrows}{\mathrel}
1649 \mdsy@DeclareAlias{nupdowncurvearrow}{MdNarrows}{\mathrel}
1650 \mdsy@DeclareSymbol{nbdunderarccarrow}{MdNarrows}{\mathrel}
1651 \mdsy@DeclareAlias{nrightrightcurvearrow}{MdNarrows}{\mathrel}
1652 \mdsy@DeclareSymbol{nbdrightarccarrow}{MdNarrows}{\mathrel}
1653 \mdsy@DeclareAlias{ndownupcurvearrow}{MdNarrows}{\mathrel}
1654 \mdsy@DeclareSymbol{nbdnwarcarrow}{MdNarrows}{\mathrel}
1655 \mdsy@DeclareAlias{nneswcurvearrow}{MdNarrows}{\mathrel}
1656 \mdsy@DeclareSymbol{nbdswarcarrow}{MdNarrows}{\mathrel}
1657 \mdsy@DeclareAlias{nnwsecurvearrow}{MdNarrows}{\mathrel}
1658 \mdsy@DeclareSymbol{nbdsearccarrow}{MdNarrows}{\mathrel}
1659 \mdsy@DeclareAlias{nswnecurvearrow}{MdNarrows}{\mathrel}
1660 \mdsy@DeclareSymbol{nbdnearccarrow}{MdNarrows}{\mathrel}
1661 \mdsy@DeclareAlias{nsewcurvearrow}{MdNarrows}{\mathrel}
1662 \mdsy@DeclareSymbol{nleftfootline}{MdNarrows}{\mathrel}
1663 \mdsy@DeclareSymbol{nrightfootline}{MdNarrows}{\mathrel}
1664 \mdsy@DeclareSymbol{nacwcirculararrowup}{MdNarrows}{\mathrel}
1665 \mdsy@DeclareSymbol{nacwcirculararrowleft}{MdNarrows}{\mathrel}
1666 \mdsy@DeclareAlias{ncirculararrowleft}{MdNarrows}{\mathrel}
1667 \mdsy@DeclareAlias{nacwopencirculararrow}{MdNarrows}{\mathrel}
1668 \mdsy@DeclareSymbol{nacwcirculararrowdown}{MdNarrows}{\mathrel}
1669 \mdsy@DeclareAlias{nacwgapcirculararrow}{MdNarrows}{\mathrel}
1670 \mdsy@DeclareSymbol{nacwcirculararrowright}{MdNarrows}{\mathrel}
1671 \mdsy@DeclareSymbol{ncwcirculararrowdown}{MdNarrows}{\mathrel}
1672 \mdsy@DeclareAlias{ncwgapcirculararrow}{MdNarrows}{\mathrel}
1673 \mdsy@DeclareSymbol{ncwcirculararrowright}{MdNarrows}{\mathrel}
1674 \mdsy@DeclareAlias{ncirculararrowright}{MdNarrows}{\mathrel}
1675 \mdsy@DeclareAlias{ncwopencirculararrow}{MdNarrows}{\mathrel}
1676 \mdsy@DeclareSymbol{ncwcirculararrowup}{MdNarrows}{\mathrel}
1677 \mdsy@DeclareSymbol{ncwcirculararrowleft}{MdNarrows}{\mathrel}
1678 \mdsy@DeclareSymbol{nRrightarrow}{MdNarrows}{\mathrel}
1679 \mdsy@DeclareSymbol{nUparrow}{MdNarrows}{\mathrel}
1680 \mdsy@DeclareSymbol{nLleftarrow}{MdNarrows}{\mathrel}
1681 \mdsy@DeclareSymbol{nDdownarrow}{MdNarrows}{\mathrel}
1682 \mdsy@DeclareSymbol{nlongrightarrow}{MdNarrows}{\mathrel}
1683 \mdsy@DeclareSymbol{nlongleftarrow}{MdNarrows}{\mathrel}
1684 \mdsy@DeclareSymbol{nLongrightarrow}{MdNarrows}{\mathrel}
1685 \mdsy@DeclareSymbol{nLongleftarrow}{MdNarrows}{\mathrel}

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1686 \mdsy@DeclareSymbol{nlongleftrightharpoon}{MdNarrows}{\mathrel}
1687 \mdsy@DeclareSymbol{nLongleftrightharpoon}{MdNarrows}{\mathrel}
1688 \mdsy@DeclareSymbol{nlongmapsto}{MdNarrows}{\mathrel}
1689 \mdsy@DeclareSymbol{nlongmapsfrom}{MdNarrows}{\mathrel}
1690 \mdsy@DeclareSymbol{nLongmapsto}{MdNarrows}{\mathrel}
1691 \mdsy@DeclareSymbol{nLongmapsfrom}{MdNarrows}{\mathrel}
1692 \mdsy@DeclareSymbol{nlongrightwavyarrow}{MdNarrows}{\mathrel}
1693 \mdsy@DeclareAlias{nlongleadsto}{MdNarrows}{\mathrel}
1694 \mdsy@DeclareAlias{nlongrightsquigarrow}{MdNarrows}{\mathrel}
1695 \mdsy@DeclareSymbol{nlongleftwavyarrow}{MdNarrows}{\mathrel}
1696 \mdsy@DeclareAlias{nlongleftsquigarrow}{MdNarrows}{\mathrel}
1697 \mdsy@DeclareSymbol{nlongleftfootline}{MdNarrows}{\mathrel}
1698 \mdsy@DeclareAlias{nvlongdash}{MdNarrows}{\mathrel}
1699 \mdsy@DeclareSymbol{nlongrightfootline}{MdNarrows}{\mathrel}
1700 \mdsy@DeclareAlias{nlongdashv}{MdNarrows}{\mathrel}
1701 \mdsy@setslot{224}
1702 \mdsy@DeclareSymbol{nrightvdash}{MdNarrows}{\mathrel}
1703 \mdsy@DeclareAlias{nvDash}{MdNarrows}{\mathrel}
1704 \mdsy@DeclareSymbol{nupvdash}{MdNarrows}{\mathrel}
1705 \mdsy@DeclareAlias{nperp}{MdNarrows}{\mathrel}
1706 \mdsy@DeclareSymbol{nleftvdash}{MdNarrows}{\mathrel}
1707 \mdsy@DeclareAlias{ndashv}{MdNarrows}{\mathrel}
1708 \mdsy@DeclareSymbol{ndownvdash}{MdNarrows}{\mathrel}
1709 \mdsy@DeclareSymbol{nrightassert}{MdNarrows}{\mathrel}
1710 \mdsy@DeclareAlias{nassert}{MdNarrows}{\mathrel}
1711 \mdsy@DeclareAlias{nshortrighttack}{MdNarrows}{\mathrel}
1712 \mdsy@DeclareSymbol{nupassert}{MdNarrows}{\mathrel}
1713 \mdsy@DeclareAlias{nshortuptack}{MdNarrows}{\mathrel}
1714 \mdsy@DeclareSymbol{nleftassert}{MdNarrows}{\mathrel}
1715 \mdsy@DeclareAlias{nshortlefttack}{MdNarrows}{\mathrel}
1716 \mdsy@DeclareSymbol{ndownassert}{MdNarrows}{\mathrel}
1717 \mdsy@DeclareAlias{nshortdowntack}{MdNarrows}{\mathrel}
1718 \mdsy@DeclareSymbol{nrightvDash}{MdNarrows}{\mathrel}
1719 \mdsy@DeclareAlias{nvDash}{MdNarrows}{\mathrel}
1720 \mdsy@DeclareSymbol{nupvDash}{MdNarrows}{\mathrel}
1721 \mdsy@DeclareAlias{nVbar}{MdNarrows}{\mathrel}
1722 \mdsy@DeclareSymbol{nleftvDash}{MdNarrows}{\mathrel}
1723 \mdsy@DeclareAlias{nDashv}{MdNarrows}{\mathrel}
1724 \mdsy@DeclareSymbol{ndownvDash}{MdNarrows}{\mathrel}
1725 \mdsy@DeclareAlias{nbarV}{MdNarrows}{\mathrel}
1726 \mdsy@DeclareSymbol{nrightmodels}{MdNarrows}{\mathrel}
1727 \mdsy@DeclareAlias{nmodels}{MdNarrows}{\mathrel}
1728 \mdsy@DeclareSymbol{nupmodels}{MdNarrows}{\mathrel}
1729 \mdsy@DeclareSymbol{nleftmodels}{MdNarrows}{\mathrel}
1730 \mdsy@DeclareSymbol{ndownmodels}{MdNarrows}{\mathrel}

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1731 \mdsy@DeclareSymbol{nrightVdash}{MdNarrows}{\mathrel}
1732 \mdsy@DeclareAlias{nVdash}{MdNarrows}{\mathrel}
1733 \mdsy@DeclareSymbol{nupVdash}{MdNarrows}{\mathrel}
1734 \mdsy@DeclareSymbol{nleftVdash}{MdNarrows}{\mathrel}
1735 \mdsy@DeclareAlias{ndashV}{MdNarrows}{\mathrel}
1736 \mdsy@DeclareSymbol{ndownVdash}{MdNarrows}{\mathrel}
1737 \mdsy@DeclareSymbol{nrightAssert}{MdNarrows}{\mathrel}
1738 \mdsy@DeclareAlias{nAssert}{MdNarrows}{\mathrel}
1739 \mdsy@DeclareSymbol{nupAssert}{MdNarrows}{\mathrel}
1740 \mdsy@DeclareAlias{nvBar}{MdNarrows}{\mathrel}
1741 \mdsy@DeclareSymbol{nleftAssert}{MdNarrows}{\mathrel}
1742 \mdsy@DeclareSymbol{ndownAssert}{MdNarrows}{\mathrel}
1743 \mdsy@DeclareAlias{nBarv}{MdNarrows}{\mathrel}
1744 \mdsy@DeclareSymbol{nrightVDash}{MdNarrows}{\mathrel}
1745 \mdsy@DeclareAlias{nVDash}{MdNarrows}{\mathrel}
1746 \mdsy@DeclareSymbol{nupVDash}{MdNarrows}{\mathrel}
1747 \mdsy@DeclareSymbol{nleftVDash}{MdNarrows}{\mathrel}
1748 \mdsy@DeclareAlias{nDashV}{MdNarrows}{\mathrel}
1749 \mdsy@DeclareSymbol{ndownVDash}{MdNarrows}{\mathrel}
1750 \mdsy@DeclareSymbol{nVvdash}{MdNarrows}{\mathrel}
1751 \mdsy@DeclareSymbol{ndashVv}{MdNarrows}{\mathrel}
1752 \mdsy@DeclareSymbol{nvDdash}{MdNarrows}{\mathrel}
1753 \mdsy@DeclareSymbol{nDdashv}{MdNarrows}{\mathrel}

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#### MdSymbolE: large operators

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1754 \mdsy@setslot{0}
1755 \mdsy@DeclareSymbol{tbigplus}{MdLargesymbols}{\mathop}
1756 \mdsy@DeclareSymbol{dbigplus}{MdLargesymbols}{\mathop}
1757 \mdsy@DeclareSymbol{tbigtimes}{MdLargesymbols}{\mathop}
1758 \mdsy@DeclareSymbol{dbigtimes}{MdLargesymbols}{\mathop}
1759 \mdsy@DeclareSymbol{tbigwedge}{MdLargesymbols}{\mathop}
1760 \mdsy@DeclareSymbol{dbigwedge}{MdLargesymbols}{\mathop}
1761 \mdsy@DeclareSymbol{tbigvee}{MdLargesymbols}{\mathop}
1762 \mdsy@DeclareSymbol{dbigvee}{MdLargesymbols}{\mathop}
1763 \mdsy@DeclareSymbol{tbigwedgedot}{MdLargesymbols}{\mathop}
1764 \mdsy@DeclareSymbol{dbigwedgedot}{MdLargesymbols}{\mathop}
1765 \mdsy@DeclareSymbol{tbigveedot}{MdLargesymbols}{\mathop}
1766 \mdsy@DeclareSymbol{dbigveedot}{MdLargesymbols}{\mathop}
1767 \mdsy@DeclareSymbol{tbigdoublewedge}{MdLargesymbols}{\mathop}
1768 \mdsy@DeclareAlias{tconjquant}{MdLargesymbols}{\mathop}
1769 \mdsy@DeclareSymbol{dbigdoublewedge}{MdLargesymbols}{\mathop}
1770 \mdsy@DeclareAlias{dconjquant}{MdLargesymbols}{\mathop}
1771 \mdsy@DeclareSymbol{tbigdoublevee}{MdLargesymbols}{\mathop}
1772 \mdsy@DeclareAlias{tdisjquant}{MdLargesymbols}{\mathop}
1773 \mdsy@DeclareSymbol{dbigdoublevee}{MdLargesymbols}{\mathop}
1774 \mdsy@DeclareAlias{ddisjquant}{MdLargesymbols}{\mathop}

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1775 \mdsy@DeclareSymbol{tbigcurlywedge}{MdLargesymbols}{\mathop}
1776 \mdsy@DeclareSymbol{dbigcurlywedge}{MdLargesymbols}{\mathop}
1777 \mdsy@DeclareSymbol{tbigcurlyvee}{MdLargesymbols}{\mathop}
1778 \mdsy@DeclareSymbol{dbigcurlyvee}{MdLargesymbols}{\mathop}
1779 \mdsy@DeclareSymbol{tbigcap}{MdLargesymbols}{\mathop}
1780 \mdsy@DeclareSymbol{dbigcap}{MdLargesymbols}{\mathop}
1781 \mdsy@DeclareSymbol{tbigcup}{MdLargesymbols}{\mathop}
1782 \mdsy@DeclareSymbol{dbigcup}{MdLargesymbols}{\mathop}
1783 \mdsy@DeclareSymbol{tbigcapdot}{MdLargesymbols}{\mathop}
1784 \mdsy@DeclareSymbol{dbigcapdot}{MdLargesymbols}{\mathop}
1785 \mdsy@DeclareSymbol{tbigcupdot}{MdLargesymbols}{\mathop}
1786 \mdsy@DeclareSymbol{dbigcupdot}{MdLargesymbols}{\mathop}
1787 \mdsy@DeclareSymbol{tbigcapplus}{MdLargesymbols}{\mathop}
1788 \mdsy@DeclareSymbol{dbigcapplus}{MdLargesymbols}{\mathop}
1789 \mdsy@DeclareSymbol{tbigcupplus}{MdLargesymbols}{\mathop}
1790 \mdsy@DeclareAlias{tbiguplus}{MdLargesymbols}{\mathop}
1791 \mdsy@DeclareSymbol{dbigcupplus}{MdLargesymbols}{\mathop}
1792 \mdsy@DeclareAlias{dbiguplus}{MdLargesymbols}{\mathop}
1793 \mdsy@DeclareSymbol{tbigsqcap}{MdLargesymbols}{\mathop}
1794 \mdsy@DeclareSymbol{dbigsqcap}{MdLargesymbols}{\mathop}
1795 \mdsy@DeclareSymbol{tbigsqcup}{MdLargesymbols}{\mathop}
1796 \mdsy@DeclareSymbol{dbigsqcup}{MdLargesymbols}{\mathop}
1797 \mdsy@DeclareSymbol{tbigsqcapdot}{MdLargesymbols}{\mathop}
1798 \mdsy@DeclareSymbol{dbigsqcapdot}{MdLargesymbols}{\mathop}
1799 \mdsy@DeclareSymbol{tbigsqcupdot}{MdLargesymbols}{\mathop}
1800 \mdsy@DeclareSymbol{dbigsqcupdot}{MdLargesymbols}{\mathop}
1801 \mdsy@DeclareSymbol{tbigsqcapplus}{MdLargesymbols}{\mathop}
1802 \mdsy@DeclareSymbol{dbigsqcapplus}{MdLargesymbols}{\mathop}
1803 \mdsy@DeclareSymbol{tbigsqcupplus}{MdLargesymbols}{\mathop}
1804 \mdsy@DeclareSymbol{dbigsqcupplus}{MdLargesymbols}{\mathop}
1805 \mdsy@DeclareSymbol{tbigoplus}{MdLargesymbols}{\mathop}
1806 \mdsy@DeclareSymbol{dbigoplus}{MdLargesymbols}{\mathop}
1807 \mdsy@DeclareSymbol{tbigotimes}{MdLargesymbols}{\mathop}
1808 \mdsy@DeclareSymbol{dbigotimes}{MdLargesymbols}{\mathop}
1809 \mdsy@DeclareSymbol{tbigodot}{MdLargesymbols}{\mathop}
1810 \mdsy@DeclareSymbol{dbigodot}{MdLargesymbols}{\mathop}
1811 \mdsy@DeclareSymbol{tbigooast}{MdLargesymbols}{\mathop}
1812 \mdsy@DeclareSymbol{dbigoast}{MdLargesymbols}{\mathop}
1813 \mdsy@DeclareSymbol{tprod}{MdLargesymbols}{\mathop}
1814 \mdsy@DeclareSymbol{dprod}{MdLargesymbols}{\mathop}
1815 \mdsy@DeclareSymbol{tcoprod}{MdLargesymbols}{\mathop}
1816 \mdsy@DeclareSymbol{dcoprod}{MdLargesymbols}{\mathop}
1817 \mdsy@DeclareSymbol{tsum}{MdLargesymbols}{\mathop}
1818 \mdsy@DeclareSymbol{dsum}{MdLargesymbols}{\mathop}
1819 \mdsy@DeclareSymbol{tosum}{MdLargesymbols}{\mathop}

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1820 \mdsy@DeclareAlias{tmodtwosum}{MdLargesymbols}{\mathop}
1821 \mdsy@DeclareSymbol{dosum}{MdLargesymbols}{\mathop}
1822 \mdsy@DeclareAlias{dmodtwosum}{MdLargesymbols}{\mathop}
1823 \mdsy@DeclareSymbol{tint}{MdLargesymbols}{\mathop}
1824 \mdsy@DeclareSymbol{dint}{MdLargesymbols}{\mathop}
1825 \mdsy@DeclareSymbol{tiint}{MdLargesymbols}{\mathop}
1826 \mdsy@DeclareSymbol{diint}{MdLargesymbols}{\mathop}
1827 \mdsy@DeclareSymbol{tiiint}{MdLargesymbols}{\mathop}
1828 \mdsy@DeclareSymbol{diiint}{MdLargesymbols}{\mathop}
1829 \mdsy@DeclareSymbol{tiiiint}{MdLargesymbols}{\mathop}
1830 \mdsy@DeclareSymbol{diiiint}{MdLargesymbols}{\mathop}
1831 \mdsy@DeclareSymbol{tidotsint}{MdLargesymbols}{\mathop}
1832 \mdsy@DeclareAlias{tdotsint}{MdLargesymbols}{\mathop}
1833 \mdsy@DeclareSymbol{didotsint}{MdLargesymbols}{\mathop}
1834 \mdsy@DeclareAlias{ddotsint}{MdLargesymbols}{\mathop}
1835 \mdsy@DeclareSymbol{tlandupint}{MdLargesymbols}{\mathop}
1836 \mdsy@DeclareAlias{tintclockwise}{MdLargesymbols}{\mathop}
1837 \mdsy@DeclareSymbol{dlandupint}{MdLargesymbols}{\mathop}
1838 \mdsy@DeclareAlias{dintclockwise}{MdLargesymbols}{\mathop}
1839 \mdsy@DeclareSymbol{tlanddownint}{MdLargesymbols}{\mathop}
1840 \mdsy@DeclareAlias{tawint}{MdLargesymbols}{\mathop}
1841 \mdsy@DeclareAlias{tintctrclockwise}{MdLargesymbols}{\mathop}
1842 \mdsy@DeclareSymbol{dlanddownint}{MdLargesymbols}{\mathop}
1843 \mdsy@DeclareAlias{dawint}{MdLargesymbols}{\mathop}
1844 \mdsy@DeclareAlias{dintctrclockwise}{MdLargesymbols}{\mathop}
1845 \mdsy@DeclareSymbol{tintbar}{MdLargesymbols}{\mathop}
1846 \mdsy@DeclareSymbol{dintbar}{MdLargesymbols}{\mathop}
1847 \mdsy@DeclareSymbol{tintBar}{MdLargesymbols}{\mathop}
1848 \mdsy@DeclareSymbol{dintBar}{MdLargesymbols}{\mathop}
1849 \mdsy@DeclareSymbol{tfint}{MdLargesymbols}{\mathop}
1850 \mdsy@DeclareSymbol{dfint}{MdLargesymbols}{\mathop}
1851 \mdsy@DeclareSymbol{toint}{MdLargesymbols}{\mathop}
1852 \mdsy@DeclareSymbol{doint}{MdLargesymbols}{\mathop}
1853 \mdsy@DeclareSymbol{tooint}{MdLargesymbols}{\mathop}
1854 \mdsy@DeclareSymbol{doiint}{MdLargesymbols}{\mathop}
1855 \mdsy@DeclareSymbol{toiiint}{MdLargesymbols}{\mathop}
1856 \mdsy@DeclareSymbol{doiiint}{MdLargesymbols}{\mathop}
1857 \mdsy@DeclareSymbol{trcircularrightint}{MdLargesymbols}{\mathop}
1858 \mdsy@DeclareAlias{tointctrclockwise}{MdLargesymbols}{\mathop}
1859 \mdsy@DeclareSymbol{drcircularrightint}{MdLargesymbols}{\mathop}
1860 \mdsy@DeclareAlias{dointctrclockwise}{MdLargesymbols}{\mathop}
1861 \mdsy@DeclareSymbol{tlcircularrightint}{MdLargesymbols}{\mathop}
1862 \mdsy@DeclareAlias{tvarointclockwise}{MdLargesymbols}{\mathop}
1863 \mdsy@DeclareSymbol{dlcircularrightint}{MdLargesymbols}{\mathop}
1864 \mdsy@DeclareAlias{dvarointclockwise}{MdLargesymbols}{\mathop}

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1865 \mdsy@DeclareSymbol{trcircleleftint}{MdLargesymbols}{\mathop}
1866 \mdsy@DeclareAlias{tvarointctrclockwise}{MdLargesymbols}{\mathop}
1867 \mdsy@DeclareSymbol{drcircleleftint}{MdLargesymbols}{\mathop}
1868 \mdsy@DeclareAlias{dvarointctrclockwise}{MdLargesymbols}{\mathop}
1869 \mdsy@DeclareSymbol{tlcircleleftint}{MdLargesymbols}{\mathop}
1870 \mdsy@DeclareAlias{tointclockwise}{MdLargesymbols}{\mathop}
1871 \mdsy@DeclareSymbol{dlcircleleftint}{MdLargesymbols}{\mathop}
1872 \mdsy@DeclareAlias{dointclockwise}{MdLargesymbols}{\mathop}
1873 \mdsy@DeclareSymbol{tsumint}{MdLargesymbols}{\mathop}
1874 \mdsy@DeclareSymbol{dsumint}{MdLargesymbols}{\mathop}
1875 %\let\intop\tint
1876 %\let\ointop\toint
1877
1878 \mdsy@DeclareOperator{bigplus}{\dbigplus}{\tbigplus}
1879 \mdsy@DeclareOperator{bigtimes}{\dbigtimes}{\tbigtimes}
1880 \mdsy@DeclareOperator{bigwedge}{\dbigwedge}{\tbigwedge}
1881 \mdsy@DeclareOperator{bigvee}{\dbigvee}{\tbigvee}
1882 \mdsy@DeclareOperator{bigwedgedot}{\dbigwedgedot}{\tbigwedgedot}
1883 \mdsy@DeclareOperator{bigveedot}{\dbigveedot}{\tbigveedot}
1884 \mdsy@DeclareOperator{bigdoublewedge}{\dbigdoublewedge}{\tbigdoublewedge}
1885 \mdsy@DeclareOperator{conjquant}{\dconjquant}{\tconjquant}
1886 \mdsy@DeclareOperator{bigdoublevee}{\dbigdoublevee}{\tbigdoublevee}
1887 \mdsy@DeclareOperator{disjquant}{\ddisjquant}{\tdisjquant}
1888 \mdsy@DeclareOperator{bigcurlywedge}{\dbigcurlywedge}{\tbigcurlywedge}
1889 \mdsy@DeclareOperator{bigcurlyvee}{\dbigcurlyvee}{\tbigcurlyvee}
1890 \mdsy@DeclareOperator{bigcurlywedgedot}{\dbigcurlywedgedot}{\tbigcurlywedgedot}
1891 \mdsy@DeclareOperator{bigcurlyveedot}{\dbigcurlyveedot}{\tbigcurlyveedot}
1892 \mdsy@DeclareOperator{bigdoublecurlywedge}{\dbigdoublecurlywedge}{\tbigdoublecurlywed}
1893 \mdsy@DeclareOperator{bigdoublecurlyvee}{\dbigdoublecurlyvee}{\tbigdoublecurlyvee}
1894 \mdsy@DeclareOperator{bigcap}{\dbigcap}{\tbigcap}
1895 \mdsy@DeclareOperator{bigcup}{\dbigcup}{\tbigcup}
1896 \mdsy@DeclareOperator{bigcapdot}{\dbigcapdot}{\tbigcapdot}
1897 \mdsy@DeclareOperator{bigcupdot}{\dbigcupdot}{\tbigcupdot}
1898 \mdsy@DeclareOperator{bigcapplus}{\dbigcapplus}{\tbigcapplus}
1899 \mdsy@DeclareOperator{bigcupplus}{\dbigcupplus}{\tbigcupplus}
1900 \mdsy@DeclareOperator{biguplus}{\dbiguplus}{\tbiguplus}
1901 \mdsy@DeclareOperator{bigsqcap}{\dbigsqcap}{\tbigsqcap}
1902 \mdsy@DeclareOperator{bigsqcup}{\dbigsqcup}{\tbigsqcup}
1903 \mdsy@DeclareOperator{bigsqcapdot}{\dbigsqcapdot}{\tbigsqcapdot}
1904 \mdsy@DeclareOperator{bigsqcupdot}{\dbigsqcupdot}{\tbigsqcupdot}
1905 \mdsy@DeclareOperator{bigsqcapplus}{\dbigsqcapplus}{\tbigsqcapplus}
1906 \mdsy@DeclareOperator{bigsqcupplus}{\dbigsqcupplus}{\tbigsqcupplus}
1907 \mdsy@DeclareOperator{bigoplus}{\dbigoplus}{\tbigoplus}
1908 \mdsy@DeclareOperator{bigotimes}{\dbigotimes}{\tbigotimes}
1909 \mdsy@DeclareOperator{bigodot}{\dbigodot}{\tbigodot}

```

```

1910 \mdsy@DeclareOperator{bigoast}{\dbigoast}{\tbigoast}
1911 \mdsy@DeclareOperator{sum}{\dsum}{\tsum}
1912 \mdsy@DeclareOperator{osum}{\dosum}{\tosum}
1913 \mdsy@DeclareOperator{modtwosum}{\dmodtwosum}{\tmodtwosum}
1914 \mdsy@DeclareOperator{prod}{\dprod}{\tprod}
1915 \mdsy@DeclareOperator{coprod}{\dcoprod}{\tcoprod}
1916 \mdsy@DeclareIntegral{int}{\dint}{\tint}
1917 \mdsy@DeclareIntegral{iint}{\diint}{\tiint}
1918 \mdsy@DeclareIntegral{iiint}{\diiint}{\tiiint}
1919 \mdsy@DeclareIntegral{iiiint}{\diiiint}{\tiiiint}
1920 \mdsy@DeclareIntegral{idotsint}{\didotsint}{\tidotsint}
1921 \mdsy@DeclareIntegral{dotsint}{\ddotsint}{\tdotsint}
1922 \mdsy@DeclareIntegral{landupint}{\dlandupint}{\tlandupint}
1923 \mdsy@DeclareIntegral{intclockwise}{\dintclockwise}{\tintclockwise}
1924 \mdsy@DeclareIntegral{landdownint}{\dlanddownint}{\tlanddownint}
1925 \mdsy@DeclareIntegral{awint}{\dawint}{\tawint}
1926 \mdsy@DeclareIntegral{intctrclockwise}{\dintctrclockwise}{\tintctrclockwise}
1927 \mdsy@DeclareIntegral{landdownint}{\dlanddownint}{\tlanddownint}
1928 \mdsy@DeclareIntegral{intbar}{\dintbar}{\tintbar}
1929 \mdsy@DeclareIntegral{intBar}{\dintBar}{\tintBar}
1930 \mdsy@DeclareIntegral{fint}{\dfint}{\tfint}
1931 \mdsy@DeclareIntegral{ooint}{\dooint}{\tooint}
1932 \mdsy@DeclareIntegral{oiint}{\doiint}{\toiint}
1933 \mdsy@DeclareIntegral{oiint}{\doiint}{\toiint}
1934 \mdsy@DeclareIntegral{rcircclerightint}{\drcircclerightint}{\trcircclerightint}
1935 \mdsy@DeclareIntegral{oointctrclockwise}{\doointctrclockwise}{\toointctrclockwise}
1936 \mdsy@DeclareIntegral{lrcircclerightint}{\dlrcircclerightint}{\tlrcircclerightint}
1937 \mdsy@DeclareIntegral{varointclockwise}{\dvarointclockwise}{\tvarointclockwise}
1938 \mdsy@DeclareIntegral{rcircleleftint}{\drcircleleftint}{\trcircleleftint}
1939 \mdsy@DeclareIntegral{varointctrclockwise}{\dvarointctrclockwise}{\tvarointctrclockwise}
1940 \mdsy@DeclareIntegral{lrcircleleftint}{\dlrcircleleftint}{\tlrcircleleftint}
1941 \mdsy@DeclareIntegral{oointclockwise}{\doointclockwise}{\toointclockwise}
1942 \mdsy@DeclareIntegral{sumint}{\dsumint}{\tsumint}
1943
1944 \mdsy@renewcommand{intkern@}{\mkern-8.5mu\mathchoice{\mkern-1mu}{-}{-}{-}}
1945 \mdsy@renewcommand{intdots@}{\mkern-6mu%
1946   \mathchoice{\@cdots}%
1947   {\{\cdotp\}\mkern0.5mu{\cdotp}\mkern0.5mu{\cdotp}}%
1948   {\{\cdotp\}{\cdotp}{\cdotp}}%
1949   {\{\cdotp\}{\cdotp}{\cdotp}}%
1950   \mkern-6mu}

```

#### Math accents.

```

1951 \mdsy@DeclareMathAccent{widehat}{\mathord}{MdLargesymbols}{72}
1952 \mdsy@DeclareMathAccent{widetilde}{\mathord}{MdLargesymbols}{78}
1953 \mdsy@DeclareMathAccent{wideparen}{\mathord}{MdLargesymbols}{7E}

```



```

1954 \mdsy@DeclareMathAccent{vec}{\mathord}{MdLargesymbols}{84}
1955 \mdsy@DeclareMathAccent{middlebar}{\mathord}{MdLargesymbols}{85}
1956 \mdsy@DeclareMathAccent{middleslash}{\mathord}{MdLargesymbols}{86}
1957 \mdsy@DeclareMathAccent{strokethrough}{\mathord}{MdLargesymbols}{87}

```

#### MdSymbolF: delimiters

```

1958 \ifmdsy@largedelims
1959 % \mdsy@DeclareOpen{(){MdDelimiters}{01}
1960 % \mdsy@DeclareClose{)}{MdDelimiters}{07}
1961 \mdsy@DeclareOpen{lparen}{MdDelimiters}{01}
1962 \mdsy@DeclareClose{rparen}{MdDelimiters}{07}
1963 % \mdsy@DeclareOpen{[]}{MdDelimiters}{13}
1964 % \mdsy@DeclareClose{[]}{MdDelimiters}{19}
1965 \mdsy@DeclareOpen{lbrack}{MdDelimiters}{13}
1966 \mdsy@DeclareClose{rbrack}{MdDelimiters}{19}
1967 \mdsy@DeclareOpen{lfloor}{MdDelimiters}{1F}
1968 \mdsy@DeclareClose{rfloor}{MdDelimiters}{25}
1969 \mdsy@DeclareOpen{lceil}{MdDelimiters}{2B}
1970 \mdsy@DeclareClose{rceil}{MdDelimiters}{31}
1971 \mdsy@DeclareOpen{ulcorner}{MdDelimiters}{37}
1972 \mdsy@DeclareClose{urcorner}{MdDelimiters}{3D}
1973 \mdsy@DeclareOpen{llcorner}{MdDelimiters}{43}
1974 \mdsy@DeclareClose{lrcorner}{MdDelimiters}{49}
1975 \mdsy@DeclareOpen{ulcorner}{MdDelimiters}{4F}
1976 \mdsy@DeclareClose{ulrcorner}{MdDelimiters}{55}
1977 \mdsy@DeclareOpen{lsem}{MdDelimiters}{61}
1978 \mdsy@DeclareClose{rsem}{MdDelimiters}{67}
1979 \mdsy@DeclareOpen{lBrack}{MdDelimiters}{61}
1980 \mdsy@DeclareClose{rBrack}{MdDelimiters}{67}
1981 \mdsy@DeclareOpen{lbrace}{MdDelimiters}{73}
1982 \mdsy@DeclareClose{rbrace}{MdDelimiters}{79}
1983 % \mdsy@DeclareOpen{<}{MdDelimiters}{86}
1984 % \mdsy@DeclareClose{>}{MdDelimiters}{8C}
1985 \mdsy@DeclareOpen{langle}{MdDelimiters}{86}
1986 \mdsy@DeclareClose{rangle}{MdDelimiters}{8C}
1987 \mdsy@DeclareOpen{lAngle}{MdDelimiters}{92}
1988 \mdsy@DeclareClose{rAngle}{MdDelimiters}{98}
1989 \mdsy@DeclareOpen{langledot}{MdDelimiters}{9E}
1990 \mdsy@DeclareClose{rangledot}{MdDelimiters}{A4}
1991 % \mdsy@DeclareDelimiter{/}{\mathord}{MdDelimiters}{AA}
1992 \mdsy@DeclareDelimiter{mathslash}{\mathord}{MdDelimiters}{AA}
1993 \mdsy@DeclareMathSymbol{divslash}{\mathbin}{MdDelimiters}{AA}
1994 \mdsy@DeclareDelimiter{backslash}{\mathord}{MdDelimiters}{B0}
1995 % \expandafter\DeclareMathDelimiter\@backslashchar%
1996 % {\mathord}{MdDelimiters}{B0}{MdDelimiters}{B0}
1997 \mdsy@DeclareMathSymbol{setminus}{\mathbin}{MdDelimiters}{B0}

```

```

1998 % \mdsy@DeclareDelimiter{|}{\mathord}{MdDelimiters}{"B7}
1999 \mdsy@DeclareDelimiter{vert}{\mathord}{MdDelimiters}{"B7}
2000 \mdsy@DeclareOpen{lvert}{MdDelimiters}{"B7}
2001 \mdsy@DeclareClose{rvert}{MdDelimiters}{"B7}
2002 \mdsy@DeclareMathSymbol{mid}{\mathrel}{MdDelimiters}{"B7}
2003 \mdsy@DeclareMathSymbol{nmid}{\mathrel}{MdDelimiters}{"BA}
2004 \mdsy@DeclareDelimiter{Vert}{\mathord}{MdDelimiters}{"BE}
2005 \mdsy@DeclareOpen{lVert}{MdDelimiters}{"BE}
2006 \mdsy@DeclareClose{rVert}{MdDelimiters}{"BE}
2007 \mdsy@DeclareMathSymbol{parallel}{\mathrel}{MdDelimiters}{"BE}
2008 \mdsy@DeclareMathSymbol{nparallel}{\mathrel}{MdDelimiters}{"C1}
2009 \mdsy@DeclareDelimiter{Vvert}{\mathord}{MdDelimiters}{"C4}
2010 \mdsy@DeclareOpen{lVvert}{MdDelimiters}{"C4}
2011 \mdsy@DeclareClose{rVvert}{MdDelimiters}{"C4}
2012 \else
2013 % \mdsy@DeclareOpen{()}{MdDelimiters}{"00}
2014 % \mdsy@DeclareClose{}{MdDelimiters}{"06}
2015 \mdsy@DeclareOpen{lparen}{MdDelimiters}{"00}
2016 \mdsy@DeclareClose{rparen}{MdDelimiters}{"06}
2017 % \mdsy@DeclareOpen{[]}{MdDelimiters}{"12}
2018 % \mdsy@DeclareClose{[]}{MdDelimiters}{"18}
2019 \mdsy@DeclareOpen{lbrack}{MdDelimiters}{"12}
2020 \mdsy@DeclareClose{rbrack}{MdDelimiters}{"18}
2021 \mdsy@DeclareOpen{lfloor}{MdDelimiters}{"1E}
2022 \mdsy@DeclareClose{rfloor}{MdDelimiters}{"24}
2023 \mdsy@DeclareOpen{lceil}{MdDelimiters}{"2A}
2024 \mdsy@DeclareClose{rceil}{MdDelimiters}{"30}
2025 \mdsy@DeclareOpen{ulcorner}{MdDelimiters}{"36}
2026 \mdsy@DeclareClose{urcorner}{MdDelimiters}{"3C}
2027 \mdsy@DeclareOpen{llcorner}{MdDelimiters}{"42}
2028 \mdsy@DeclareClose{lrcorner}{MdDelimiters}{"48}
2029 \mdsy@DeclareOpen{ullcorner}{MdDelimiters}{"4E}
2030 \mdsy@DeclareClose{ulrcorner}{MdDelimiters}{"54}
2031 \mdsy@DeclareOpen{lsem}{MdDelimiters}{"60}
2032 \mdsy@DeclareClose{rsem}{MdDelimiters}{"66}
2033 \mdsy@DeclareOpen{lBrack}{MdDelimiters}{"60}
2034 \mdsy@DeclareClose{rBrack}{MdDelimiters}{"66}
2035 \mdsy@DeclareOpen{lbrace}{MdDelimiters}{"72}
2036 \mdsy@DeclareClose{rbrace}{MdDelimiters}{"78}
2037 % \mdsy@DeclareOpen{<}{MdDelimiters}{"85}
2038 % \mdsy@DeclareClose{>}{MdDelimiters}{"8B}
2039 \mdsy@DeclareOpen{langle}{MdDelimiters}{"85}
2040 \mdsy@DeclareClose{rangle}{MdDelimiters}{"8B}
2041 \mdsy@DeclareOpen{lAngle}{MdDelimiters}{"91}
2042 \mdsy@DeclareClose{rAngle}{MdDelimiters}{"97}

```

```

2043 \mdsy@DeclareOpen{langledot}{MdDelimiters}{ "9D}
2044 \mdsy@DeclareClose{rangledot}{MdDelimiters}{ "A3}
2045 % \mdsy@DeclareDelimiter{/}{\mathord}{MdDelimiters}{ "A9}
2046 \mdsy@DeclareDelimiter{mathslash}{\mathord}{MdDelimiters}{ "A9}
2047 \mdsy@DeclareMathSymbol{divslash}{\mathbin}{MdDelimiters}{ "A9}
2048 \mdsy@DeclareDelimiter{backslash}{\mathord}{MdDelimiters}{ "AF}
2049 % \expandafter\DeclareMathDelimiter\@backslashchar%
2050 % {\mathord}{MdDelimiters}{ "AF}{MdDelimiters}{ "AF}
2051 \mdsy@DeclareMathSymbol{setminus}{\mathbin}{MdDelimiters}{ "AF}
2052 % \mdsy@DeclareDelimiter{|}{\mathord}{MdDelimiters}{ "B6}
2053 \mdsy@DeclareDelimiter{vert}{\mathord}{MdDelimiters}{ "B6}
2054 \mdsy@DeclareOpen{lvert}{MdDelimiters}{ "B6}
2055 \mdsy@DeclareClose{rvert}{MdDelimiters}{ "B6}
2056 \mdsy@DeclareMathSymbol{mid}{\mathrel}{MdDelimiters}{ "B6}
2057 \mdsy@DeclareMathSymbol{nmid}{\mathrel}{MdDelimiters}{ "B9}
2058 \mdsy@DeclareDelimiter{Vert}{\mathord}{MdDelimiters}{ "BD}
2059 \mdsy@DeclareOpen{lVert}{MdDelimiters}{ "BD}
2060 \mdsy@DeclareClose{rVert}{MdDelimiters}{ "BD}
2061 \mdsy@DeclareMathSymbol{parallel}{\mathrel}{MdDelimiters}{ "BD}
2062 \mdsy@DeclareMathSymbol{nparallel}{\mathrel}{MdDelimiters}{ "C0}
2063 \mdsy@DeclareDelimiter{Vvert}{\mathord}{MdDelimiters}{ "C3}
2064 \mdsy@DeclareOpen{lVvert}{MdDelimiters}{ "C3}
2065 \mdsy@DeclareClose{rVvert}{MdDelimiters}{ "C3}
2066 \fi
2067 \let\|\Vert
2068 \mdsy@renewcommand{divides}{\mid}
2069 \mdsy@renewcommand{ndivides}{\nmid}
2070 \mdsy@DeclareMathSymbol{shortmid}{\mathrel}{MdDelimiters}{ "B5}
2071 \mdsy@DeclareMathSymbol{nshortmid}{\mathrel}{MdDelimiters}{ "B8}
2072 \mdsy@DeclareMathSymbol{shortparallel}{\mathrel}{MdDelimiters}{ "BC}
2073 \mdsy@DeclareMathSymbol{nshortparallel}{\mathrel}{MdDelimiters}{ "BF}
2074 \mdsy@DeclareDelimiter{arrowvert}{\mathord}{MdDelimiters}{ "BB}
2075 \mdsy@DeclareDelimiter{Arrowvert}{\mathord}{MdDelimiters}{ "C2}
2076 \mdsy@DeclareClose{lgroup}{MdDelimiters}{ "7E}
2077 \mdsy@DeclareOpen{rgroup}{MdDelimiters}{ "7F}
2078 \mdsy@DeclareClose{rmoustache}{MdDelimiters}{ "80}
2079 \mdsy@DeclareOpen{lmoustache}{MdDelimiters}{ "81}
2080 \mdsy@DeclareDelimiter{bracevert}{\mathord}{MdDelimiters}{ "84}
2081
2082 \mdsy@DeclareMathDelimiter{uparrow}{\mathrel}{MdArrows}{ "01}{MdDelimiters}{ "C6}
2083 \mdsy@DeclareMathDelimiter{downarrow}{\mathrel}{MdArrows}{ "03}{MdDelimiters}{ "C7}
2084 \mdsy@DeclareMathDelimiter{updownarrow}{\mathrel}{MdArrows}{ "11}{MdDelimiters}{ "C8}
2085 \mdsy@DeclareMathDelimiter{Uparrow}{\mathrel}{MdArrows}{ "09}{MdDelimiters}{ "C9}
2086 \mdsy@DeclareMathDelimiter{Downarrow}{\mathrel}{MdArrows}{ "0B}{MdDelimiters}{ "CA}
2087 \mdsy@DeclareMathDelimiter{Updownarrow}{\mathrel}{MdArrows}{ "15}{MdDelimiters}{ "CB}

```

Horizontal braces.

```

2088 \mdsy@DeclareMathSymbol{braceld}{\mathord}{MdDelimiters}{CC}
2089 \mdsy@DeclareMathSymbol{bracelu}{\mathord}{MdDelimiters}{CD}
2090 \mdsy@DeclareMathSymbol{bracerd}{\mathord}{MdDelimiters}{CE}
2091 \mdsy@DeclareMathSymbol{braceru}{\mathord}{MdDelimiters}{CF}
2092 \mdsy@DeclareMathSymbol{bracemd}{\mathord}{MdDelimiters}{D0}
2093 \mdsy@DeclareMathSymbol{bracemu}{\mathord}{MdDelimiters}{D1}
2094 \mdsy@DeclareMathSymbol{bracemid}{\mathord}{MdDelimiters}{D2}
2095
2096 \mdsy@DeclareRobustCommandArg{bracefill@}{5}{%
2097   $\m@th#5#1\leaders\hbox{${\mathord{\mathrel{\mkern-1mu\mathrel{\mkern-1mu}}}}$}\hfill#2\leaders\hbox{${\mathord{\mathrel{\mkern-1mu\mathrel{\mkern-1mu}}}}$}\hfill#3$%
2098 }
2099 \mdsy@renewcommand{downbracefill@}{\bracefill@\braceld\bracemd\bracerd\bracemid}
2100 \mdsy@renewcommand{upbracefill@}{\bracefill@\bracelu\bracemu\braceru\bracemid}
2101 \mdsy@renewcommand{downgroupfill@}{\bracefill@\braceld{\bracerd\bracemid}}
2102 \mdsy@renewcommand{upgroupfill@}{\bracefill@\bracelu{\braceru\bracemid}}
2103 \mdsy@renewcommand{linesegmentfill@}{\arrowfill@\leftfootline\relbar\rightfootline}
2104 \mdsy@renewcommand{leftharpoonfill@}{\arrowfill@\leftharpoondown\relbar\relbar}
2105 \mdsy@renewcommand{rightharpoonfill@}{\arrowfill@\relbar\relbar\rightharpoonup}
2106
2107 \mdsy@DeclareRobustCommandArg{overbrace}{1}{%
2108   \mathop{\mathpalette{\overarrow@\downbracefill@}{#1}}\limits%
2109 }
2110 \mdsy@DeclareRobustCommandArg{underbrace}{1}{%
2111   \mathop{\mathpalette{\underarrow@\upbracefill@}{#1}}\limits%
2112 }
2113 \mdsy@DeclareRobustCommand{overgroup}{\mathpalette{\overarrow@\downgroupfill@}}
2114 \mdsy@DeclareRobustCommand{undergroup}{\mathpalette{\underarrow@\upgroupfill@}}
2115 \mdsy@DeclareRobustCommand{overlinesegment}{\mathpalette{\overarrow@\linesegmentfill@}}
2116 \mdsy@DeclareRobustCommand{overleftharpoon}{\mathpalette{\overarrow@\leftharpoonfill@}}
2117 \mdsy@DeclareRobustCommand{overrightharpoon}{\mathpalette{\overarrow@\rightharpoonfill@}}
2118 \mdsy@DeclareRobustCommand{underlinesegment}{\mathpalette{\underarrow@\linesegmentfill@}}

```

Radical symbols.

```

2119 \ifmdsy@largedelims
2120   \mdsy@DeclareMathRadical{sqrtsgn}{MdDelimiters}{D4}{MdDelimiters}{D4}
2121   \mdsy@DeclareMathSymbol{surd}{\mathop}{MdDelimiters}{D4}
2122 \else
2123   \mdsy@DeclareMathRadical{sqrtsgn}{MdDelimiters}{D3}{MdDelimiters}{D3}
2124   \mdsy@DeclareMathSymbol{surd}{\mathop}{MdDelimiters}{D3}
2125 \fi

```

In the  $n$ -th root, we don't want the  $n$  to come too close to the radical (adopted from package lucimatx).

```

2126 \mdsy@DeclareRobustCommandArg{r@t}{2}{\setbox\z@{\hbox{${\m@th#1\sqrt{#2}}$}}%
2127   \dimen@{\ht\z@ \advance\dimen@-\dp\z@}
2128   \mkern5mu\raise.6\dimen@{\copy\rootbox \mkern-8mu\box\z@}

```

Mathchars. If onlysansmath, we make certain single characters active to react on the mathversion.

```

2129 \AtBeginDocument{%
2130   \mdsy@DeclareActiveMathSymbol{+}{\mathbin}{MdSymbols}{11}
2131   \mdsy@DeclareActiveMathSymbol{-}{\mathbin}{MdSymbols}{0E}
2132   \mdsy@DeclareActiveMathSymbol{*}{\mathbin}{MdSymbols}{98}
2133   \mdsy@DeclareActiveMathSymbol{:}{\mathrel}{MdSymbols}{02}
2134   \mdsy@DeclareActiveMathSymbol{=}{\mathrel}{MdRelations}{00}
2135   \mdsy@DeclareActiveMathSymbol{<}{\mathrel}{MdRelations}{24}
2136   \mdsy@DeclareActiveMathSymbol{>}{\mathrel}{MdRelations}{25}
2137   \ifmdsy@largedelims
2138     \mdsy@DeclareActiveMathDelimiter{|}{\mathord}{MdDelimiters}{B7}
2139     \mdsy@DeclareActiveMathDelimiter{(}{\mathopen}{MdDelimiters}{01}
2140     \mdsy@DeclareActiveMathDelimiter{)}{\mathclose}{MdDelimiters}{07}
2141     \mdsy@DeclareActiveMathDelimiter{[}{\mathopen}{MdDelimiters}{13}
2142     \mdsy@DeclareActiveMathDelimiter{]}{\mathclose}{MdDelimiters}{19}
2143     \mdsy@DeclareActiveMathDelimiter{/}{\mathord}{MdDelimiters}{AA}
2144   \else
2145     \mdsy@DeclareActiveMathDelimiter{|}{\mathord}{MdDelimiters}{B6}
2146     \mdsy@DeclareActiveMathDelimiter{(}{\mathopen}{MdDelimiters}{00}
2147     \mdsy@DeclareActiveMathDelimiter{)}{\mathclose}{MdDelimiters}{06}
2148     \mdsy@DeclareActiveMathDelimiter{[}{\mathopen}{MdDelimiters}{12}
2149     \mdsy@DeclareActiveMathDelimiter{]}{\mathclose}{MdDelimiters}{18}
2150     \mdsy@DeclareActiveMathDelimiter{/}{\mathord}{MdDelimiters}{A9}
2151   \fi
2152   \ifmdsy@onlysansmath

```

amsmath and amsopn define commands which use the mathcode of some of the symbols above to define new math characters. Since the mathcode is out of the range (made active), this fails. So change the commands and make the definitions at the begin of the document.

```

2153   \def\resetMathstrut{%
2154     \setbox\z@\hbox{%
2155       \ifmathversionsans{%
2156         \mathchardef\@tempa\csname{@new\endcsname}%
2157       }{%
2158         \mathchardef\@tempa\csname{@old\endcsname}%
2159       }
2160       \def\@tempb##1"##2##3{\the\textfont"##3\char"}%
2161       \expandafter\@tempb\meaning\@tempa \relax
2162     }%
2163     \ht\Mathstrutbox@\ht\z@ \dp\Mathstrutbox@\dp\z@
2164   }
2165   \renewcommand{\std@minus}{-}
2166   \renewcommand{\std@equal}{=}
2167   \gdef\newmcodes@{\mathcode'\ '39\mathcode'\ *42\mathcode'\ ."613A%

```

```

2168      \ifnum\mathcode'\-45 \else
2169        \renewcommand{\std@minus}{-}\relax
2170      \fi
2171      \mathcode'\-45\mathcode'\-/47\mathcode'\:"603A\relax}
2172    \fi
2173  }

```

There is no `\not` symbol in MdSymbol since all relational symbols come with a stroked companion. For compatibility we define a `\not` command that places a virgule over the following symbol.

```

2174 \mdsy@DeclareRobustCommandArg{c@ncel}{2}{\m@th\oalign{${\hfil#1/\hfil$\crrc$#1#2$}}
2175 \mdsy@DeclareRobustCommandArg{not}{1}{\mathrel{\m@th\mathpalette{c@ncel{#1}}}}
2176 \</style>

```