FdSymbol: A Math Symbol Font

Michael Ummels v0.5 - 2011/03/30

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1 Introduction

FdSymbol is a font of mathematical symbols designed as a companion to Typotheque's Fedra family $^{\rm l}$, but it might also fit well to other contemporary type-faces. To use this font in a ${\tt LAT}_{\rm EX}$ document, add the command

\usepackage[\langle options \rangle] \{ fdsymbol \}

to the preamble of your document. This redefined most of the standard mathematical symbols and makes available many new ones (see Section 4). For the available options see Section 3.

 $^{^{1} \}verb|http://www.typotheque.com/fonts|$

Acknowledgements

The FdSymbol font is derived from MnSymbol², another math symbol font, designed by Achim Blumensath.

2 Interferences with other packages

The fdsymbol 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 fdsymbol or you can include the options in the \documentclass command.

3 Font selection

FdSymbol comes in four weights, which are (in increasing order) Book, Regular, Medium and Bold. Of these, Book and Regular are suitable for normal math typesetting, while Medium 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 Medium weight as the normal weight in math, add normalweight=Medium to the package options. Analogously, to use the Bold weight with \boldmath or \boldsymbol, add boldweight=Bold to the package options. By default, Book and Medium are used. Additionally, it is possible to use select a suitable weight automatically depending on the font size by selecting auto. For example, if you use the option normalweight=auto, the Book weight will be used for normal and large sizes, but the Regular weight will be used for small sizes (e.g. in sub- and superscripts).

In order to use FdSymbol 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 FdSymbol with a text font that has rather tall delimiters, such as Fedra Serif B. In fact, the height of normal delimiters will match the height of text delimiters in Fedra Serif B if you select this option.

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

²http://www.ctan.org/tex-archive/fonts/mnsymbol/

Key	Values
normalweight	Book*, Regular, auto
boldweight	Medium*, Bold, auto
scale	(factor)
largedelims	true, false*

4 Symbols

The fdsymbol package provides the following symbols.

4.1 Ordinary symbols

•••	\hdots		\mdwhtlozenge
:	\vdots	♦	\medblacklozenge,
\cdot	\udots, \adots		\blacklozenge,
٠.	\ddots		\mdlgblklozenge,
:•	\righttherefore		\mdblklozenge
$\ddot{\cdot}$	\uptherefore, \therefore	\Diamond	\lozengeminus
·:	\lefttherefore	$\stackrel{\wedge}{\Rightarrow}$	\largewhitestar
:	\downtherefore, \because	\star	\largeblackstar,\bigstar
::	\squaredots	∞	\infty
¬	\neg, \lnot	Τ	\bot
_	\backneg, \invnot, \invneg	Τ	\top
_	\turnedneg, \turnednot	_	\angle
_	\turnedbackneg	7	\revangle
\triangle	\largetriangleup	4	\measuredangle
∇	\largetriangledown	Δ	\revmeasuredangle,
Ø	\emptyset, \diameter,		\measuredangleleft
	\varnothing	∢	\sphericalangle
Ø	\revemptyset	A	\sphericalangleup
0	\largecircle, \lgwhtcircle	⊳	\sphericalangleleft,
lacktriangle	\largeblackcircle		\revsphericalangle, \gtlpar
	\largesquare, \lgwhtsquare	Α	\sphericalangledown
	\largeblacksquare,	L	\rightangle
	\lgblksquare	⊾	\measuredrightangle
\Diamond	\smalllozenge, \smwhtlozenge	ь	\rightanglesquare,
•	\smallblacklozenge,		\rightanglesqr
	\smblklozenge	₽	\measuredrightangledot,
\Diamond	\medlozenge, \lozenge,		\rightanglemdot
	\mdlgwhtlozenge,	1	\prime

\backprime ∂ \Game √ \checkmark \complement / \lightning, \downzigzagarrow \flat ♦ \diamondsuit \natural \vardiamondsuit \sharp ♡ \heartsuit X \aleph ♥ \varheartsuit \beth \spadesuit \gimel \clubsuit T \daleth ★ \maltese qw/ ☆ \starofdavid

 ∨ \sector
 / /, \mathslash

 ∀ \forall
 \ backslash

 ∃ \exists
 | |, \vert

 ∄ \nexists
 | \Vert

 ∃ \Finv
 | | \Vert

4.2 Binary operators

: \vdotdot \times \leftthreetimes . \udotdot \times \rightthreetimes . \ddotdot \times \dtimes,\btimes

-, \minus × \rtimes

/ \medslash, \smalldivslash \times, \ttimes

\ \medbackslash, \smallsetminus \kappa \ltimes + +, \plus \kappa \lrtimes

∴ \minusfdots
 ∴ \minusrdots
 ∴ \minusrdots
 ∴ \dotsminusdots
 ∴ \dotsminusdots
 ∴ \dotplus
 ∴ \div
 ∴ \div<

 $ilde{ u}$ \minushookdown $ilde{ u}$ \veedoublebar

- $\overline{\wedge}$ \doublebarwedge
- M \doublewedge, \wedgeonwedge
- w \doublevee, \veeonwee
- ∧ \curlywedge
- y \curlyvee
- ∧ \curlywedgedot
- v \curlyveedot
- w \doublecurlyvee
- ∪ \cup
- ∩ \cap
- ⊎ \doublecup, \Cup
- ∪ \cupdot
- ∩ \capdot
- ⊎ \cupplus, \uplus
- ∩ \capplus
- ⊔ \sqcup
- □ \sqcap
- □ \doublesqcup, \Sqcup
- \doublesqcap, \Sqcap
- ⊔ \sqcupdot
- □ \sqcapdot
- 世 \sqcupplus
- → \pullback
- ▷ \smalltriangleright
- △ \smalltriangleup

- ▶ \smallblacktriangleright
- ▲ \smallblacktriangleup
- √ \smallblacktriangleleft
- ▼ \smallblacktriangledown
- △ \medtriangleup,\triangle, \vartriangle

- √ \medtriangledown,
 \triangledown
- \medblacktriangleright,
 \blacktriangleright
- ▲ \medblacktriangleup, \blacktriangle
- √ medblacktriangleleft,
 \blacktriangleleft
- ▼ \medblacktriangledown, \blacktriangledown
- √ \bigtriangledown
- \smallcircle, \circ, \smwhtcircle
- \smallblackcircle, \bullet, \smblkcircle
- O \medcircle, \mdlgwhtcircle, \mdwhtcircle
- \medblackcircle, \mdlgblkcircle,\mdblkcircle
- ⊖ \ominus
- Φ \overt,\circledvert
- ⊘ \oslash
- ∌ \oplus
- ⊗ \otimes
- ⊙ \odot
- ⊚ \ocirc,\circledcirc
- ♦ \oast, \circledast
- ⊖ \odash,\circleddash
- ⊜ \oequal, \circledequal
- \bigcirc
- smallsquare, \smwhtsquare
- \smallblacksquare, \smblksquare
- □ \medsquare, \square, \Box, \mdlgwhtsquare, \mdwhtsquare
- ⊟ \boxminus
- □ \boxvert, \boxbar

⊞ \boxplus

□ \boxdot

\smalldiamond, \diamond,

\smwhtdiamond

♦ \smallblackdiamond,

\blackdiamond, \smblkdiamond

♦ \meddiamond, \Diamond,

 $\verb|\mdlgwhtdiamond|,$

\mdwhtdiamond

♦ \medblackdiamond,

\mdlgblkdiamond,
\mdblkdiamond

♦ \diamondminus

 \Diamond \diamondvert

♦ \diamondslash

♦ \diamondbackslash, \diamondbslash

♦ \diamondplus

♦ \diamondtimes

♦ \diamonddot, \diamondcdot

♦ \diamonddiamond

★ \smallblackstar, \star

☆ \medwhitestar

★ \medblackstar, \medstar

\frownsmile, \closure

* *,\ast

T \intercal

\wreath, \wr

u \amalg

√ \lhd

⊳ \rhd

\unlhd

≥ \unrhd

/ \divslash

\setminus

4.3 Relations

\simeq

 \simeq

≅

\backsimeq ≅ \smileeq

\cong = \eqcirc
\backcong = \circeq

<,\less ٦ \supset >, \gtr \subseteq \subseteq \leq , \leq ⊇ \supseteq ≤ \geq, \ge ⊑ \subseteqq ≥ ≤ \leqslant ₽ \supseteqq \Subset \geqslant ≽ ≦ \leqq \Supset \prec ≧ \geqq ≲ \lesssim \succ \gtrsim ≳ \preceq ≨ \lessapprox \succeq ≥ ≳ \gtrapprox \preccurlyeq ≶ \lessgtr ≽ \succcurlyeq ≷ \gtrless ≦ \preceqq ⋚ \lesseqgtr ≽ \succeqq ⋛ \gtreqless \precsim ≾ VIIV VIIV \lesseqqgtr \succsim ≿ \precapprox \gtreqqless ş \lesseqgtrslant \succapprox ⋛ \gtreqlessslant \lessdot **«** \11 \gtrdot \gg \leqdot >>> ⊴ ≪ \lll, \llless \geqdot \ggg,\gggtr \leqslantdot, \lesdot >>>> \lessclosed, \vartriangleleft \geqslantdot, \gesdot ◁ \gtrclosed, \vartriangleright < \eqslantless \triangleright \leqclosed, \trianglelefteq \eqslantgtr ⊴ \geqclosed, \trianglerighteq \curlyeqprec ⊵ \lesscc, \ltcc \curlyeqsucc ◁ \gtrcc, \gtcc \thicksim 0 ಶ \leqslcc, \lescc \thickapprox \rightarrow, \to ⊳ \geqslcc, \gescc \Box \sqsubset \uparrow 1 \Box \sqsupset \leftarrow, \gets ⊑ \sqsubseteq \downarrow \sqsupseteq ⊒ \nearrow

\nwarrow

\swarrow \searrow

\Uparrow

\Rightarrow

⊑

⊒

╚

□

\sqsubseteqq

\sqsupseteqq

\Sqsubset \Sqsupset

\subset

← \	Leftarrow
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- ↓ \Downarrow

- → \leftrightarrow
- \$\updownarrow
- ∠ \neswarrow
- \nwsearrow
- ⇔ \Leftrightarrow

- → \twoheadrightarrow
- † \twoheaduparrow
- ← \twoheadleftarrow
- ↓ \twoheaddownarrow

- ∠ \twoheadswarrow
- √ \twoheadsearrow
- → \rightarrowtail
- 1 \uparrowtail
- \downarrowtail
- → \nearrowtail
- \nwarrowtail
- ∠ \swarrowtail
- √ \searrowtail
- → \rightmapsto,\mapsto
- 1 \upmapsto, \mapsup
- ← \leftmapsto, \mapsfrom
- \downmapsto, \mapsdown
- √ \nemapsto
- √ \nwmapsto
- ∠ \swmapsto
- √ \semapsto
- → \lhookrightarrow,
 - \hookrightarrow
- ↑ \lhookuparrow

- ↓ \lhookdownarrow
- √ \lhooknearrow
- \\lhooknwarrow,\hknwarrow
- ∠ \lhookswarrow
- \ \lhooksearrow, \hksearrow
- → \rhookrightarrow
- \rhookuparrow
- - \hookleftarrow
- 1 \rhookdownarrow
- √ \rhooknwarrow
- ∠ \rhookswarrow, \hkswarrow
- √ \rhooksearrow
- → \rightharpoonup
- 1 \upharpoonleft
- ← \leftharpoondown
- | \downharpoonright
- √ \neharpoonnw
- \ \nwharpoonsw
- ∠ \swharpoonse
- √ \seharpoonne
- → \rightharpoondown
- \upharpoonright,\restriction
- ← \leftharpoonup
- \downharpoonleft
- \nwharpoonne
- √ \swharpoonnw
- √ \seharpoonsw
- → \leftrightharpoonupdown
- 1 \updownharpoonleftright
- Z \neswharpoonnwse
- \nwseharpoonnesw
- → \updownharpoonrightleft
- √ \neswharpoonsenw
- \nwseharpoonswne
- ⇒ \rightleftharpoons

- \updownharpoons,
 \updownharpoonsleftright
- /neswharpoons
- ≒ \leftrightharpoons
- ↑ \downupharpoons, \downupharpoonsleftright
- √ \swneharpoons
- √ \nwseharpoons
- → \rightbkarrow, \dashrightarrow, \dasharrow
- ↑ \upbkarrow
- \leftbkarrow, \dashleftarrow
- . \downbkarrow
- √ \nebkarrow
- \[
 \nwbkarrow
 \]
- √ \swbkarrow
- ` \sebkarrow
- → \rightspoon, \multimap
- \upspoon,\cirmid
- ← \leftspoon, \multimapinv
- \downspoon, \midcir
- → \rightblackspoon
- | \upblackspoon
- ← \leftblackspoon
- ↓ \downblackspoon
- → \rightpitchfork
- ← \leftpitchfork
- Ψ \downpitchfork
- ⇒ \rightrightarrows
- ↑ \upuparrows
- ↓ \downdownarrows
- ク \nenearrows
- √ \nwnwarrows
- √ \swswarrows
- √ \sesearrows
- ↑ \updownarrows
- ⟨ \neswarrows

- \nwsearrows
- ≒ \leftrightarrows
- ↓↑ \downuparrows
- √ \swnearrows
- √ \senwarrows
- → \rightlsquigarrow, \leadsto, \rightsquigarrow
- \uplsquigarrow
- \sim \leftlsquigarrow
- \downlsquigarrow
 }
- → \rightrsquigarrow,
- \uprsquigarrow
- \downrsquigarrow
- \$ \updownsquigarrow
- \$ \downupsquigarrow
- (\uplcurvearrow
- \sim \leftlcurvearrow
- \downlcurvearrow,
 \cwrightarcarrow

- √ \swlcurvearrow,
 - \cwundercurvearrow
- √ rightrcurvearrow, √acwunderarcarrow
- 5 \uprcurvearrow
- \leftrcurvearrow,
 \curvearrowleft,
 - \acwoverarcarrow
 - \downrcurvearrow,
 - \acwleftarcarrow

\sercurvearrow,
\ccwundercurvearrow

 \sim \leftrightcurvearrow

⟨ \updowncurvearrow

5 \downupcurvearrow

⊢ \leftfootline, \vlongdash

→ \rightfootline, \longdashv

() \acwcirclearrowleft, \circlearrowleft,

 $\verb|\acwopencirclearrow| \\$

\acwcirclearrowdown,
\acwgapcirclearrow

C \cwcirclearrowdown, \cwgapcirclearrow

C \cwcirclearrowright, \circlearrowright,

\cwopencirclearrow

○ \cwcirclearrowleft

⇒ \Rrightarrow

↑ \Uuparrow

← \Lleftarrow

← \Lsh

r \Rsh

↓ \Ldsh

\Rdsh

→ \looparrowright

← \looparrowleft

 \longrightarrow \longrightarrow

 \leftarrow \longleftarrow

 \longleftrightarrow \longleftrightarrow

 $\implies \verb|\Longrightarrow||$

 $\Leftarrow \Longleftarrow$

⇔\Longleftrightarrow

→ \longmapsto

→ \emptyblackspoon, \origof

→ \filledemptyspoon, \imageof

→ \leftrightspoon, \dualmap

→ \leftrightblackspoon

⊢ \rightvdash, \vdash, \assert

⊥ \upvdash, \perp

→ \leftvdash, \dashv

T \downvdash

⊨ \rightvDash, \vDash, \models

⊥ \upvDash, \Vbar

⇒ \leftvDash, \Dashv

π \downvDash,\barV

⊢ \rightVdash, \Vdash

⊥ \upVdash

| \rightVDash, \VDash

<u>↓</u> \upVDash

⇒ \leftVDash, \DashV

⊪ \Vvdash

/nequal, \neq, \ne

≠ \nequiv

√ \nsim

√ \nbacksim

≠ \nbacksimeq

≠ \neqsim

≢ \nbackcong

∮ \nbumpeqq

\ndoteq

\neqdot

+ \moquot

\nDoteq

\nfallingdotseq \ngtrclosed, \ntriangleright \nleqclosed, \ntrianglelefteq \nrisingdotseq \nsmile \ngeqclosed, \ntrianglerighteq \nfrown ø \nlesscc, \nltcc +

\nsmilefrown, \nasymp \ngtrcc, \ngtcc * \nfrownsmile, \nclosure \nleqslcc, \nlescc # \nsmileeq \ngeqslcc, \ngescc ¥

\nfrowneq, \narceq \nsqsubset ¢ # \neqcirc ⊅ \nsqsupset # # \ncirceq ⋢ \nsqsubseteq # \nwedgeq, \nhateq \nsqsupseteq ¥ \nveeeq ቜ \nsqsubseteqq # \nstareq \nsqsupseteqq ∄ # \ntriangleeq \nSqsubset \nin, \notin \nSqsupset ∉ ∌ ∌ \nowns, \nni ¢ \nsubset ≮ \nless \nsupset ⊅ \ngtr \nsubseteq * \nsupseteq ≰ \nleq ⊉

\nsubseteqq

\nsupseteqq \nleqslant \ngeqslant \nSubset \nleqq \n Supset \ngeqq \nprec \nlesssim \nsucc \ngtrsim ≰ \npreceq \nlessapprox \nsucceq ≱

\ngeq

≱

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≱ ≰

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≹

≵ \ngtrapprox \npreccurlyeq ≴ \nlessgtr \nsucccurlyeq ≹ \ngtrless \npreceqq ≰ \nlesseqgtr \nsucceqq \ngtreqless \nprecsim

≸ \nlesseqqgtr \nsuccsim , ≹ \ngtreqqless ≵ \nprecapprox ≸ \nlesseqgtrslant \nsuccapprox ≹ \ngtreqlessslant \nlessdot ≮ \nll \ngtrdot ≯ ≫ \ngg ≰ \nleqdot

≪ \nlll \ngeqdot ≱ >>> \nggg \nleqslantdot, \nlesdot \nlessclosed, \ntriangleleft \ngeqslantdot, \ngesdot * \neqslantless

* \neqslantgtr

* \ncurlyeqprec

* \ncurlyeqsucc

\$\timeqq\$

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\lambdacksimneqq\$

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\lambdacksimneqq\$

\$ \lneq
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₹

⊊

\$ \lneqq, \lvertneqq

\$ \gneqq, \gvertneqq

\lnsim ⋦ \gnsim ⋧ \lnapprox ≨ ≩ \gnapprox ≨ \lessneqqgtr ₹ \gtrneqqless ¥ \sqsubsetneq ⋥ \sqsupsetneq ⋤ \sqsubsetneqq

\sqsupsetneqq

⇒ \supsetneq, \varsupsetneq

⊊ \subsetneqq, \varsubsetneqq

⊋ \supsetneqq, \varsupsetneqq

\subsetneq, \varsubsetneq

⋨ \precneq ≱ \succneq \precneqq ≨ ≩ \succneqq \precnsim ⋨ \succnsim ⋩ ⋨ \precnapprox \succnapprox ≵

↑ \nuparrow

← \nleftarrow, \ngets

t \ndownarrow

x \nnearrow

x \nnwarrow

x \nswarrow

x \nsearrow

⇒ \nRightarrow

\nUparrow
\nLeftarrow
\nDownarrow
\nNearrow
\(\)\nNwarrow
\(\)\nSwarrow
\(\)\nSwarrow

/** \ntwoheadrightarrow

| \tau \ntwoheadleftarrow \
| \tau \ntwoheadleftarrow \
| \tau \ntwoheadlearrow \
| \tau \ntightarrowtail \
| \tau \nleftarrowtail \
| \tau \nleftarrowtail \
| \tau \nnearrowtail \\
| \tau \nnearrowtai

\nswarrowtail

% \nsearrowtail

 \nrightmapsto, \nmapsto

 \nupmapsto, \nmapsup

 \nleftmapsto, \nmapsfrom

 \ndownmapsto, \nmapsdown

% \nnemapsto
% \nnwmapsto
% \nswmapsto
% \nsemapsto

- \$ \nlhookuparrow
- √ \nlhookleftarrow
- f \nlhookdownarrow
- √ \nlhooknearrow
- % \nlhooknwarrow, \nhknwarrow
- ✗ \nlhookswarrow
- % \nlhooksearrow, \nhksearrow
- → \nrhookrightarrow
- † \nrhookuparrow
- \nrhookdownarrow
- % \nrhooknearrow, \nhknearrow
- √ \nrhooknwarrow
- √ \nrhooksearrow
- → \nrightharpoonup
- 1 \nupharpoonleft
- → \nleftharpoondown
- † \ndownharpoonright
- x \nneharpoonnw
- X \nswharpoonse
- √ \nseharpoonne
- → \nrightharpoondown
- \nupharpoonright,
 \nrestriction
- 4 \nleftharpoonup
- † \ndownharpoonleft
- √ \nneharpoonse
- \nnwharpoonne
- \nswharpoonnw
- \nseharpoonsw
- → \nleftrightharpoonupdown
- † \nupdownharpoonleftright
- // \nneswharpoonnwse
- // \nleftrightharpoondownup
- → \nupdownharpoonrightleft
- % \nnwseharpoonswne

-
 [↑] \nupdownharpoons,

\nupdownharpoonsleftright

- \nsenwharpoons
- # \nleftrightharpoons
- ∦ \ndownupharpoons,

\ndownupharpoonsleftright

- \nswneharpoons
- % \nnwseharpoons
- -/> \nrightbkarrow, \ndasharrow,
 \ndashrightarrow
- ↑ \nupbkarrow
- </- \nleftbkarrow, \ndashleftarrow</pre>
- \nnebkarrow
- √ \nnwbkarrow
- √ \nswbkarrow
- √ \nsebkarrow
- → \nrightspoon, \nmultimap
- nupspoon, \ncirmid
- → \nleftspoon, \nmultimapinv
- t \ndownspoon, \nmidcir
- √ \nrightblackspoon
- † \nupblackspoon
- + \nleftblackspoon
- → \nrightpitchfork
- ← \nleftpitchfork
- ₩ \ndownpitchfork
- ↑ \nupuparrows
- ♯ \nleftleftarrows
- ♦ \nnenearrows
- % \nswswarrows

- ₹ \nupdownarrows

- \nneswarrows
- \nnwsearrows
- \nleftrightarrows #
- \ndownuparrows Ħ
- \nswnearrows Ľν
- \nsenwarrows
- \nrightlsquigarrow, \nleadsto, \nrightsquigarrow
- \nuplsquigarrow ş
- \nleftlsquigarrow
- \ndownlsquigarrow 3
- \nrightrsquigarrow t4
- \nuprsquigarrow 7
- \nleftrsquigarrow, \nleftsquigarrow
- \ndownrsquigarrow £
- √ \nleftrightsquigarrow
- ž \nupdownsquigarrow
- \nrightleftsquigarrow
- \ndownupsquigarrow £
- \nrightlcurvearrow, \ncurvearrowright
- \nuplcurvearrow Ŧ
- \nleftlcurvearrow
- \ndownlcurvearrow, \ncwrightarcarrow
- \nnelcurvearrow
- た \nnwlcurvearrow
- \nswlcurvearrow, \ncwundercurvearrow
- \nselcurvearrow
- \nrightrcurvearrow, \nacwunderarcarrow
- 7 \nuprcurvearrow
- \nleftrcurvearrow,

\ncurvearrowleft, \nacwoverarcarrow

- { \ndownrcurvearrow, \nacwleftarcarrow
- ♪ \nnercurvearrow
- \nnwrcurvearrow

- \nswrcurvearrow
- \nsercurvearrow.

\nccwundercurvearrow

- \nleftrightcurvearrow
- ₹ \nupdowncurvearrow
- \nrightleftcurvearrow
- \ndownupcurvearrow
- \nneswcurvearrow
- \nnwsecurvearrow
- \nswnecurvearrow
- ⟨√ \nsenwcurvearrow
- \nleftfootline, \nvlongdash
- \nrightfootline, \nlongdashv
- ☼ \nacwcirclearrowup
- (/) \nacwcirclearrowleft, \ncirclearrowleft,

\nacwopencirclearrow

- \nacwcirclearrowdown, \nacwgapcirclearrow
- () \nacwcirclearrowright
- () \ncwcirclearrowdown, \ncwgapcirclearrow
- (/) \ncwcirclearrowright, \ncirclearrowright, \ncwopencirclearrow
- \ncwcirclearrowup
- \ncwcirclearrowleft
- \nRrightarrow
- \nUuparrow
- \nLleftarrow #
- \nDdownarrow
- \nrightvdash, \nvdash, \nassert
- \nupvdash, \nperp
- \nleftvdash, \ndashv
- \ndownvdash
- \nrightvDash, \nvDash, \nmodels
- \nupvDash, \nVbar #
- \nleftvDash, \nDashv
- \ndownvDash, \nbarV
- \nrightVdash, \nVdash
- \nupVdash

//I \nleftVdash, \ndashV ∞ \backpropto, propfrom ₹ \ndownVdash \times \crossing ⊯ \nrightVDash, \nVDash ≬ \between <u>★</u> \nupVDash)(\separated # \nleftVDash, \nDashV ₩ \ndownVDash \mid, \divides :,\mathratio ∤ \nshortmid :: \Colon ∤ \nmid, \ndivides - \relbar ⋈ \rJoin | \parallel ⋈ \bowtie,\Join \propto \propto, \varpropto ∦ \nparallel

4.4 Punctuation symbols

\cdotp : \colon, \mathcolon

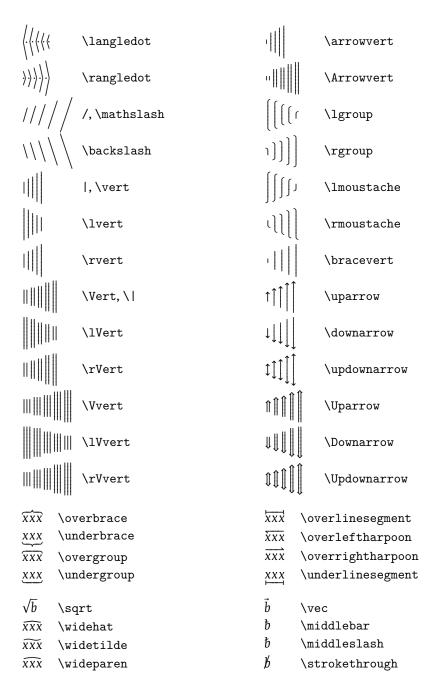
4.5 Large operators

+	+	\bigplus	(+)	+	\bigcapplus
\times	\times	\bigtimes	+	+	\bigcupplus, \biguplus
\land	\wedge	\bigwedge	П		\bigsqcap
V	\bigvee	\bigvee	\sqcup		\bigsqcup
\wedge	\wedge	\bigwedgedot	\Box		\bigsqcapdot
\forall	\bigvee	\bigveedot	oxdot	$\lfloor \cdot \rfloor$	\bigsqcupdot
M	M	\bigdoublewedge,	+	+	\bigsqcapplus
	VV //	\conjquant	+	+	\bigsqcupplus
W	W	\bigdoublevee, \disjquant	\oplus	$\overline{\bigoplus}$	\bigoplus
人	人	\bigcurlywedge	\otimes	\bigotimes	\bigotimes
Υ	Υ	\bigcurlyvee	\odot	$\widetilde{(\cdot)}$	\bigodot
\bigvee	\bigvee	\bigcurlywedgedot	\otimes	$\widecheck{\otimes}$	\bigoast
Υ	Υ	\bigcurlyveedot	П	П	\prod
从	从	\bigdoublecurlywedge	Ц	ÎÌ	\coprod
W	\mathbb{Y}	\bigdoublecurlyvee	Σ	\sum_{i}	\sum
\bigcap	\bigcap	\bigcap	\sum_{i}	<u>S</u>	\osum
\bigcup	\bigcup	\bigcup	ſ	ſ	\int
\cap	$\overline{\cap}$	\bigcapdot	J	J	/1110
\bigcup	$\overline{\cdot}$	\bigcupdot	\iint	JJ	\iint

```
∰ \oiiint
        \iiint
                                            \rcirclerightint,
                                              \ointctrclockwise
∫…∫ \… \idotsint, \dotsint
                                             \lcirclerightint,
        \landupint, \intclockwise
                                              \varointclockwise
                                            \rcircleleftint,
        \landdownint, \awint,
                                              \varointctrclockwise
          \ intctrclockwise
                                             \lcircleleftint,
        \ intbar
                                              \ointclockwise
        \intBar
                                             \sumint
        \fint
                                             \smallprod
                                             \smallcoprod
        \olimits
                                    ſ
                                        ſ
                                             \smallint
        \olimits
                                             \surd
```

4.6 Delimiters and accents

$\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left(\left($	(,\lparen	_ ,,,,	\lrcorner
)))))),\rparen	Lr _{rr}	\ullcorner
]]]]	[,\lbrack	,,,,,	\ulrcorner
]]]]]],\rbrack		\lsem,\lBrack
	\lfloor		\rsem, \rBrack
ا [ا	\rfloor	{{{{{	\lbrace,\{
[[[[]	\lceil	}}}}	\rbrace,\}
 	\rceil	$\langle \langle \langle \langle \langle \langle \rangle \rangle \rangle \rangle \rangle \rangle$	\langle
r _{rr}	\ulcorner	$\rangle\rangle\rangle\rangle\rangle$	\rangle
,,,,,,,	\urcorner	 	\lAngle
LLLL	\llcorner	" 》》》》》	\rAngle



4.7 Faked symbols

The following symbols are taken from the text font or another math font (in case of \mathbb{R} and \mathbb{I} m).

ℜ \Re \dagger † ‡ \ddagger ℑ \Im \mathparagraph ħ \hbar 1 \mathsection ħ \hslash \$ \mathdollar (R) \circledR £ \mathsterling ¥ \yen (s) \circledS

4.8 Missing symbols

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

\mho	\varkappa	\label{lhook}
\nabla	\Bbbk	\rhook
\eth	\backepsilon	\diagup
\digamma	$\mbox{\tt mapstochar}$	\diagdowr

5 Implementation

```
1 (*style)
2 \RequirePackage{xkeyval}
```

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

3 \define@boolkey{fdsymbol.sty}[fdsy@]{largedelims}[true]{}

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

- 4 \newcommand{\fdsy@scale}{1.0}
- 5 \define@key{fdsymbol.sty}{scale}{\renewcommand\fdsy@scale{#1}}

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

- 6 \newcommand\fdsy@mweight{Book}
- 7 \newcommand\fdsy@msweight{Book}
- 8 \newcommand\fdsy@bweight{Medium}
- ${\tt 9 \ low command \ fdsy@bsweight \{Medium\}}$

10 \define@choicekey*{fdsymbol.sty}{normalweight}[\@tempa\@tempb]{book,regular,auto}{%

- 11 \ifcase\@tempb\relax
- 12 \renewcommand\fdsy@mweight{Book}
- 13 \renewcommand\fdsy@msweight{Book}
- 14 \or
- 15 \renewcommand\fdsy@mweight{Regular}
- 16 \renewcommand\fdsy@msweight{Regular}
- 17 \or

```
\renewcommand\fdsy@mweight{Book}
18
      \renewcommand\fdsy@msweight{Regular}
19
20
    \fi
21 }
22 \define@choicekey*{fdsymbol.sty}{boldweight}[\@tempa\@tempb]{medium,bold,auto}{%
    \ifcase\@tempb\relax
23
      \renewcommand\fdsy@bweight{Medium}
24
25
      \renewcommand\fdsy@bsweight{Medium}
26
    \or
      \renewcommand\fdsy@bweight{Bold}
27
      \renewcommand\fdsy@bsweight{Bold}
28
29
      \renewcommand\fdsy@bweight{Medium}
30
      \renewcommand\fdsy@bsweight{Bold}
31
32
    \fi
33 }
34
35 \ExecuteOptionsX{largedelims=false}
36 \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.
37 \@ifpackageloaded{amsmath}{}{\RequirePackage{amsmath}}
38 \@ifpackageloaded{textcomp}{}{\RequirePackage{textcomp}}
39 \@ifundefined{mathfrak}{\RequirePackage{eufrak}}{}
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.
40 \iffdsy@largedelims
    \renewcommand{\Big}{\bBigg@{1.25}}
    \renewcommand{\bigg}{\bBigg@{1.66}}
    \renewcommand{\Bigg}{\bBigg@{2.08}}
44\fi
Some symbols missing from FdSymbol can be obtained from other fonts or by
combining several other symbols.
45 \DeclareRobustCommand{\dagger}{\fdsy@text{\textdagger}}
46 \DeclareRobustCommand{\ddagger}{\fdsy@text{\textdaggerdbl}}
47 \DeclareRobustCommand{\mathparagraph}{\fdsy@text{\textparagraph}}
48 \DeclareRobustCommand{\mathsection}{\fdsy@text{\textsection}}
49 \DeclareRobustCommand{\mathdollar}{\fdsy@text{\textdollar}}
50 \DeclareRobustCommand{\mathsterling}{\fdsy@text{\textsterling}}
51 \DeclareRobustCommand{\yen}{\fdsy@text{\textyen}}
52 \DeclareRobustCommand{\circledR}{\fdsy@text{\textcircled{%
    \check@mathfonts\fontsize\sf@size\z@\math@fontsfalse\selectfont R}}}
54 \DeclareRobustCommand{\circledS}{\fdsy@text{\textcircled{%
    \check@mathfonts\fontsize\sf@size\z@\math@fontsfalse\selectfont S}}}
```

```
56 \DeclareRobustCommand{\Re}{\mathfrak{R}}
57 \DeclareRobustCommand{\Im}{\mathfrak{I}}}
58 \DeclareRobustCommand{\dotplus}{\mathbin{\dot{+}}}
59 \DeclareRobustCommand{\dotcong}{\mathrel{\dot{\cong}}}
61 \DeclareRobustCommand{\thickapprox}{\mathrel{\text{\boldmath$\m@th\approx$}}}
62 \let\hbar\undefined
63 \let\hslash\undefined
64 \DeclareRobustCommand{\hbar}{\middlebar h}
65 \DeclareRobustCommand{\hslash}{\middleslash h}
66 \DeclareRobustCommand{\veebar}{\mathbin{\underline{\vee}}}
67 \DeclareRobustCommand{\barwedge}{\mathbin{\overline{\wedge}}}
68 \DeclareRobustCommand{\veedoublebar}{\mathbin{\underline{\underline{\vee}}}}
69 \DeclareRobustCommand{\doublebarwedge}{\mathbin{\overline{\overline{\wedge}}}}
70 \DeclareRobustCommand{\centerdot}{\mathbin{\rule{0.15em}{0.15em}}}
Unneeded partial symbols.
72 \let\mapstochar\undefined
73 \let\lhook\undefined
74 \let\rhook\undefined
Short hands to simplify the definitions below.
75 \newcommand\fdsy@setslot[1]{\@tempcnta #1\relax}
76 \newcommand\fdsy@nextslot{\advance\@tempcnta 1\relax}
77 \newcommand\fdsy@prevslot{\advance\@tempcnta-1\relax}
78
79 \newcommand\fdsy@@DeclareSymbol[4] {\DeclareMathSymbol{#2}{#3}{#4}{#1}}
80 \newcommand\fdsy@DeclareSymbol[3]{%
   \if\relax\noexpand#1\let#1\undefined\fi
   \expandafter\fdsy@@DeclareSymbol\expandafter{\the\@tempcnta}{#1}{#3}{#2}%
   \fdsy@nextslot
83
85 \newcommand\fdsy@DeclareAlias[3] {\fdsy@prevslot\fdsy@DeclareSymbol{#1}{#2}{#3}}
86 \newcommand\fdsy@DeclareOperator[3] {\def#1{\DOTSB#3\slimits@}}
87 \newcommand\fdsy@DeclareIntegral[3] {\def#1{\DOTSI#3\ilimits@}}
88 \newcommand\fdsy@DeclareDelimiter[4] {%
   \if\relax\noexpand#1\let#1\undefined\fi
   \DeclareMathDelimiter{#1}{#2}{#3}{#4}{#3}{#4}%
90
92 \newcommand\fdsy@DeclareOpen[3] {\fdsy@DeclareDelimiter{#1} {\mathopen} {#2} {#3}}
93 \newcommand\fdsy@DeclareClose[3] {\fdsy@DeclareDelimiter{#1} {\mathclose} {#2} {#3}}
Font definitions.
94 \DeclareFontFamily{U}{FdSymbolA}{}
95 \DeclareFontFamily{U}{FdSymbolB}{}
96 \DeclareFontFamily{U}{FdSymbolC}{}
```

```
97 \DeclareFontFamily{U}{FdSymbolD}{}
98 \DeclareFontFamily{U}{FdSymbolE}{}
99 \DeclareFontFamily{U}{FdSymbolF}{}
100
101 \DeclareFontShape{U}{FdSymbolA}{m}{n}{
102
       <-7.1> s * [\fdsy@scale] FdSymbolA-\fdsy@msweight
       <7.1-> s * [\fdsy@scale] FdSymbolA-\fdsy@mweight
103
104 } { }
105 \DeclareFontShape{U}{FdSymbolA}{b}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolA-\fdsy@bsweight
106
       <7.1-> s * [\fdsy@scale] FdSymbolA-\fdsy@bweight
107
108 }{}
109 \DeclareFontShape{U}{FdSymbolB}{m}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolB-\fdsy@msweight
110
111
       <7.1-> s * [\fdsy@scale] FdSymbolB-\fdsy@mweight
112 }{}
113 \DeclareFontShape{U}{FdSymbolB}{b}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolB-\fdsy@bsweight
114
       <7.1-> s * [\fdsy@scale] FdSymbolB-\fdsy@bweight
115
116 }{}
117 \DeclareFontShape{U}{FdSymbolC}{m}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolC-\fdsy@msweight
       <7.1-> s * [\fdsy@scale] FdSymbolC-\fdsy@mweight
119
120 }{}
121 \DeclareFontShape{U}{FdSymbolC}{b}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolC-\fdsy@bsweight
122
123
       <7.1-> s * [\fdsy@scale] FdSymbolC-\fdsy@bweight
124 }{}
125 \DeclareFontShape{U}{FdSymbolD}{m}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolD-\fdsy@msweight
126
       <7.1-> s * [\fdsy@scale] FdSymbolD-\fdsy@mweight
127
128 } { }
129 \DeclareFontShape{U}{FdSymbolD}{b}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolD-\fdsy@bsweight
130
       <7.1-> s * [\fdsy@scale] FdSymbolD-\fdsy@bweight
131
132 } { }
133 \ensuremath{\verb| DeclareFontShape{U}{FdSymbolE}{m}{n}{\{}}
       <-7.1> s * [\fdsy@scale] FdSymbolE-\fdsy@msweight
134
       <7.1-> s * [\fdsy@scale] FdSymbolE-\fdsy@mweight
135
136 }{}
137 \DeclareFontShape{U}{FdSymbolE}{b}{n}{
138
       <-7.1> s * [\fdsy@scale] FdSymbolE-\fdsy@bsweight
139
       <7.1-> s * [\fdsy@scale] FdSymbolE-\fdsy@bweight
140 }{}
141 \DeclareFontShape{U}{FdSymbolF}{m}{n}{
```

```
<-7.1> s * [\fdsy@scale] FdSymbolF-\fdsy@msweight
142
       <7.1-> s * [\fdsy@scale] FdSymbolF-\fdsy@mweight
143
144 }{}
145 \DeclareFontShape{U}{FdSymbolF}{b}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolF-\fdsy@bsweight
146
       <7.1-> s * [\fdsy@scale] FdSymbolF-\fdsy@bweight
147
148 } { }
149
150 \DeclareSymbolFont{symbols}{U}{FdSymbolA}{m}{n}
151 \DeclareSymbolFont{relations}{U}{FdSymbolB}{m}{n}
152 \DeclareSymbolFont{arrows}{U}{FdSymbolC}{m}{n}
153 \DeclareSymbolFont{narrows}{U}{FdSymbolD}{m}{n}
154 \DeclareSymbolFont{largesymbols}{U}{FdSymbolE}{m}{n}
155 \DeclareSymbolFont{delimiters}{U}{FdSymbolF}{m}{n}
156 \SetSymbolFont{symbols}{bold}{U}{FdSymbolA}{b}{n}
157 \SetSymbolFont{relations}{bold}{U}{FdSymbolB}{b}{n}
158 \SetSymbolFont{arrows}{bold}{U}{FdSymbolC}{b}{n}
159 \SetSymbolFont{narrows}{bold}{U}{FdSymbolD}{b}{n}
160 \SetSymbolFont{largesymbols}{bold}{U}{FdSymbolE}{b}{n}
161 \SetSymbolFont{delimiters}{bold}{U}{FdSymbolF}{b}{n}
At the moment, we still use cmsy for the calligraphic alphabet.
162 \DeclareMathAlphabet{\mathcal}{OMS}{cmsy}{m}{n}
163 \SetMathAlphabet{\mathcal}{bold}{OMS}{cmsy}{b}{n}
A command to take math symbols from text fonts.
164 \newcommand\fdsy@bold{bold}
165 \newcommand\fdsy@text[1] {%
     \ifx\fdsy@bold\math@version
       \text{\bfseries#1}%
167
168
       \text{\mdseries#1}%
169
170
    \fi
171 }
FdSymbolA: binary operators and ordinary symbols
172 \fdsy@setslot{0}
173 \fdsy@DeclareSymbol{\cdot}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\cdotp}{symbols}{\mathpunct}
175 \fdsy@DeclareSymbol{\hdotdot}{symbols}{\mathbin}
176 \fdsy@DeclareSymbol{\vdotdot}{symbols}{\mathbin}
177
     \fdsy@DeclareAlias{\colon}{symbols}{\mathpunct}
     \fdsy@DeclareAlias{\mathcolon}{symbols}{\mathpunct}
178
     \fdsy@DeclareAlias{\mathratio}{symbols}{\mathrel}
180 \fdsy@DeclareSymbol{\udotdot}{symbols}{\mathbin}
181 \fdsy@DeclareSymbol{\ddotdot}{symbols}{\mathbin}
182 \fdsy@DeclareSymbol{\hdots}{symbols}{\mathord}
```

```
\fdsy@DeclareAlias{\@cdots}{symbols}{\mathinner}
183
    \let\cdots\@cdots
184
185 \fdsv@DeclareSvmbol{\@vdots}{svmbols}{\mathord}
187 \fdsv@DeclareSvmbol{\udots}{svmbols}{\mathord}
    \fdsy@DeclareAlias{\adots}{symbols}{\mathord}
189 \fdsy@DeclareSymbol{\ddots}{symbols}{\mathord}
190 \fdsy@DeclareSymbol{\righttherefore}{symbols}{\mathord}
191 \fdsy@DeclareSymbol{\uptherefore}{symbols}{\mathord}
    \fdsy@DeclareAlias{\therefore}{symbols}{\mathord}
193 \fdsy@DeclareSymbol{\lefttherefore}{symbols}{\mathord}
194 \fdsy@DeclareSymbol{\downtherefore}{symbols}{\mathord}
    \fdsy@DeclareAlias{\because}{symbols}{\mathord}
196 \fdsy@DeclareSymbol{\squaredots}{symbols}{\mathord}
    \fdsy@DeclareAlias{\Colon}{symbols}{\mathrel}
198 \fdsy@DeclareSymbol{\minus}{symbols}{\mathbin}
199 \fdsy@DeclareSymbol{\medslash}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\smalldivslash}{symbols}{\mathbin}
201\fdsv@DeclareSvmbol{\medbackslash}{svmbols}{\mathbin}
    \fdsy@DeclareAlias{\smallsetminus}{symbols}{\mathbin}
203 \fdsv@DeclareSymbol{\plus}{symbols}{\mathbin}
204 \fdsy@DeclareSymbol{\times}{symbols}{\mathbin}
205 \fdsy@DeclareSymbol{\pm}{symbols}{\mathbin}
206 \fdsy@DeclareSymbol{\mp}{symbols}{\mathbin}
207\fdsy@DeclareSymbol{\dotminus}{symbols}{\mathbin}
208 \fdsy@DeclareSymbol{\minusdot}{symbols}{\mathbin}
209 \fdsy@DeclareSymbol{\minusfdots}{symbols}{\mathbin}
210 \fdsy@DeclareSymbol{\minusrdots}{symbols}{\mathbin}
211 \fdsy@DeclareSymbol{\dotsminusdots}{symbols}{\mathbin}
212 \fdsv@DeclareSvmbol{\div}{svmbols}{\mathbin}
213 \fdsy@DeclareSymbol{\neg}{symbols}{\mathord}
    \fdsy@DeclareAlias{\lnot}{symbols}{\mathord}
214
    \fdsy@DeclareAlias{\minushookdown}{symbols}{\mathbin}
215
216 \fdsy@DeclareSymbol{\backneg}{symbols}{\mathord}
    \fdsv@DeclareAlias{\hookdownminus}{svmbols}{\mathbin}
217
    \fdsy@DeclareAlias{\invneg}{symbols}{\mathord}
218
    \fdsy@DeclareAlias{\invnot}{symbols}{\mathord}
219
   fdsy@DeclareSymbol{\intprod}{symbols}{\mathbin}
220
    \fdsy@DeclareAlias{\minushookup}{symbols}{\mathbin}
221
    \fdsy@DeclareAlias{\turnedneg}{symbols}{\mathord}
222
223
    \fdsy@DeclareAlias{\turnednot}{symbols}{\mathord}
224 \fdsy@DeclareSymbol{\intprodr}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\hookupminus}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\turnedbackneg}{symbols}{\mathord}
227 \fdsy@DeclareSymbol{\leftthreetimes}{symbols}{\mathbin}
```

```
228 \fdsy@DeclareSymbol{\rightthreetimes}{symbols}{\mathbin}
229 \fdsy@DeclareSymbol{\dtimes}{symbols}{\mathbin}
     \fdsv@DeclareAlias{\btimes}{svmbols}{\mathbin}
230
   fdsy@DeclareSymbol{\rtimes}{symbols}{\mathbin}
     \fdsv@DeclareAlias{\rJoin}{svmbols}{\mathrel}
232
   \fdsy@DeclareSymbol{\utimes}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\ttimes}{symbols}{\mathbin}
234
235 \fdsy@DeclareSymbol{\ltimes}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\lJoin}{symbols}{\mathrel}
236
  \fdsy@DeclareSymbol{\bowtie}{symbols}{\mathrel}
237
    \fdsy@DeclareAlias{\Join}{symbols}{\mathrel}
238
    \fdsy@DeclareAlias{\lrtimes}{symbols}{\mathbin}
239
  \fdsy@DeclareSymbol{\upbowtie}{symbols}{\mathbin}
240
     \fdsy@DeclareAlias{\hourglass}{symbols}{\mathbin}
241
242 \fdsy@DeclareSymbol{\rightY}{symbols}{\mathbin}
243 \fdsy@DeclareSymbol{\upY}{symbols}{\mathbin}
244 \fdsy@DeclareSymbol{\leftY}{symbols}{\mathbin}
245 \fdsy@DeclareSymbol{\downY}{symbols}{\mathbin}
246 \fdsv@DeclareSvmbol{\wedge}{svmbols}{\mathbin}
     \fdsy@DeclareAlias{\land}{symbols}{\mathbin}
248 \fdsv@DeclareSvmbol{\vee}{svmbols}{\mathbin}
     \fdsy@DeclareAlias{\lor}{symbols}{\mathbin}
250 \fdsy@DeclareSymbol{\wedgedot}{symbols}{\mathbin}
251 \fdsy@DeclareSymbol{\veedot}{symbols}{\mathbin}
   fdsy@DeclareSymbol{\doublewedge}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\wedgeonwedge}{symbols}{\mathbin}
253
254 \fdsy@DeclareSymbol{\doublevee}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\veeonvee}{symbols}{\mathbin}
256 \fdsy@DeclareSymbol{\curlywedge}{symbols}{\mathbin}
257 \fdsy@DeclareSymbol{\curlyvee}{symbols}{\mathbin}
258 \fdsy@DeclareSymbol{\curlywedgedot}{symbols}{\mathbin}
259 \fdsy@DeclareSymbol{\curlyveedot}{symbols}{\mathbin}
260 \fdsy@DeclareSymbol{\doublecurlywedge}{symbols}{\mathbin}
261 \fdsy@DeclareSymbol{\doublecurlyvee}{symbols}{\mathbin}
262 \fdsv@DeclareSvmbol{\cup}{svmbols}{\mathbin}
263 \fdsy@DeclareSymbol{\cap}{symbols}{\mathbin}
264 \fdsy@DeclareSymbol{\doublecup}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\Cup}{symbols}{\mathbin}
265
266 \fdsy@DeclareSymbol{\doublecap}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\Cap}{symbols}{\mathbin}
268 \fdsy@DeclareSymbol{\cupdot}{symbols}{\mathbin}
269 \fdsy@DeclareSymbol{\capdot}{symbols}{\mathbin}
270 \fdsy@DeclareSymbol{\cupplus}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\uplus}{symbols}{\mathbin}
272 \fdsy@DeclareSymbol{\capplus}{symbols}{\mathbin}
```

```
273 \fdsy@DeclareSymbol{\sqcup}{symbols}{\mathbin}
274 \fdsy@DeclareSymbol{\sqcap}{symbols}{\mathbin}
275 \fdsv@DeclareSvmbol{\doublesgcup}{svmbols}{\mathbin}
     \fdsy@DeclareAlias{\Sqcup}{symbols}{\mathbin}
277 \fdsv@DeclareSvmbol{\doublesgcap}{svmbols}{\mathbin}
     \fdsy@DeclareAlias{\Sqcap}{symbols}{\mathbin}
279 \fdsy@DeclareSymbol{\sqcupdot}{symbols}{\mathbin}
280 \fdsy@DeclareSymbol{\sqcapdot}{symbols}{\mathbin}
281 \fdsy@DeclareSymbol{\sqcupplus}{symbols}{\mathbin}
282 \fdsy@DeclareSymbol{\sqcapplus}{symbols}{\mathbin}
283 \fdsy@DeclareSymbol{\pullback}{symbols}{\mathbin}
284 \fdsy@DeclareSymbol{\pushout}{symbols}{\mathbin}
285 \fdsy@DeclareSymbol{\smalltriangleright}{symbols}{\mathbin}
286 \fdsy@DeclareSymbol{\smalltriangleup}{symbols}{\mathbin}
287 \fdsy@DeclareSymbol{\smalltriangleleft}{symbols}{\mathbin}
288 \fdsy@DeclareSymbol{\smalltriangledown}{symbols}{\mathbin}
289 \fdsy@DeclareSymbol{\smallblacktriangleright}{symbols}{\mathbin}
290 \fdsy@DeclareSymbol{\smallblacktriangleup}{symbols}{\mathbin}
291\fdsv@DeclareSvmbolf\smallblacktriangleleft}fsvmbols}f\mathbin}
292 \fdsy@DeclareSymbol{\smallblacktriangledown}{symbols}{\mathbin}
293 \fdsv@DeclareSymbol{\medtriangleright}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\triangleright}{symbols}{\mathbin}
295 \fdsy@DeclareSymbol{\medtriangleup}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\triangle}{symbols}{\mathbin}
296
    \fdsy@DeclareAlias{\vartriangle}{symbols}{\mathbin}
297
   fdsy@DeclareSymbol{\medtriangleleft}{symbols}{\mathbin}
298
299
     \fdsy@DeclareAlias{\triangleleft}{symbols}{\mathbin}
   fdsy@DeclareSymbol{\medtriangledown}{symbols}{\mathbin}
300
     \fdsy@DeclareAlias{\triangledown}{symbols}{\mathbin}
   fdsv@DeclareSymbol{\medblacktriangleright}{symbols}{\mathbin}
302
     \fdsy@DeclareAlias{\blacktriangleright}{symbols}{\mathbin}
303
   fdsy@DeclareSymbol{\medblacktriangleup}{symbols}{\mathbin}
304
     \fdsy@DeclareAlias{\blacktriangle}{symbols}{\mathbin}
305
306 \fdsy@DeclareSymbol{\medblacktriangleleft}{symbols}{\mathbin}
     \fdsv@DeclareAlias{\blacktriangleleft}{svmbols}{\mathbin}
307
   fdsy@DeclareSymbol{\medblacktriangledown}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\blacktriangledown}{symbols}{\mathbin}
309
   fdsy@DeclareSymbol{\largetriangleup}{symbols}{\mathord}
     \fdsy@DeclareAlias{\bigtriangleup}{symbols}{\mathbin}
311
    fdsy@DeclareSymbol{\largetriangledown}{symbols}{\mathord}
312
313
     \fdsy@DeclareAlias{\bigtriangledown}{symbols}{\mathbin}
314 \fdsy@DeclareSymbol{\smallcircle}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circ}{symbols}{\mathbin}
315
     \fdsy@DeclareAlias{\smwhtcircle}{symbols}{\mathbin}
317 \fdsy@DeclareSymbol{\smallblackcircle}{symbols}{\mathbin}
```

```
\fdsy@DeclareAlias{\bullet}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\smblkcircle}{symbols}{\mathbin}
319
  \fdsv@DeclareSvmbol{\medcircle}{svmbols}{\mathbin}
320
     \fdsy@DeclareAlias{\mdlgwhtcircle}{symbols}{\mathbin}
322 \fdsv@DeclareSvmbol{\medblackcircle}{svmbols}{\mathbin}
     \fdsy@DeclareAlias{\mdlgblkcircle}{symbols}{\mathbin}
324 \fdsv@DeclareSvmbol{\ominus}{svmbols}{\mathbin}
    fdsy@DeclareSymbol{\overt}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circledvert}{symbols}{\mathbin}
  \fdsy@DeclareSymbol{\oslash}{symbols}{\mathbin}
   fdsy@DeclareSymbol{\obackslash}{symbols}{\mathbin}
328
     \fdsy@DeclareAlias{\obslash}{symbols}{\mathbin}
330 \fdsy@DeclareSymbol{\oplus}{symbols}{\mathbin}
331 \fdsv@DeclareSymbol{\otimes}{symbols}{\mathbin}
  \fdsy@DeclareSymbol{\odot}{symbols}{\mathbin}
   fdsy@DeclareSymbol{\ocirc}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circledcirc}{symbols}{\mathbin}
334
    fdsy@DeclareSymbol{\oast}{symbols}{\mathbin}
335
     \fdsv@DeclareAlias{\circledast}{svmbols}{\mathbin}
336
  \fdsy@DeclareSymbol{\odash}{symbols}{\mathbin}
337
     \fdsv@DeclareAlias{\circleddash}{svmbols}{\mathbin}
338
   fdsy@DeclareSymbol{\oequal}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circledequal}{symbols}{\mathbin}
340
   fdsy@DeclareSymbol{\emptyset}{symbols}{\mathord}
341
     \fdsy@DeclareAlias{\diameter}{symbols}{\mathord}
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     \fdsy@DeclareAlias{\varnothing}{symbols}{\mathord}
343
344 \fdsy@DeclareSymbol{\revemptyset}{symbols}{\mathord}
345 \fdsy@DeclareSymbol{\largecircle}{symbols}{\mathord}
     \fdsy@DeclareAlias{\bigcirc}{symbols}{\mathord}
346
     \fdsv@DeclareAlias{\lgwhtcircle}{svmbols}{\mathord}
347
   fdsy@DeclareSymbol{\largeblackcircle}{symbols}{\mathord}
348
     \fdsy@DeclareAlias{\lgblkcircle}{symbols}{\mathord}
349
   fdsy@DeclareSymbol{\smallsquare}{symbols}{\mathbin}
350
     \fdsy@DeclareAlias{\smwhtsquare}{symbols}{\mathbin}
351
   fdsv@DeclareSvmbol{\smallblacksquare}{svmbols}{\mathbin}
352
     \fdsy@DeclareAlias{\smblksquare}{symbols}{\mathbin}
353
   fdsy@DeclareSymbol{\medsquare}{symbols}{\mathbin}
354
     \fdsy@DeclareAlias{\square}{symbols}{\mathbin}
355
    \fdsy@DeclareAlias{\Box}{symbols}{\mathbin}
356
     \fdsy@DeclareAlias{\mdlgwhtsquare}{symbols}{\mathbin}
357
358
    \fdsy@DeclareAlias{\mdwhtsquare}{symbols}{\mathbin}
```

fdsy@DeclareSymbol{\medblacksquare}{symbols}{\mathbin}

\fdsy@DeclareAlias{\mdblksquare}{symbols}{\mathbin}

362 \fdsy@DeclareSymbol{\boxminus}{symbols}{\mathbin}

\fdsy@DeclareAlias{\mdlgblksquare}{symbols}{\mathbin}

359

360

```
363 \fdsy@DeclareSymbol{\boxvert}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\boxbar}{symbols}{\mathbin}
365 \fdsv@DeclareSvmbol{\boxslash}{svmbols}{\mathbin}
     \fdsy@DeclareAlias{\boxdiag}{symbols}{\mathbin}
367 \fdsv@DeclareSvmbol{\boxbackslash}{svmbols}{\mathbin}
     \fdsy@DeclareAlias{\boxbslash}{symbols}{\mathbin}
369 \fdsy@DeclareSymbol{\boxplus}{symbols}{\mathbin}
370 \fdsy@DeclareSymbol{\boxtimes}{symbols}{\mathbin}
371 \fdsy@DeclareSymbol{\boxdot}{symbols}{\mathbin}
372 \fdsy@DeclareSymbol{\boxbox}{symbols}{\mathbin}
    fdsy@DeclareSymbol{\largesquare}{symbols}{\mathord}
     \fdsy@DeclareAlias{\lgwhtsquare}{symbols}{\mathord}
374
    fdsy@DeclareSymbol{\largeblacksquare}{symbols}{\mathord}
     \fdsy@DeclareAlias{\lgblksquare}{symbols}{\mathord}
376
377 \fdsy@DeclareSymbol{\smalldiamond}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\diamond}{symbols}{\mathbin}
378
     \fdsy@DeclareAlias{\smwhtdiamond}{symbols}{\mathbin}
379
    fdsy@DeclareSymbol{\smallblackdiamond}{symbols}{\mathbin}
380
     \fdsv@DeclareAlias{\blackdiamond}{svmbols}{\mathbin}
381
     \fdsy@DeclareAlias{\smblkdiamond}{symbols}{\mathbin}
382
    fdsv@DeclareSvmbol{\meddiamond}{svmbols}{\mathbin}
383
     \fdsy@DeclareAlias{\Diamond}{symbols}{\mathbin}
384
     \fdsy@DeclareAlias{\mdlgwhtdiamond}{symbols}{\mathbin}
385
     \fdsy@DeclareAlias{\mdwhtdiamond}{symbols}{\mathbin}
386
    fdsy@DeclareSymbol{\medblackdiamond}{symbols}{\mathbin}
387
     \fdsy@DeclareAlias{\mdlgblkdiamond}{symbols}{\mathbin}
388
389
     \fdsy@DeclareAlias{\mdblkdiamond}{symbols}{\mathbin}
390 \fdsy@DeclareSymbol{\diamondminus}{symbols}{\mathbin}
391\fdsy@DeclareSymbol{\diamondvert}{symbols}{\mathbin}
392 \fdsv@DeclareSymbol{\diamondslash}{symbols}{\mathbin}
   \fdsy@DeclareSymbol{\diamondbackslash}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\diamondbslash}{symbols}{\mathbin}
395 \fdsy@DeclareSymbol{\diamondplus}{symbols}{\mathbin}
396 \fdsy@DeclareSymbol{\diamondtimes}{symbols}{\mathbin}
397 \fdsv@DeclareSvmbol{\diamonddot}{svmbols}{\mathbin}
     \fdsy@DeclareAlias{\diamondcdot}{symbols}{\mathbin}
399 \fdsy@DeclareSymbol{\diamonddiamond}{symbols}{\mathbin}
   fdsy@DeclareSymbol{\smalllozenge}{symbols}{\mathord}
     \fdsy@DeclareAlias{\smwhtlozenge}{symbols}{\mathord}
401
    fdsy@DeclareSymbol{\smallblacklozenge}{symbols}{\mathord}
402
403
     \fdsy@DeclareAlias{\smblklozenge}{symbols}{\mathord}
404 \fdsy@DeclareSymbol{\medlozenge}{symbols}{\mathord}
     \fdsy@DeclareAlias{\lozenge}{symbols}{\mathord}
405
     \fdsy@DeclareAlias{\mdlgwhtlozenge}{symbols}{\mathord}
406
     \fdsy@DeclareAlias{\mdwhtlozenge}{symbols}{\mathord}
```

```
408 \fdsy@DeclareSymbol{\medblacklozenge}{symbols}{\mathord}
    \fdsy@DeclareAlias{\blacklozenge}{symbols}{\mathord}
409
    \fdsv@DeclareAlias{\mdlgblklozenge}{svmbols}{\mathord}
410
    \fdsy@DeclareAlias{\mdblklozenge}{symbols}{\mathord}
412 \fdsy@DeclareSymbol{\lozengeminus}{symbols}{\mathord}
   fdsy@DeclareSymbol{\smallwhitestar}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\smwhitestar}{symbols}{\mathbin}
414
   fdsy@DeclareSymbol{\smallblackstar}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\star}{symbols}{\mathbin}
417 \fdsy@DeclareSymbol{\medwhitestar}{symbols}{\mathbin}
   fdsy@DeclareSymbol{\medblackstar}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\medstar}{symbols}{\mathbin}
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421 \fdsy@DeclareSymbol{\largeblackstar}{symbols}{\mathord}
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423 \fdsy@DeclareSymbol{\ast}{symbols}{\mathbin}
424 \fdsy@DeclareSymbol{\infty}{symbols}{\mathord}
425 \fdsy@DeclareSymbol{\propto}{symbols}{\mathrel}
     \fdsv@DeclareAlias{\varpropto}{svmbols}{\mathrel}
427 \fdsy@DeclareSymbol{\backpropto}{symbols}{\mathrel}
     \fdsy@DeclareAlias{\propfrom}{symbols}{\mathrel}
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430 \fdsy@DeclareSymbol{\between}{symbols}{\mathrel}
431 \fdsy@DeclareSymbol{\separated}{symbols}{\mathrel}
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433 \fdsy@DeclareSymbol{\top}{symbols}{\mathord}
     \fdsy@DeclareAlias{\intercal}{symbols}{\mathbin}
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     \fdsy@DeclareAlias{\wr}{symbols}{\mathbin}
437 \fdsy@DeclareSymbol{\angle}{symbols}{\mathord}
438 \fdsy@DeclareSymbol{\revangle}{symbols}{\mathord}
439 \fdsy@DeclareSymbol{\measuredangle}{symbols}{\mathord}
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    \fdsy@DeclareAlias{\measuredangleleft}{symbols}{\mathord}
442\fdsv@DeclareSymbol{\sphericalangle}{symbols}{\mathord}
443 \fdsy@DeclareSymbol{\sphericalangleup}{symbols}{\mathord}
444 \fdsy@DeclareSymbol{\sphericalangleleft}{symbols}{\mathord}
     \fdsy@DeclareAlias{\revsphericalangle}{symbols}{\mathord}
    \fdsy@DeclareAlias{\gtlpar}{symbols}{\mathord}
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448 \fdsy@DeclareSymbol{\rightangle}{symbols}{\mathord}
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450 \fdsy@DeclareSymbol{\rightanglesquare}{symbols}{\mathord}
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452 \fdsy@DeclareSymbol{\measuredrightangledot}{symbols}{\mathord}
```

```
\fdsy@DeclareAlias{\rightanglemdot}{symbols}{\mathord}
454 \fdsy@DeclareSymbol{\prime}{symbols}{\mathord}
455 \fdsv@DeclareSvmbol{\backprime}{svmbols}{\mathord}
456 \fdsy@DeclareSymbol{\smallprod}{symbols}{\mathop}
457 \fdsy@DeclareSymbol{\smallcoprod}{symbols}{\mathop}
     \fdsy@DeclareAlias{\amalg}{symbols}{\mathbin}
459 \fdsy@DeclareSymbol{\smallint}{symbols}{\mathop}
460 \fdsy@DeclareSymbol{\checkmark}{symbols}{\mathord}
461\fdsy@DeclareSymbol{\lightning}{symbols}{\mathord}
     \fdsy@DeclareAlias{\downzigzagarrow}{symbols}{\mathord}
463 \fdsy@DeclareSymbol{\diamondsuit}{symbols}{\mathord}
464 \fdsy@DeclareSymbol{\vardiamondsuit}{symbols}{\mathord}
465 \fdsy@DeclareSymbol{\heartsuit}{symbols}{\mathord}
466 \fdsy@DeclareSymbol{\varheartsuit}{symbols}{\mathord}
467 \fdsy@DeclareSymbol{\spadesuit}{symbols}{\mathord}
468 \fdsy@DeclareSymbol{\clubsuit}{symbols}{\mathord}
469 \fdsy@DeclareSymbol{\maltese}{symbols}{\mathord}
470 \fdsy@DeclareSymbol{\starofdavid}{symbols}{\mathord}
471 \fdsy@DeclareSymbol{\sector}{symbols}{\mathord}
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474 \fdsy@DeclareSymbol{\nexists}{symbols}{\mathord}
475 \fdsy@DeclareSymbol{\Finv}{symbols}{\mathord}
476 \fdsy@DeclareSymbol{\Game}{symbols}{\mathord}
477 \fdsy@DeclareSymbol{\complement}{symbols}{\mathord}
478 \fdsy@DeclareSymbol{\flat}{symbols}{\mathord}
479 \fdsy@DeclareSymbol{\natural}{symbols}{\mathord}
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483 \fdsy@DeclareSymbol{\gimel}{symbols}{\mathord}
484 \fdsy@DeclareSymbol{\daleth}{symbols}{\mathord}
485 \fdsy@DeclareSymbol{\wp}{symbols}{\mathord}
FdSymbolB: relations
486 \fdsy@setslot{0}
487 \fdsy@DeclareSymbol{\equal}{relations}{\mathrel}
488 \fdsy@DeclareSymbol{\equiv}{relations}{\mathrel}
489 \fdsy@DeclareSymbol{\sim}{relations}{\mathrel}
490 \fdsy@DeclareSymbol{\backsim}{relations}{\mathrel}
491 \fdsy@DeclareSymbol{\approx}{relations}{\mathrel}
492 \fdsy@DeclareSymbol{\triplesim}{relations}{\mathrel}
    \fdsy@DeclareAlias{\approxident}{relations}{\mathrel}
494 \fdsy@DeclareSymbol{\simeq}{relations}{\mathrel}
495 \fdsy@DeclareSymbol{\backsimeq}{relations}{\mathrel}
496 \fdsy@DeclareSymbol{\eqsim}{relations}{\mathrel}
```

```
497 \fdsy@DeclareSymbol{\cong}{relations}{\mathrel}
498 \fdsy@DeclareSymbol{\backcong}{relations}{\mathrel}
499 \fdsv@DeclareSvmbol{\approxeq}{relations}{\mathrel}
500 \fdsy@DeclareSymbol{\bumpeq}{relations}{\mathrel}
501\fdsy@DeclareSymbol{\bumpeqq}{relations}{\mathrel}
502 \fdsy@DeclareSymbol{\Bumpeq}{relations}{\mathrel}
503 \fdsy@DeclareSymbol{\doteq}{relations}{\mathrel}
504 \fdsy@DeclareSymbol{\eqdot}{relations}{\mathrel}
505 \fdsy@DeclareSymbol{\Doteq}{relations}{\mathrel}
     \fdsy@DeclareAlias{\dotegdot}{relations}{\mathrel}
507\fdsy@DeclareSymbol{\fallingdotseq}{relations}{\mathrel}
508 \fdsy@DeclareSymbol{\risingdotseq}{relations}{\mathrel}
509 \fdsy@DeclareSymbol{\smile}{relations}{\mathrel}
     \fdsy@DeclareAlias{\smallsmile}{relations}{\mathrel}
511 \fdsy@DeclareSymbol{\frown}{relations}{\mathrel}
     \fdsy@DeclareAlias{\smallfrown}{relations}{\mathrel}
512
   \fdsy@DeclareSymbol{\smilefrown}{relations}{\mathrel}
513
     \fdsy@DeclareAlias{\asymp}{relations}{\mathrel}
515 \fdsv@DeclareSymbol{\frownsmile}{relations}{\mathrel}
     \fdsy@DeclareAlias{\closure}{relations}{\mathrel}
517 \fdsy@DeclareSymbol{\smileeq}{relations}{\mathrel}
    fdsy@DeclareSymbol{\frowneq}{relations}{\mathrel}
     \fdsy@DeclareAlias{\arceq}{relations}{\mathrel}
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522 \fdsy@DeclareSymbol{\wedgeq}{relations}{\mathrel}
     \fdsy@DeclareAlias{\hateq}{relations}{\mathrel}
524 \fdsy@DeclareSymbol{\veeeq}{relations}{\mathrel}
525 \fdsy@DeclareSymbol{\stareg}{relations}{\mathrel}
526 \fdsy@DeclareSymbol{\triangleeq}{relations}{\mathrel}
     \fdsy@DeclareAlias{\triangleq}{relations}{\mathrel}
528 \fdsy@DeclareSymbol{\in}{relations}{\mathrel}
529 \fdsy@DeclareSymbol{\owns}{relations}{\mathrel}
     \fdsy@DeclareAlias{\ni}{relations}{\mathrel}
530
531 \fdsv@DeclareSymbol{\less}{relations}{\mathrel}
532 \fdsy@DeclareSymbol{\gtr}{relations}{\mathrel}
533 \fdsy@DeclareSymbol{\leg}{relations}{\mathrel}
     \fdsy@DeclareAlias{\le}{relations}{\mathrel}
535 \fdsy@DeclareSymbol{\geq}{relations}{\mathrel}
     \fdsy@DeclareAlias{\ge}{relations}{\mathrel}
537 \fdsy@DeclareSymbol{\leqslant}{relations}{\mathrel}
538 \fdsy@DeclareSymbol{\geqslant}{relations}{\mathrel}
539 \fdsy@DeclareSymbol{\leqq}{relations}{\mathrel}
540 \fdsy@DeclareSymbol{\geqq}{relations}{\mathrel}
541 \fdsy@DeclareSymbol{\lesssim}{relations}{\mathrel}
```

```
542 \fdsy@DeclareSymbol{\gtrsim}{relations}{\mathrel}
543 \fdsy@DeclareSymbol{\lessapprox}{relations}{\mathrel}
544 \fdsv@DeclareSvmbol{\gtrapprox}{relations}{\mathrel}
545 \fdsy@DeclareSymbol{\lessgtr}{relations}{\mathrel}
546 \fdsy@DeclareSymbol{\gtrless}{relations}{\mathrel}
547 \fdsy@DeclareSymbol{\lesseggtr}{relations}{\mathrel}
548 \fdsy@DeclareSymbol{\gtreqless}{relations}{\mathrel}
549 \fdsy@DeclareSymbol{\lesseqggtr}{relations}{\mathrel}
550 \fdsy@DeclareSymbol{\gtreggless}{relations}{\mathrel}
551\fdsy@DeclareSymbol{\lesseggtrslant}{relations}{\mathrel}
552 \fdsy@DeclareSymbol{\gtreqlessslant}{relations}{\mathrel}
553 \fdsy@DeclareSymbol{\ll}{relations}{\mathrel}
554 \fdsy@DeclareSymbol{\gg}{relations}{\mathrel}
555 \fdsv@DeclareSymbol{\lll}{relations}{\mathrel}
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   fdsy@DeclareSymbol{\ggg}{relations}{\mathrel}
     \fdsy@DeclareAlias{\gggtr}{relations}{\mathrel}
558
   fdsy@DeclareSymbol{\lessclosed}{relations}{\mathrel}
559
     \fdsv@DeclareAlias{\lhd}{relations}{\mathbin}
560
    \fdsy@DeclareAlias{\vartriangleleft}{relations}{\mathrel}
561
562 \fdsv@DeclareSvmbol{\gtrclosed}{relations}{\mathrel}
    \fdsy@DeclareAlias{\rhd}{relations}{\mathbin}
    \fdsy@DeclareAlias{\vartriangleright}{relations}{\mathrel}
564
   fdsy@DeclareSymbol{\legclosed}{relations}{\mathrel}
565
    \fdsy@DeclareAlias{\unlhd}{relations}{\mathbin}
566
    \fdsy@DeclareAlias{\trianglelefteg}{relations}{\mathrel}
567
568
   fdsy@DeclareSymbol{\geqclosed}{relations}{\mathrel}
     \fdsy@DeclareAlias{\unrhd}{relations}{\mathbin}
569
    \fdsy@DeclareAlias{\trianglerighteq}{relations}{\mathrel}
570
   fdsv@DeclareSvmbol{\lesscc}{relations}{\mathrel}
571 \
     \fdsy@DeclareAlias{\ltcc}{relations}{\mathrel}
572
    fdsy@DeclareSymbol{\gtrcc}{relations}{\mathrel}
573 \
     \fdsy@DeclareAlias{\gtcc}{relations}{\mathrel}
574
575 \fdsy@DeclareSymbol{\leqslcc}{relations}{\mathrel}
     \fdsv@DeclareAlias{\lescc}{relations}{\mathrel}
576
577 \fdsy@DeclareSymbol{\geqslcc}{relations}{\mathrel}
     \fdsy@DeclareAlias{\gescc}{relations}{\mathrel}
579 \fdsy@DeclareSymbol{\sqsubset}{relations}{\mathrel}
580 \fdsy@DeclareSymbol{\sqsupset}{relations}{\mathrel}
581 \fdsy@DeclareSymbol{\sqsubseteq}{relations}{\mathrel}
582 \fdsy@DeclareSymbol{\sqsupseteq}{relations}{\mathrel}
583 \fdsy@DeclareSymbol{\sqsubseteqq}{relations}{\mathrel}
584 \fdsy@DeclareSymbol{\sqsupseteqq}{relations}{\mathrel}
585 \fdsy@DeclareSymbol{\Sqsubset}{relations}{\mathrel}
586 \fdsy@DeclareSymbol{\Sqsupset}{relations}{\mathrel}
```

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587 \fdsy@DeclareSymbol{\subset}{relations}{\mathrel}
588 \fdsy@DeclareSymbol{\supset}{relations}{\mathrel}
589 \fdsv@DeclareSvmbol{\subseteg}{relations}{\mathrel}
590 \fdsy@DeclareSymbol{\supseteq}{relations}{\mathrel}
591\fdsy@DeclareSymbol{\subseteqq}{relations}{\mathrel}
592 \fdsy@DeclareSymbol{\supseteqq}{relations}{\mathrel}
593 \fdsy@DeclareSymbol{\Subset}{relations}{\mathrel}
594 \fdsy@DeclareSymbol{\Supset}{relations}{\mathrel}
595 \fdsy@DeclareSymbol{\prec}{relations}{\mathrel}
596 \fdsy@DeclareSymbol{\succ}{relations}{\mathrel}
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602 \fdsy@DeclareSymbol{\succeqq}{relations}{\mathrel}
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608 \fdsy@DeclareSymbol{\gtrdot}{relations}{\mathrel}
609 \fdsy@DeclareSymbol{\leqdot}{relations}{\mathrel}
610 \fdsy@DeclareSymbol{\geqdot}{relations}{\mathrel}
611 \fdsy@DeclareSymbol{\leqslantdot}{relations}{\mathrel}
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613 \fdsy@DeclareSymbol{\geqslantdot}{relations}{\mathrel}
     \fdsy@DeclareAlias{\gesdot}{relations}{\mathrel}
615 \fdsy@DeclareSymbol{\egslantless}{relations}{\mathrel}
616 \fdsy@DeclareSymbol{\eqslantgtr}{relations}{\mathrel}
617 \fdsy@DeclareSymbol{\curlyegprec}{relations}{\mathrel}
618 \fdsy@DeclareSymbol{\curlyeqsucc}{relations}{\mathrel}
619 \fdsy@DeclareSymbol{\nequal}{relations}{\mathrel}
     \fdsy@DeclareAlias{\neq}{relations}{\mathrel}
620
     \fdsy@DeclareAlias{\ne}{relations}{\mathrel}
622 \fdsy@DeclareSymbol{\nequiv}{relations}{\mathrel}
623 \fdsy@DeclareSymbol{\nsim}{relations}{\mathrel}
624 \fdsy@DeclareSymbol{\nbacksim}{relations}{\mathrel}
625 \fdsy@DeclareSymbol{\napprox}{relations}{\mathrel}
626 \fdsy@DeclareSymbol{\ntriplesim}{relations}{\mathrel}
     \fdsy@DeclareAlias{\napproxident}{relations}{\mathrel}
628 \fdsy@DeclareSymbol{\nsimeq}{relations}{\mathrel}
     \fdsy@DeclareAlias{\nsime}{relations}{\mathrel}
630 \fdsy@DeclareSymbol{\nbacksimeg}{relations}{\mathrel}
631 \fdsy@DeclareSymbol{\negsim}{relations}{\mathrel}
```

```
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633 \fdsy@DeclareSymbol{\nbackcong}{relations}{\mathrel}
634 \fdsv@DeclareSvmbol{\napproxeg}{relations}{\mathrel}
635 \fdsy@DeclareSymbol{\nbumpeq}{relations}{\mathrel}
636 \fdsy@DeclareSymbol{\nbumpeqq}{relations}{\mathrel}
637 \fdsy@DeclareSymbol{\nBumpeq}{relations}{\mathrel}
638 \fdsy@DeclareSymbol{\ndoteq}{relations}{\mathrel}
639 \fdsy@DeclareSymbol{\neqdot}{relations}{\mathrel}
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641 \fdsy@DeclareSymbol{\nfallingdotseq}{relations}{\mathrel}
642 \fdsy@DeclareSymbol{\nrisingdotseq}{relations}{\mathrel}
643 \fdsy@DeclareSymbol{\nsmile}{relations}{\mathrel}
644 \fdsy@DeclareSymbol{\nfrown}{relations}{\mathrel}
645 \fdsy@DeclareSymbol{\nsmilefrown}{relations}{\mathrel}
     \fdsy@DeclareAlias{\nasymp}{relations}{\mathrel}
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649 \fdsy@DeclareSymbol{\nsmileeq}{relations}{\mathrel}
650 \fdsy@DeclareSymbol{\nfrowneq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\narceq}{relations}{\mathrel}
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653 \fdsy@DeclareSymbol{\ncirceq}{relations}{\mathrel}
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658 \fdsy@DeclareSymbol{\ntriangleeq}{relations}{\mathrel}
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664 \fdsy@DeclareSymbol{\ngtr}{relations}{\mathrel}
665 \fdsy@DeclareSymbol{\nleg}{relations}{\mathrel}
666 \fdsv@DeclareSvmbol{\ngeg}{relations}{\mathrel}
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669 \fdsy@DeclareSymbol{\nleqq}{relations}{\mathrel}
670 \fdsy@DeclareSymbol{\ngeqq}{relations}{\mathrel}
671 \fdsy@DeclareSymbol{\nlesssim}{relations}{\mathrel}
672 \fdsy@DeclareSymbol{\ngtrsim}{relations}{\mathrel}
673 \fdsy@DeclareSymbol{\nlessapprox}{relations}{\mathrel}
674 \fdsy@DeclareSymbol{\ngtrapprox}{relations}{\mathrel}
675 \fdsy@DeclareSymbol{\nlessgtr}{relations}{\mathrel}
676 \fdsy@DeclareSymbol{\ngtrless}{relations}{\mathrel}
```

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677 \fdsy@DeclareSymbol{\nlesseggtr}{relations}{\mathrel}
678 \fdsy@DeclareSymbol{\ngtreqless}{relations}{\mathrel}
679 \fdsv@DeclareSvmbol{\nlessegggtr}{relations}{\mathrel}
680 \fdsy@DeclareSymbol{\ngtreqqless}{relations}{\mathrel}
681 \fdsy@DeclareSymbol{\nlesseggtrslant}{relations}{\mathrel}
682 \fdsy@DeclareSymbol{\ngtreqlessslant}{relations}{\mathrel}
683 \fdsy@DeclareSymbol{\nll}{relations}{\mathrel}
684 \fdsy@DeclareSymbol{\ngg}{relations}{\mathrel}
685 \fdsy@DeclareSymbol{\nlll}{relations}{\mathrel}
686 \fdsy@DeclareSymbol{\nggg}{relations}{\mathrel}
687 \fdsy@DeclareSymbol{\nlessclosed}{relations}{\mathrel}
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688
   \fdsy@DeclareSymbol{\ngtrclosed}{relations}{\mathrel}
     \fdsy@DeclareAlias{\ntriangleright}{relations}{\mathrel}
690
691 \fdsy@DeclareSymbol{\nlegclosed}{relations}{\mathrel}
     \fdsy@DeclareAlias{\ntrianglelefteq}{relations}{\mathrel}
692
   \fdsy@DeclareSymbol{\ngeqclosed}{relations}{\mathrel}
693
     \fdsy@DeclareAlias{\ntrianglerighteq}{relations}{\mathrel}
695 \fdsv@DeclareSymbol{\nlesscc}{relations}{\mathrel}
     \fdsy@DeclareAlias{\nltcc}{relations}{\mathrel}
697 \fdsv@DeclareSvmbol{\ngtrcc}{relations}{\mathrel}
     \fdsy@DeclareAlias{\ngtcc}{relations}{\mathrel}
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700
   fdsy@DeclareSymbol{\ngeqslcc}{relations}{\mathrel}
701
     \fdsy@DeclareAlias{\ngescc}{relations}{\mathrel}
703 \fdsy@DeclareSymbol{\nsqsubset}{relations}{\mathrel}
704 \fdsy@DeclareSymbol{\nsqsupset}{relations}{\mathrel}
705 \fdsy@DeclareSymbol{\nsgsubseteg}{relations}{\mathrel}
706 \fdsv@DeclareSvmbol{\nsqsupseteq}{relations}{\mathrel}
707\fdsy@DeclareSymbol{\nsqsubseteqq}{relations}{\mathrel}
708 \fdsy@DeclareSymbol{\nsqsupseteqq}{relations}{\mathrel}
709 \fdsy@DeclareSymbol{\nSqsubset}{relations}{\mathrel}
710 \fdsy@DeclareSymbol{\nSqsupset}{relations}{\mathrel}
711 \fdsv@DeclareSvmbol{\nsubset}{relations}{\mathrel}
712 \fdsy@DeclareSymbol{\nsupset}{relations}{\mathrel}
713 \fdsy@DeclareSymbol{\nsubseteg}{relations}{\mathrel}
714 \fdsy@DeclareSymbol{\nsupseteq}{relations}{\mathrel}
715 \fdsy@DeclareSymbol{\nsubseteqq}{relations}{\mathrel}
716 \fdsy@DeclareSymbol{\nsupsetegg}{relations}{\mathrel}
717 \fdsy@DeclareSymbol{\nSubset}{relations}{\mathrel}
718 \fdsy@DeclareSymbol{\nSupset}{relations}{\mathrel}
719 \fdsy@DeclareSymbol{\nprec}{relations}{\mathrel}
720 \fdsy@DeclareSymbol{\nsucc}{relations}{\mathrel}
721 \fdsy@DeclareSymbol{\npreceq}{relations}{\mathrel}
```

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722 \fdsy@DeclareSymbol{\nsucceq}{relations}{\mathrel}
723 \fdsy@DeclareSymbol{\npreccurlyeq}{relations}{\mathrel}
724 \fdsv@DeclareSvmbol{\nsucccurlveg}{relations}{\mathrel}
725 \fdsy@DeclareSymbol{\npreceqq}{relations}{\mathrel}
726 \fdsy@DeclareSymbol{\nsucceqq}{relations}{\mathrel}
727 \fdsy@DeclareSymbol{\nprecsim}{relations}{\mathrel}
728 \fdsy@DeclareSymbol{\nsuccsim}{relations}{\mathrel}
729 \fdsy@DeclareSymbol{\nprecapprox}{relations}{\mathrel}
730 \fdsy@DeclareSymbol{\nsuccapprox}{relations}{\mathrel}
731 \fdsy@DeclareSymbol{\nlessdot}{relations}{\mathrel}
732 \fdsy@DeclareSymbol{\ngtrdot}{relations}{\mathrel}
733 \fdsy@DeclareSymbol{\nleqdot}{relations}{\mathrel}
734 \fdsy@DeclareSymbol{\ngeqdot}{relations}{\mathrel}
735 \fdsy@DeclareSymbol{\nlegslantdot}{relations}{\mathrel}
     \fdsy@DeclareAlias{\nlesdot}{relations}{\mathrel}
737 \fdsy@DeclareSymbol{\ngeqslantdot}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ngesdot}{relations}{\mathrel}
739 \fdsy@DeclareSymbol{\neqslantless}{relations}{\mathrel}
740 \fdsv@DeclareSymbol{\negslantgtr}{relations}{\mathrel}
741 \fdsy@DeclareSymbol{\ncurlyeqprec}{relations}{\mathrel}
742 \fdsy@DeclareSymbol{\ncurlyeqsucc}{relations}{\mathrel}
743 \fdsy@DeclareSymbol{\simneqq}{relations}{\mathrel}
744 \fdsy@DeclareSymbol{\backsimneqq}{relations}{\mathrel}
745 \fdsy@DeclareSymbol{\lneg}{relations}{\mathrel}
746 \fdsy@DeclareSymbol{\gneq}{relations}{\mathrel}
747 \fdsy@DeclareSymbol{\lnegg}{relations}{\mathrel}
    \fdsy@DeclareAlias{\lvertneqq}{relations}{\mathrel}
749 \fdsy@DeclareSymbol{\gneqq}{relations}{\mathrel}
     \fdsy@DeclareAlias{\gvertneqq}{relations}{\mathrel}
751\fdsy@DeclareSymbol{\lnsim}{relations}{\mathrel}
752 \fdsy@DeclareSymbol{\gnsim}{relations}{\mathrel}
753 \fdsy@DeclareSymbol{\lnapprox}{relations}{\mathrel}
754 \fdsy@DeclareSymbol{\gnapprox}{relations}{\mathrel}
755 \fdsy@DeclareSymbol{\lessneqggtr}{relations}{\mathrel}
756 \fdsy@DeclareSymbol{\gtrneqqless}{relations}{\mathrel}
757 \fdsy@DeclareSymbol{\sqsubsetneq}{relations}{\mathrel}
758 \fdsy@DeclareSymbol{\sqsupsetneq}{relations}{\mathrel}
759 \fdsy@DeclareSymbol{\sqsubsetneqq}{relations}{\mathrel}
760 \fdsy@DeclareSymbol{\sqsupsetneqq}{relations}{\mathrel}
761 \fdsy@DeclareSymbol{\subsetneg}{relations}{\mathrel}
762
     \fdsy@DeclareAlias{\varsubsetneq}{relations}{\mathrel}
763 \fdsy@DeclareSymbol{\supsetneg}{relations}{\mathrel}
     \fdsy@DeclareAlias{\varsupsetneg}{relations}{\mathrel}
765 \fdsy@DeclareSymbol{\subsetnegg}{relations}{\mathrel}
    \fdsy@DeclareAlias{\varsubsetneqg}{relations}{\mathrel}
```

```
767 \fdsy@DeclareSymbol{\supsetneqq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\varsupsetneqq}{relations}{\mathrel}
769 \fdsy@DeclareSymbol{\precneg}{relations}{\mathrel}
770 \fdsy@DeclareSymbol{\succneq}{relations}{\mathrel}
771 \fdsy@DeclareSymbol{\precneqq}{relations}{\mathrel}
772 \fdsy@DeclareSymbol{\succneqq}{relations}{\mathrel}
773 \fdsy@DeclareSymbol{\precnsim}{relations}{\mathrel}
774 \fdsy@DeclareSymbol{\succnsim}{relations}{\mathrel}
775 \fdsy@DeclareSymbol{\precnapprox}{relations}{\mathrel}
776 \fdsy@DeclareSymbol{\succnapprox}{relations}{\mathrel}
778 \DeclareRobustCommand{\coloneq}{\mathrel{{\vdotdot}{\equal}}}
779 \let\coloneqq\coloneq
FdSymbolC: arrows
780 \fdsy@setslot{0}
781 \fdsy@DeclareSymbol{\rightarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\to}{arrows}{\mathrel}
783 \fdsy@DeclareSymbol{\uparrow}{arrows}{\mathrel}
784 \fdsy@DeclareSymbol{\leftarrow}{arrows}{\mathrel}
785 \fdsy@DeclareAlias{\gets}{arrows}{\mathrel}
786 \fdsy@DeclareSymbol{\downarrow}{arrows}{\mathrel}
787 \fdsy@DeclareSymbol{\nearrow}{arrows}{\mathrel}
788 \fdsy@DeclareSymbol{\nwarrow}{arrows}{\mathrel}
789 \fdsy@DeclareSymbol{\swarrow}{arrows}{\mathrel}
790 \fdsy@DeclareSymbol{\searrow}{arrows}{\mathrel}
791 \fdsy@DeclareSymbol{\Rightarrow}{arrows}{\mathrel}
792 \fdsy@DeclareSymbol{\Uparrow}{arrows}{\mathrel}
793 \fdsy@DeclareSymbol{\Leftarrow}{arrows}{\mathrel}
794 \fdsy@DeclareSymbol{\Downarrow}{arrows}{\mathrel}
795 \fdsy@DeclareSymbol{\Nearrow}{arrows}{\mathrel}
796 \fdsy@DeclareSymbol{\Nwarrow}{arrows}{\mathrel}
797 \fdsy@DeclareSymbol{\Swarrow}{arrows}{\mathrel}
798 \fdsy@DeclareSymbol{\Searrow}{arrows}{\mathrel}
799 \fdsy@DeclareSymbol{\leftrightarrow}{arrows}{\mathrel}
800 \fdsy@DeclareSymbol{\updownarrow}{arrows}{\mathrel}
801 \fdsy@DeclareSymbol{\neswarrow}{arrows}{\mathrel}
802 \fdsy@DeclareSymbol{\nwsearrow}{arrows}{\mathrel}
803 \fdsy@DeclareSymbol{\Leftrightarrow}{arrows}{\mathrel}
804 \fdsy@DeclareSymbol{\Updownarrow}{arrows}{\mathrel}
805 \fdsy@DeclareSymbol{\Neswarrow}{arrows}{\mathrel}
806 \fdsy@DeclareSymbol{\Nwsearrow}{arrows}{\mathrel}
807\fdsy@DeclareSymbol{\twoheadrightarrow}{arrows}{\mathrel}
808 \fdsy@DeclareSymbol{\twoheaduparrow}{arrows}{\mathrel}
809 \fdsy@DeclareSymbol{\twoheadleftarrow}{arrows}{\mathrel}
810 \fdsy@DeclareSymbol{\twoheaddownarrow}{arrows}{\mathrel}
```

```
811 \fdsy@DeclareSymbol{\twoheadnearrow}{arrows}{\mathrel}
812 \fdsy@DeclareSymbol{\twoheadnwarrow}{arrows}{\mathrel}
813 \fdsv@DeclareSvmbol{\twoheadswarrow}{arrows}{\mathrel}
814 \fdsy@DeclareSymbol{\twoheadsearrow}{arrows}{\mathrel}
815 \fdsy@DeclareSymbol{\rightarrowtail}{arrows}{\mathrel}
816 \fdsy@DeclareSymbol{\uparrowtail}{arrows}{\mathrel}
817 \fdsy@DeclareSymbol{\leftarrowtail}{arrows}{\mathrel}
818 \fdsy@DeclareSymbol{\downarrowtail}{arrows}{\mathrel}
819 \fdsy@DeclareSymbol{\nearrowtail}{arrows}{\mathrel}
820 \fdsy@DeclareSymbol{\nwarrowtail}{arrows}{\mathrel}
821\fdsy@DeclareSymbol{\swarrowtail}{arrows}{\mathrel}
822 \fdsy@DeclareSymbol{\searrowtail}{arrows}{\mathrel}
823 \fdsy@DeclareSymbol{\rightmapsto}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\mapsto}{arrows}{\mathrel}
825 \fdsy@DeclareSymbol{\upmapsto}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\mapsup}{arrows}{\mathrel}
826
827 \fdsy@DeclareSymbol{\leftmapsto}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\mapsfrom}{arrows}{\mathrel}
829 \fdsv@DeclareSvmbol{\downmapsto}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\mapsdown}{arrows}{\mathrel}
830
831 \fdsv@DeclareSvmbol{\nemapsto}{arrows}{\mathrel}
832 \fdsy@DeclareSymbol{\nwmapsto}{arrows}{\mathrel}
833 \fdsy@DeclareSymbol{\swmapsto}{arrows}{\mathrel}
834 \fdsy@DeclareSymbol{\semapsto}{arrows}{\mathrel}
835 \fdsy@DeclareSymbol{\lhookrightarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\hookrightarrow}{arrows}{\mathrel}
837 \fdsy@DeclareSymbol{\lhookuparrow}{arrows}{\mathrel}
838 \fdsy@DeclareSymbol{\lhookleftarrow}{arrows}{\mathrel}
839 \fdsy@DeclareSymbol{\lhookdownarrow}{arrows}{\mathrel}
840 \fdsv@DeclareSvmbol{\lhooknearrow}{arrows}{\mathrel}
841 \fdsy@DeclareSymbol{\lhooknwarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\hknwarrow}{arrows}{\mathrel}
843 \fdsy@DeclareSymbol{\lhookswarrow}{arrows}{\mathrel}
844 \fdsy@DeclareSymbol{\lhooksearrow}{arrows}{\mathrel}
     \fdsv@DeclareAlias{\hksearrow}{arrows}{\mathrel}
846 \fdsy@DeclareSymbol{\rhookrightarrow}{arrows}{\mathrel}
847 \fdsy@DeclareSymbol{\rhookuparrow}{arrows}{\mathrel}
848 \fdsy@DeclareSymbol{\rhookleftarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\hookleftarrow}{arrows}{\mathrel}
850 \fdsy@DeclareSymbol{\rhookdownarrow}{arrows}{\mathrel}
851 \fdsy@DeclareSymbol{\rhooknearrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\hknearrow}{arrows}{\mathrel}
853 \fdsy@DeclareSymbol{\rhooknwarrow}{arrows}{\mathrel}
854 \fdsy@DeclareSymbol{\rhookswarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\hkswarrow}{arrows}{\mathrel}
```

```
856 \fdsy@DeclareSymbol{\rhooksearrow}{arrows}{\mathrel}
857 \fdsy@DeclareSymbol{\rightharpoonup}{arrows}{\mathrel}
858 \fdsv@DeclareSvmbol{\upharpoonleft}{arrows}{\mathrel}
859 \fdsy@DeclareSymbol{\leftharpoondown}{arrows}{\mathrel}
860 \fdsy@DeclareSymbol{\downharpoonright}{arrows}{\mathrel}
861 \fdsy@DeclareSymbol{\neharpoonnw}{arrows}{\mathrel}
862 \fdsy@DeclareSymbol{\nwharpoonsw}{arrows}{\mathrel}
863 \fdsy@DeclareSymbol{\swharpoonse}{arrows}{\mathrel}
864 \fdsy@DeclareSymbol{\seharpoonne}{arrows}{\mathrel}
865 \fdsy@DeclareSymbol{\rightharpoondown}{arrows}{\mathrel}
866 \fdsy@DeclareSymbol{\upharpoonright}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\restriction}{arrows}{\mathrel}
868 \fdsy@DeclareSymbol{\leftharpoonup}{arrows}{\mathrel}
869 \fdsy@DeclareSymbol{\downharpoonleft}{arrows}{\mathrel}
870 \fdsy@DeclareSymbol{\neharpoonse}{arrows}{\mathrel}
871 \fdsy@DeclareSymbol{\nwharpoonne}{arrows}{\mathrel}
872 \fdsy@DeclareSymbol{\swharpoonnw}{arrows}{\mathrel}
873 \fdsy@DeclareSymbol{\seharpoonsw}{arrows}{\mathrel}
874 \fdsy@DeclareSymbol{\leftrightharpoonupdown}{arrows}{\mathrel}
875 \fdsy@DeclareSymbol{\updownharpoonleftright}{arrows}{\mathrel}
876 \fdsy@DeclareSymbol{\neswharpoonnwse}{arrows}{\mathrel}
877 \fdsy@DeclareSymbol{\nwseharpoonnesw}{arrows}{\mathrel}
878 \fdsy@DeclareSymbol{\leftrightharpoondownup}{arrows}{\mathrel}
879 \fdsy@DeclareSymbol{\updownharpoonrightleft}{arrows}{\mathrel}
880 \fdsy@DeclareSymbol{\neswharpoonsenw}{arrows}{\mathrel}
881 \fdsy@DeclareSymbol{\nwseharpoonswne}{arrows}{\mathrel}
882 \fdsy@DeclareSymbol{\rightleftharpoons}{arrows}{\mathrel}
883 \fdsy@DeclareSymbol{\updownharpoons}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\updownharpoonsleftright}{arrows}{\mathrel}
885 \fdsy@DeclareSymbol{\neswharpoons}{arrows}{\mathrel}
886 \fdsy@DeclareSymbol{\senwharpoons}{arrows}{\mathrel}
887\fdsy@DeclareSymbol{\leftrightharpoons}{arrows}{\mathrel}
888 \fdsy@DeclareSymbol{\downupharpoons}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\downupharpoonsleftright}{arrows}{\mathrel}
890 \fdsv@DeclareSymbol{\swneharpoons}{arrows}{\mathrel}
891 \fdsy@DeclareSymbol{\nwseharpoons}{arrows}{\mathrel}
892 \fdsy@DeclareSymbol{\rightbkarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\dasharrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\dashrightarrow}{arrows}{\mathrel}
894
895 \fdsy@DeclareSymbol{\upbkarrow}{arrows}{\mathrel}
896 \fdsy@DeclareSymbol{\leftbkarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\dashleftarrow}{arrows}{\mathrel}
898 \fdsy@DeclareSymbol{\downbkarrow}{arrows}{\mathrel}
899 \fdsy@DeclareSymbol{\nebkarrow}{arrows}{\mathrel}
900 \fdsy@DeclareSymbol{\nwbkarrow}{arrows}{\mathrel}
```

```
901 \fdsy@DeclareSymbol{\swbkarrow}{arrows}{\mathrel}
902 \fdsy@DeclareSymbol{\sebkarrow}{arrows}{\mathrel}
903 \fdsv@DeclareSvmbol{\rightspoon}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\multimap}{arrows}{\mathrel}
905 \fdsy@DeclareSymbol{\upspoon}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\cirmid}{arrows}{\mathrel}
907\fdsy@DeclareSymbol{\leftspoon}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\multimapinv}{arrows}{\mathrel}
909 \fdsy@DeclareSymbol{\downspoon}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\midcir}{arrows}{\mathrel}
911 \fdsy@DeclareSymbol{\rightblackspoon}{arrows}{\mathrel}
912 \fdsy@DeclareSymbol{\upblackspoon}{arrows}{\mathrel}
913 \fdsy@DeclareSymbol{\leftblackspoon}{arrows}{\mathrel}
914 \fdsy@DeclareSymbol{\downblackspoon}{arrows}{\mathrel}
915 \fdsy@DeclareSymbol{\rightpitchfork}{arrows}{\mathrel}
916 \fdsy@DeclareSymbol{\uppitchfork}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\pitchfork}{arrows}{\mathrel}
918 \fdsy@DeclareSymbol{\leftpitchfork}{arrows}{\mathrel}
919 \fdsv@DeclareSymbol{\downpitchfork}{arrows}{\mathrel}
920 \fdsy@DeclareSymbol{\rightrightarrows}{arrows}{\mathrel}
921 \fdsy@DeclareSymbol{\upuparrows}{arrows}{\mathrel}
922 \fdsy@DeclareSymbol{\leftleftarrows}{arrows}{\mathrel}
923 \fdsy@DeclareSymbol{\downdownarrows}{arrows}{\mathrel}
924 \fdsy@DeclareSymbol{\nenearrows}{arrows}{\mathrel}
925 \fdsy@DeclareSymbol{\nwnwarrows}{arrows}{\mathrel}
926 \fdsy@DeclareSymbol{\swswarrows}{arrows}{\mathrel}
927 \fdsy@DeclareSymbol{\sesearrows}{arrows}{\mathrel}
928 \fdsy@DeclareSymbol{\rightleftarrows}{arrows}{\mathrel}
929 \fdsy@DeclareSymbol{\updownarrows}{arrows}{\mathrel}
930 \fdsv@DeclareSvmbol{\neswarrows}{arrows}{\mathrel}
931 \fdsy@DeclareSymbol{\nwsearrows}{arrows}{\mathrel}
932 \fdsy@DeclareSymbol{\leftrightarrows}{arrows}{\mathrel}
933 \fdsy@DeclareSymbol{\downuparrows}{arrows}{\mathrel}
934 \fdsy@DeclareSymbol{\swnearrows}{arrows}{\mathrel}
935 \fdsv@DeclareSymbol{\senwarrows}{arrows}{\mathrel}
936 \fdsy@DeclareSymbol{\rightlsquigarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\leadsto}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\rightsquigarrow}{arrows}{\mathrel}
939 \fdsy@DeclareSymbol{\uplsquigarrow}{arrows}{\mathrel}
940 \fdsy@DeclareSymbol{\leftlsquigarrow}{arrows}{\mathrel}
941 \fdsy@DeclareSymbol{\downlsquigarrow}{arrows}{\mathrel}
942 \fdsy@DeclareSymbol{\rightrsquigarrow}{arrows}{\mathrel}
943 \fdsy@DeclareSymbol{\uprsquigarrow}{arrows}{\mathrel}
944 \fdsy@DeclareSymbol{\leftrsquigarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\leftsquigarrow}{arrows}{\mathrel}
```

```
946 \fdsy@DeclareSymbol{\downrsquigarrow}{arrows}{\mathrel}
947\fdsy@DeclareSymbol{\leftrightsquigarrow}{arrows}{\mathrel}
948 \fdsv@DeclareSymbol{\updownsquigarrow}{arrows}{\mathrel}
949 \fdsy@DeclareSymbol{\rightleftsquigarrow}{arrows}{\mathrel}
950 \fdsv@DeclareSvmbol{\downupsquigarrow}{arrows}{\mathrel}
951\fdsy@DeclareSymbol{\rightlcurvearrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\curvearrowright}{arrows}{\mathrel}
953 \fdsy@DeclareSymbol{\uplcurvearrow}{arrows}{\mathrel}
954 \fdsy@DeclareSymbol{\leftlcurvearrow}{arrows}{\mathrel}
955 \fdsy@DeclareSymbol{\downlcurvearrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\cwrightarcarrow}{arrows}{\mathrel}
957 \fdsy@DeclareSymbol{\nelcurvearrow}{arrows}{\mathrel}
958 \fdsy@DeclareSymbol{\nwlcurvearrow}{arrows}{\mathrel}
959 \fdsv@DeclareSvmbol{\swlcurvearrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\cwundercurvearrow}{arrows}{\mathrel}
961\fdsy@DeclareSymbol{\selcurvearrow}{arrows}{\mathrel}
962 \fdsy@DeclareSymbol{\rightrcurvearrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\acwunderarcarrow}{arrows}{\mathrel}
964 \fdsv@DeclareSymbol{\uprcurvearrow}{arrows}{\mathrel}
965 \fdsy@DeclareSymbol{\leftrcurvearrow}{arrows}{\mathrel}
     \fdsv@DeclareAlias{\curvearrowleft}{arrows}{\mathrel}
966
     \fdsy@DeclareAlias{\acwoverarcarrow}{arrows}{\mathrel}
968 \fdsy@DeclareSymbol{\downrcurvearrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\acwleftarcarrow}{arrows}{\mathrel}
970 \fdsy@DeclareSymbol{\nercurvearrow}{arrows}{\mathrel}
971 \fdsy@DeclareSymbol{\nwrcurvearrow}{arrows}{\mathrel}
972 \fdsy@DeclareSymbol{\swrcurvearrow}{arrows}{\mathrel}
973 \fdsy@DeclareSymbol{\sercurvearrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\ccwundercurvearrow}{arrows}{\mathrel}
975 \fdsv@DeclareSvmbol{\leftrightcurvearrow}{arrows}{\mathrel}
976 \fdsy@DeclareSymbol{\updowncurvearrow}{arrows}{\mathrel}
977 \fdsy@DeclareSymbol{\rightleftcurvearrow}{arrows}{\mathrel}
978 \fdsy@DeclareSymbol{\downupcurvearrow}{arrows}{\mathrel}
979 \fdsy@DeclareSymbol{\neswcurvearrow}{arrows}{\mathrel}
980 \fdsv@DeclareSvmbol{\nwsecurvearrow}{arrows}{\mathrel}
981 \fdsy@DeclareSymbol{\swnecurvearrow}{arrows}{\mathrel}
982 \fdsy@DeclareSymbol{\senwcurvearrow}{arrows}{\mathrel}
983 \fdsy@DeclareSymbol{\leftfootline}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\vlongdash}{arrows}{\mathrel}
985 \fdsy@DeclareSymbol{\rightfootline}{arrows}{\mathrel}
986
     \fdsy@DeclareAlias{\longdashv}{arrows}{\mathrel}
987 \fdsy@DeclareSymbol{\acwcirclearrowup}{arrows}{\mathrel}
988 \fdsy@DeclareSymbol{\acwcirclearrowleft}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\circlearrowleft}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\acwopencirclearrow}{arrows}{\mathrel}
```

```
991\fdsy@DeclareSymbol{\acwcirclearrowdown}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\acwgapcirclearrow}{arrows}{\mathrel}
993 \fdsv@DeclareSvmbol{\acwcirclearrowright}{arrows}{\mathrel}
994 \fdsy@DeclareSymbol{\cwcirclearrowdown}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\cwgapcirclearrow}{arrows}{\mathrel}
995
996 \fdsy@DeclareSymbol{\cwcirclearrowright}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\circlearrowright}{arrows}{\mathrel}
997
     \fdsy@DeclareAlias{\cwopencirclearrow}{arrows}{\mathrel}
999 \fdsy@DeclareSymbol{\cwcirclearrowup}{arrows}{\mathrel}
1000 \fdsy@DeclareSymbol{\cwcirclearrowleft}{arrows}{\mathrel}
1001 \fdsy@DeclareSymbol{\Rrightarrow}{arrows}{\mathrel}
1002 \fdsy@DeclareSymbol{\Uuparrow}{arrows}{\mathrel}
1003 \fdsy@DeclareSymbol{\Lleftarrow}{arrows}{\mathrel}
1004 \fdsy@DeclareSymbol{\Ddownarrow}{arrows}{\mathrel}
1005 \fdsy@DeclareSymbol{\Lsh}{arrows}{\mathrel}
1006 \fdsy@DeclareSymbol{\Rsh}{arrows}{\mathrel}
1007 \fdsy@DeclareSymbol{\Ldsh}{arrows}{\mathrel}
1008 \fdsy@DeclareSymbol{\Rdsh}{arrows}{\mathrel}
1009 \fdsy@DeclareSymbol{\looparrowright}{arrows}{\mathrel}
1010 \fdsy@DeclareSymbol{\looparrowleft}{arrows}{\mathrel}
1011 \fdsv@setslot{224}
1012 \fdsy@DeclareSymbol{\rightvdash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\vdash}{arrows}{\mathrel}
1013
     \fdsy@DeclareAlias{\assert}{arrows}{\mathrel}
1015 \fdsy@DeclareSymbol{\upvdash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\perp}{arrows}{\mathrel}
1017 \fdsy@DeclareSymbol{\leftvdash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\dashv}{arrows}{\mathrel}
1019 \fdsy@DeclareSymbol{\downvdash}{arrows}{\mathrel}
1020 \fdsy@DeclareSymbol{\rightvDash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\vDash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\models}{arrows}{\mathrel}
1022
1023 \fdsy@DeclareSymbol{\upvDash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\Vbar}{arrows}{\mathrel}
1024
1025 \fdsv@DeclareSvmbol{\leftvDash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\Dashv}{arrows}{\mathrel}
1027 \fdsy@DeclareSymbol{\downvDash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\barV}{arrows}{\mathrel}
1029 \fdsy@DeclareSymbol{\rightVdash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\Vdash}{arrows}{\mathrel}
1031 \fdsy@DeclareSymbol{\upVdash}{arrows}{\mathrel}
1032 \fdsy@DeclareSymbol{\leftVdash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\dashV}{arrows}{\mathrel}
1034 \fdsy@DeclareSymbol{\downVdash}{arrows}{\mathrel}
1035 \fdsy@DeclareSymbol{\rightVDash}{arrows}{\mathrel}
```

```
\fdsy@DeclareAlias{\VDash}{arrows}{\mathrel}
1037 \fdsy@DeclareSymbol{\upVDash}{arrows}{\mathrel}
1038 \fdsy@DeclareSymbol{\leftVDash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\DashV}{arrows}{\mathrel}
1040 \fdsy@DeclareSymbol{\downVDash}{arrows}{\mathrel}
1041 \fdsy@DeclareSymbol{\Vvdash}{arrows}{\mathrel}
1043 \DeclareRobustCommand{\relbar}{\mathrel{\smash-}}
1044 \DeclareRobustCommand{\Relbar}{\mathrel=}
1045 \let\joinrel\undefined
1046 \DeclareRobustCommand\joinrel{\mathrel{\mkern-4mu}}
1047 \DeclareRobustCommand\longrightarrow{\DOTSB\relbar\joinrel\rightarrow}
1048 \DeclareRobustCommand\longleftarrow{\DOTSB\leftarrow\joinrel\relbar}
1049 \DeclareRobustCommand\longleftrightarrow{\DOTSB\leftarrow\joinrel\rightarrow}
1050 \DeclareRobustCommand\Longrightarrow{\DOTSB\Relbar\joinrel\Rightarrow}
1051 \DeclareRobustCommand\Longleftarrow{\DOTSB\Leftarrow\joinrel\Relbar}
1052 \DeclareRobustCommand\Longleftrightarrow{\DOTSB\Leftarrow\joinrel\Rightarrow}
1053 \DeclareRobustCommand\longmapsto{\DOTSB\leftfootline\mkern-7mu\rightarrow}
1054 \DeclareRobustCommand\emptyblackspoon{\DOTSB\leftspoon\mkern-13mu\rightblackspoon}
1055 \let\origof\emptyblackspoon
1056 \DeclareRobustCommand\filledemptyspoon{\DOTSB\leftblackspoon\mkern-13mu\rightspoon}
1057 \let\imageof\filledemptyspoon
1058 \DeclareRobustCommand\leftrightspoon{\DOTSB\leftspoon\mkern-13mu\rightspoon}
1059 \let\dualmap\leftrightspoon
1060 \DeclareRobustCommand\leftrightblackspoon{\DOTSB\leftblackspoon\mkern-13mu\rightblackspoon}
 FdSymbolD: stroked arrows
1061 \fdsy@setslot{0}
1062 \fdsy@DeclareSymbol{\nrightarrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nto}{narrows}{\mathrel}
1064 \fdsy@DeclareSymbol{\nuparrow}{narrows}{\mathrel}
1065 \fdsy@DeclareSymbol{\nleftarrow}{narrows}{\mathrel}
    \fdsy@DeclareAlias{\ngets}{narrows}{\mathrel}
1067 \fdsy@DeclareSymbol{\ndownarrow}{narrows}{\mathrel}
1068 \fdsy@DeclareSymbol{\nnearrow}{narrows}{\mathrel}
1069 \fdsy@DeclareSymbol{\nnwarrow}{narrows}{\mathrel}
1070 \fdsy@DeclareSymbol{\nswarrow}{narrows}{\mathrel}
1071 \fdsy@DeclareSymbol{\nsearrow}{narrows}{\mathrel}
1072 \fdsy@DeclareSymbol{\nRightarrow}{narrows}{\mathrel}
1073 \fdsy@DeclareSymbol{\nUparrow}{narrows}{\mathrel}
1074 \fdsy@DeclareSymbol{\nLeftarrow}{narrows}{\mathrel}
1075 \fdsy@DeclareSymbol{\nDownarrow}{narrows}{\mathrel}
1076 \fdsy@DeclareSymbol{\nNearrow}{narrows}{\mathrel}
1077 \fdsy@DeclareSymbol{\nNwarrow}{narrows}{\mathrel}
1078 \fdsy@DeclareSymbol{\nSwarrow}{narrows}{\mathrel}
1079 \fdsy@DeclareSymbol{\nSearrow}{narrows}{\mathrel}
```

```
1080 \fdsy@DeclareSymbol{\nleftrightarrow}{narrows}{\mathrel}
1081 \fdsy@DeclareSymbol{\nupdownarrow}{narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narrows}{\narr
1082 \fdsv@DeclareSvmbol{\nneswarrow}{narrows}{\mathrel}
1083 \fdsy@DeclareSymbol{\nnwsearrow}{narrows}{\mathrel}
1084 \fdsy@DeclareSymbol{\nLeftrightarrow}{narrows}{\mathrel}
1085 \fdsy@DeclareSymbol{\nUpdownarrow}{narrows}{\mathrel}
1086 \fdsy@DeclareSymbol{\nNeswarrow}{narrows}{\mathrel}
1087 \fdsy@DeclareSymbol{\nNwsearrow}{narrows}{\mathrel}
1088 \fdsy@DeclareSymbol{\ntwoheadrightarrow}{narrows}{\mathrel}
1089 \fdsy@DeclareSymbol{\ntwoheaduparrow}{narrows}{\mathrel}
1090 \fdsy@DeclareSymbol{\ntwoheadleftarrow}{narrows}{\mathrel}
1091 \fdsy@DeclareSymbol{\ntwoheaddownarrow}{narrows}{\mathrel}
1092 \fdsy@DeclareSymbol{\ntwoheadnearrow}{narrows}{\mathrel}
1093 \fdsy@DeclareSymbol{\ntwoheadnwarrow}{narrows}{\mathrel}
1094 \fdsy@DeclareSymbol{\ntwoheadswarrow}{narrows}{\mathrel}
1095 \fdsy@DeclareSymbol{\ntwoheadsearrow}{narrows}{\mathrel}
1096 \fdsy@DeclareSymbol{\nrightarrowtail}{narrows}{\mathrel}
1097 \fdsy@DeclareSymbol{\nuparrowtail}{narrows}{\mathrel}
1098 \fdsy@DeclareSymbol{\nleftarrowtail}{narrows}{\mathrel}
1099 \fdsy@DeclareSymbol{\ndownarrowtail}{narrows}{\mathrel}
1100 \fdsy@DeclareSymbol{\nnearrowtail}{narrows}{\mathrel}
1101 \fdsy@DeclareSymbol{\nnwarrowtail}{narrows}{\mathrel}
1102 \fdsy@DeclareSymbol{\nswarrowtail}{narrows}{\mathrel}
1103 \fdsy@DeclareSymbol{\nsearrowtail}{narrows}{\mathrel}
1104 \fdsy@DeclareSymbol{\nrightmapsto}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nmapsto}{narrows}{\mathrel}
1106 \fdsy@DeclareSymbol{\nupmapsto}{\narrows}{\mathrel}
          \fdsy@DeclareAlias{\nmapsup}{\narrows}{\mathrel}
1107
1108 \fdsy@DeclareSymbol{\nleftmapsto}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nmapsfrom}{narrows}{\mathrel}
1109
1110 \fdsy@DeclareSymbol{\ndownmapsto}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nmapsdown}{narrows}{\mathrel}
1112 \fdsy@DeclareSymbol{\nnemapsto}{\narrows}{\mathrel}
1113 \fdsy@DeclareSymbol{\nnwmapsto}{\narrows}{\mathrel}
1114 \fdsv@DeclareSvmbol{\nswmapsto}{narrows}{\mathrel}
1115 \fdsy@DeclareSymbol{\nsemapsto}{\narrows}{\mathrel}
1116 \fdsy@DeclareSymbol{\nlhookrightarrow}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nhookrightarrow}{narrows}{\mathrel}
1118 \fdsy@DeclareSymbol{\nlhookuparrow}{narrows}{\mathrel}
1119 \fdsy@DeclareSymbol{\nlhookleftarrow}{narrows}{\mathrel}
1120 \fdsy@DeclareSymbol{\nlhookdownarrow}{narrows}{\mathrel}
1121 \fdsy@DeclareSymbol{\nlhooknearrow}{narrows}{\mathrel}
1122 \fdsy@DeclareSymbol{\nlhooknwarrow}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nhknwarrow}{narrows}{\mathrel}
1124 \fdsy@DeclareSymbol{\nlhookswarrow}{narrows}{\mathrel}
```

```
1125 \fdsy@DeclareSymbol{\nlhooksearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nhksearrow}{narrows}{\mathrel}
1127 \fdsv@DeclareSymbol {\nrhookrightarrow} {\narrows} {\mathrel}
1128 \fdsy@DeclareSymbol{\nrhookuparrow}{narrows}{\mathrel}
1129 \fdsy@DeclareSymbol{\nrhookleftarrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nhookleftarrow}{narrows}{\mathrel}
1131 \fdsy@DeclareSymbol{\nrhookdownarrow}{narrows}{\mathrel}
1132 \fdsy@DeclareSymbol{\nrhooknearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nhknearrow}{narrows}{\mathrel}
1134 \fdsy@DeclareSymbol{\nrhooknwarrow}{narrows}{\mathrel}
1135 \fdsy@DeclareSymbol{\nrhookswarrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nhkswarrow}{narrows}{\mathrel}
1137 \fdsy@DeclareSymbol{\nrhooksearrow}{narrows}{\mathrel}
1138 \fdsy@DeclareSymbol{\nrightharpoonup}{narrows}{\mathrel}
1139 \fdsy@DeclareSymbol{\nupharpoonleft}{narrows}{\mathrel}
1140 \fdsy@DeclareSymbol{\nleftharpoondown}{narrows}{\mathrel}
1141 \fdsy@DeclareSymbol{\ndownharpoonright}{narrows}{\mathrel}
1142 \fdsy@DeclareSymbol{\nneharpoonnw}{narrows}{\mathrel}
1143 \fdsy@DeclareSymbol{\nnwharpoonsw}{narrows}{\mathrel}
1144 \fdsy@DeclareSymbol{\nswharpoonse}{narrows}{\mathrel}
1145 \fdsy@DeclareSymbol{\nseharpoonne}{narrows}{\mathrel}
1146 \fdsy@DeclareSymbol{\nrightharpoondown}{narrows}{\mathrel}
1147 \fdsy@DeclareSymbol{\nupharpoonright}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nrestriction}{narrows}{\mathrel}
1149 \fdsy@DeclareSymbol{\nleftharpoonup}{narrows}{\mathrel}
1150 \fdsy@DeclareSymbol{\ndownharpoonleft}{narrows}{\mathrel}
1151 \fdsy@DeclareSymbol{\nneharpoonse}{narrows}{\mathrel}
1152 \fdsy@DeclareSymbol{\nnwharpoonne}{narrows}{\mathrel}
1153 \fdsy@DeclareSymbol{\nswharpoonnw}{narrows}{\mathrel}
1154 \fdsy@DeclareSymbol{\nseharpoonsw}{narrows}{\mathrel}
1155 \fdsy@DeclareSymbol{\nleftrightharpoonupdown}{narrows}{\mathrel}
1156 \fdsy@DeclareSymbol{\nupdownharpoonleftright}{narrows}{\mathrel}
1157 \fdsy@DeclareSymbol{\nneswharpoonnwse}{narrows}{\mathrel}
1158 \fdsy@DeclareSymbol{\nnwseharpoonnesw}{narrows}{\mathrel}
1159 \fdsv@DeclareSymbol {\nleftrightharpoondownup} {\narrows} {\mathrel}
1160 \fdsy@DeclareSymbol{\nupdownharpoonrightleft}{narrows}{\mathrel}
1161 \fdsy@DeclareSymbol{\nneswharpoonsenw}{narrows}{\mathrel}
1162 \fdsy@DeclareSymbol \\nnwseharpoonswne \{\narrows\} \\mathrel \}
1163 \fdsy@DeclareSymbol{\nrightleftharpoons}{narrows}{\mathrel}
1164 \fdsy@DeclareSymbol{\nupdownharpoons}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nupdownharpoonsleftright}{narrows}{\mathrel}
1166 \fdsy@DeclareSymbol{\nneswharpoons}{narrows}{\mathrel}
1167 \fdsy@DeclareSymbol{\nsenwharpoons}{narrows}{\mathrel}
1168 \fdsy@DeclareSymbol{\nleftrightharpoons}{narrows}{\mathrel}
1169 \fdsy@DeclareSymbol{\ndownupharpoons}{narrows}{\mathrel}
```

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\fdsy@DeclareAlias{\ndownupharpoonsleftright}{narrows}{\mathrel}
1171 \fdsy@DeclareSymbol{\nswneharpoons}{narrows}{\mathrel}
1172 \fdsv@DeclareSvmbol{\nnwseharpoons}{narrows}{\mathrel}
1173 \fdsy@DeclareSymbol{\nrightbkarrow}{narrows}{\mathrel}
     \fdsv@DeclareAlias{\ndasharrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ndashrightarrow}{narrows}{\mathrel}
1176 \fdsy@DeclareSymbol{\nupbkarrow}{narrows}{\mathrel}
1177 \fdsy@DeclareSymbol{\nleftbkarrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ndashleftarrow}{narrows}{\mathrel}
1179 \fdsy@DeclareSymbol{\ndownbkarrow}{narrows}{\mathrel}
1180 \fdsy@DeclareSymbol{\nnebkarrow}{narrows}{\mathrel}
1181 \fdsy@DeclareSymbol{\nnwbkarrow}{narrows}{\mathrel}
1182 \fdsy@DeclareSymbol{\nswbkarrow}{narrows}{\mathrel}
1183 \fdsy@DeclareSymbol{\nsebkarrow}{narrows}{\mathrel}
1184 \fdsy@DeclareSymbol{\nrightspoon}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nmultimap}{narrows}{\mathrel}
1186 \fdsy@DeclareSymbol{\nupspoon}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ncirmid}{narrows}{\mathrel}
1188 \fdsv@DeclareSvmbol{\nleftspoon}{narrows}{\mathrel}
1189
     \fdsy@DeclareAlias{\nmultimapinv}{narrows}{\mathrel}
1190 \fdsv@DeclareSvmbol{\ndownspoon}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nmidcir}{narrows}{\mathrel}
1192 \fdsy@DeclareSymbol{\nrightblackspoon}{narrows}{\mathrel}
1193 \fdsy@DeclareSymbol{\nupblackspoon}{narrows}{\mathrel}
1194 \fdsy@DeclareSymbol{\nleftblackspoon}{narrows}{\mathrel}
1195 \fdsy@DeclareSymbol{\ndownblackspoon}{narrows}{\mathrel}
1196 \fdsy@DeclareSymbol{\nrightpitchfork}{narrows}{\mathrel}
1197 \fdsy@DeclareSymbol{\nuppitchfork}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\npitchfork}{narrows}{\mathrel}
1199 \fdsy@DeclareSymbol{\nleftpitchfork}{narrows}{\mathrel}
1200 \fdsy@DeclareSymbol{\ndownpitchfork}{narrows}{\mathrel}
1201 \fdsy@DeclareSymbol{\nrightrightarrows}{\narrows}{\mathrel}
1202 \fdsy@DeclareSymbol{\nupuparrows}{narrows}{\mathrel}
1203 \fdsy@DeclareSymbol{\nleftleftarrows}{narrows}{\mathrel}
1204 \fdsv@DeclareSvmbol{\ndowndownarrows}{\narrows}{\mathrel}
1205 \fdsy@DeclareSymbol{\nnenearrows}{\narrows}{\mathrel}
1206 \fdsy@DeclareSymbol{\nnwnwarrows}{\narrows}{\mathrel}
1207 \fdsy@DeclareSymbol{\nswswarrows}{\narrows}{\mathrel}
1208 \fdsy@DeclareSymbol{\nsesearrows}{\narrows}{\mathrel}
1209 \fdsy@DeclareSymbol{\nrightleftarrows}{narrows}{\mathrel}
1210 \fdsy@DeclareSymbol{\nupdownarrows}{\narrows}{\mathrel}
1211 \fdsy@DeclareSymbol{\nneswarrows}{\narrows}{\mathrel}
1212 \fdsy@DeclareSymbol{\nnwsearrows}{narrows}{\mathrel}
1213 \fdsy@DeclareSymbol{\nleftrightarrows}{narrows}{\mathrel}
1214 \fdsy@DeclareSymbol{\ndownuparrows}{narrows}{\mathrel}
```

```
1215 \fdsy@DeclareSymbol{\nswnearrows}{narrows}{\mathrel}
1216 \fdsy@DeclareSymbol{\nsenwarrows}{narrows}{\mathrel}
1217 \fdsv@DeclareSymbol{\nrightlsquigarrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nleadsto}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nrightsquigarrow}{narrows}{\mathrel}
1220 \fdsy@DeclareSymbol{\nuplsquigarrow}{narrows}{\mathrel}
1221 \fdsy@DeclareSymbol{\nleftlsquigarrow}{narrows}{\mathrel}
1222 \fdsy@DeclareSymbol{\ndownlsquigarrow}{narrows}{\mathrel}
1223 \fdsy@DeclareSymbol{\nrightrsquigarrow}{narrows}{\mathrel}
1224 \fdsy@DeclareSymbol{\nuprsquigarrow}{narrows}{\mathrel}
1225 \fdsy@DeclareSymbol{\nleftrsquigarrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nleftsquigarrow}{narrows}{\mathrel}
1227 \fdsy@DeclareSymbol{\ndownrsquigarrow}{narrows}{\mathrel}
1228 \fdsy@DeclareSymbol{\nleftrightsquigarrow}{\narrows}{\mathrel}
1229 \fdsy@DeclareSymbol{\nupdownsquigarrow}{narrows}{\mathrel}
1230 \fdsy@DeclareSymbol{\nrightleftsquigarrow}{narrows}{\mathrel}
1231 \fdsy@DeclareSymbol{\ndownupsquigarrow}{narrows}{\mathrel}
1232 \fdsy@DeclareSymbol{\nrightlcurvearrow}{narrows}{\mathrel}
     \fdsv@DeclareAlias{\ncurvearrowright}{narrows}{\mathrel}
1234 \fdsy@DeclareSymbol{\nuplcurvearrow}{narrows}{\mathrel}
1235 \fdsy@DeclareSymbol{\nleftlcurvearrow}{narrows}{\mathrel}
1236 \fdsy@DeclareSymbol{\ndownlcurvearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ncwrightarcarrow}{narrows}{\mathrel}
1238 \fdsy@DeclareSymbol{\nnelcurvearrow}{narrows}{\mathrel}
1239 \fdsy@DeclareSymbol{\nnwlcurvearrow}{narrows}{\mathrel}
1240 \fdsy@DeclareSymbol{\nswlcurvearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ncwundercurvearrow}{narrows}{\mathrel}
1242 \fdsy@DeclareSymbol{\nselcurvearrow}{narrows}{\mathrel}
1243 \fdsy@DeclareSymbol{\nrightrcurvearrow}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nacwunderarcarrow}{narrows}{\mathrel}
1245 \fdsy@DeclareSymbol{\nuprcurvearrow}{narrows}{\mathrel}
1246 \fdsy@DeclareSymbol{\nleftrcurvearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ncurvearrowleft}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nacwoverarcarrow}{narrows}{\mathrel}
1248
1249 \fdsv@DeclareSvmbol{\ndownrcurvearrow}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nacwleftarcarrow}{narrows}{\mathrel}
1251 \fdsy@DeclareSymbol{\nnercurvearrow}{narrows}{\mathrel}
1252 \fdsy@DeclareSymbol{\nnwrcurvearrow}{narrows}{\mathrel}
1253 \fdsy@DeclareSymbol{\nswrcurvearrow}{narrows}{\mathrel}
1254 \fdsy@DeclareSymbol{\nsercurvearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nccwundercurvearrow}{narrows}{\mathrel}
1256 \fdsy@DeclareSymbol{\nleftrightcurvearrow}{narrows}{\mathrel}
1257 \fdsy@DeclareSymbol{\nupdowncurvearrow}{narrows}{\mathrel}
1258 \fdsy@DeclareSymbol{\nrightleftcurvearrow}{narrows}{\mathrel}
1259 \fdsy@DeclareSymbol{\ndownupcurvearrow}{narrows}{\mathrel}
```

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1260 \fdsy@DeclareSymbol{\nneswcurvearrow}{narrows}{\mathrel}
1261 \fdsy@DeclareSymbol{\nnwsecurvearrow}{narrows}{\mathrel}
1262 \fdsv@DeclareSvmbol{\nswnecurvearrow}{narrows}{\mathrel}
1263 \fdsv@DeclareSvmbol{\nsenwcurvearrow}{narrows}{\mathrel}
1264 \fdsv@DeclareSvmbol{\nleftfootline}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nvlongdash}{narrows}{\mathrel}
1266 \fdsv@DeclareSvmbol{\nrightfootline}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nlongdashv}{narrows}{\mathrel}
1268 \fdsy@DeclareSymbol{\nacwcirclearrowup}{narrows}{\mathrel}
1269 \fdsy@DeclareSymbol{\nacwcirclearrowleft}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ncirclearrowleft}{narrows}{\mathrel}
1270
     \fdsy@DeclareAlias{\nacwopencirclearrow}{narrows}{\mathrel}
1271
1272 \fdsy@DeclareSymbol{\nacwcirclearrowdown}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nacwgapcirclearrow}{narrows}{\mathrel}
1274 \fdsy@DeclareSymbol{\nacwcirclearrowright}{\narrows}{\mathrel}
1275 \fdsv@DeclareSvmbol{\ncwcirclearrowdown}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ncwgapcirclearrow}{narrows}{\mathrel}
1277 \fdsy@DeclareSymbol{\ncwcirclearrowright}{narrows}{\mathrel}
     \fdsv@DeclareAlias{\ncirclearrowright}{narrows}{\mathrel}
1279
     \fdsy@DeclareAlias{\ncwopencirclearrow}{narrows}{\mathrel}
1280 \fdsv@DeclareSvmbol{\ncwcirclearrowup}{narrows}{\mathrel}
1281 \fdsy@DeclareSymbol{\ncwcirclearrowleft}{narrows}{\mathrel}
1282 \fdsy@DeclareSymbol{\nRrightarrow}{narrows}{\mathrel}
1283 \fdsy@DeclareSymbol{\nUuparrow}{narrows}{\mathrel}
1284 \fdsy@DeclareSymbol{\nLleftarrow}{narrows}{\mathrel}
1285 \fdsy@DeclareSymbol{\nDdownarrow}{narrows}{\mathrel}
1286 \fdsy@setslot{224}
1287 \fdsy@DeclareSymbol{\nrightvdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nvdash}{narrows}{\mathrel}
1288
     \fdsv@DeclareAlias{\nassert}{narrows}{\mathrel}
1289
   \fdsy@DeclareSymbol{\nupvdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nperp}{narrows}{\mathrel}
1291
1292 \fdsy@DeclareSymbol{\nleftvdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ndashv}{narrows}{\mathrel}
1293
1294 \fdsv@DeclareSvmbol{\ndownvdash}{narrows}{\mathrel}
   \fdsy@DeclareSymbol{\nrightvDash}{narrows}{\mathrel}
     \fdsv@DeclareAlias{\nvDash}{narrows}{\mathrel}
1296
     \fdsy@DeclareAlias{\nmodels}{narrows}{\mathrel}
1297
    fdsy@DeclareSymbol{\nupvDash}{narrows}{\mathrel}
1298
     \fdsy@DeclareAlias{\nVbar}{narrows}{\mathrel}
1299
1300 \fdsy@DeclareSymbol{\nleftvDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nDashv}{narrows}{\mathrel}
1301
    fdsy@DeclareSymbol{\ndownvDash}{narrows}{\mathrel}
1302 \
     \fdsy@DeclareAlias{\nbarV}{narrows}{\mathrel}
1304 \fdsy@DeclareSymbol{\nrightVdash}{narrows}{\mathrel}
```

```
\fdsy@DeclareAlias{\nVdash}{narrows}{\mathrel}
1306 \fdsy@DeclareSymbol{\nupVdash}{narrows}{\mathrel}
1307 \fdsv@DeclareSvmbol{\nleftVdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ndashV}{narrows}{\mathrel}
1309 \fdsv@DeclareSvmbol{\ndownVdash}{narrows}{\mathrel}
1310 \fdsy@DeclareSymbol{\nrightVDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nVDash}{narrows}{\mathrel}
1312 \fdsy@DeclareSymbol{\nupVDash}{narrows}{\mathrel}
1313 \fdsy@DeclareSymbol{\nleftVDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nDashV}{narrows}{\mathrel}
1315 \fdsy@DeclareSymbol{\ndownVDash}{narrows}{\mathrel}
 FdSymbolE: large operators
1316 \fdsy@setslot{0}
1317 \fdsy@DeclareSymbol{\tbigplus}{largesymbols}{\mathop}
1318 \fdsy@DeclareSymbol{\dbigplus}{largesymbols}{\mathop}
1319 \fdsy@DeclareSymbol{\tbigtimes}{largesymbols}{\mathop}
1320 \fdsy@DeclareSymbol{\dbigtimes}{largesymbols}{\mathop}
1321 \fdsy@DeclareSymbol{\tbigwedge}{largesymbols}{\mathop}
1322 \fdsy@DeclareSymbol{\dbigwedge}{largesymbols}{\mathop}
1323 \fdsy@DeclareSymbol{\tbigvee}{largesymbols}{\mathop}
1324 \fdsy@DeclareSymbol{\dbigvee}{largesymbols}{\mathop}
1325 \fdsy@DeclareSymbol{\tbigwedgedot}{largesymbols}{\mathop}
1326 \fdsy@DeclareSymbol{\dbigwedgedot}{largesymbols}{\mathop}
1327 \fdsy@DeclareSymbol{\tbigveedot}{largesymbols}{\mathop}
1328 \fdsy@DeclareSymbol{\dbigveedot}{largesymbols}{\mathop}
1329 \fdsy@DeclareSymbol{\tbigdoublewedge}{largesymbols}{\mathop}
1330
     \fdsy@DeclareAlias{\tconjquant}{largesymbols}{\mathop}
1331 \fdsy@DeclareSymbol{\dbigdoublewedge}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\dconjquant}{largesymbols}{\mathop}
1332
1333 \fdsy@DeclareSymbol{\tbigdoublevee}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tdisjquant}{largesymbols}{\mathop}
1334
1335 \fdsy@DeclareSymbol{\dbigdoublevee}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\ddisjquant}{largesymbols}{\mathop}
1337 \fdsy@DeclareSymbol{\tbigcurlywedge}{largesymbols}{\mathop}
1338 \fdsy@DeclareSymbol{\dbigcurlywedge}{largesymbols}{\mathop}
1339 \fdsy@DeclareSymbol{\tbigcurlyvee}{largesymbols}{\mathop}
1340 \fdsy@DeclareSymbol{\dbigcurlyvee}{largesymbols}{\mathop}
1341 \fdsy@DeclareSymbol{\tbigcurlywedgedot}{largesymbols}{\mathop}
1342 \fdsy@DeclareSymbol{\dbigcurlywedgedot}{largesymbols}{\mathop}
1343 \fdsy@DeclareSymbol{\tbigcurlyveedot}{largesymbols}{\mathop}
1344 \fdsv@DeclareSvmbol{\dbigcurlvveedot}{largesvmbols}{\mathop}
1345 \fdsy@DeclareSymbol{\tbigdoublecurlywedge} {largesymbols} {\mathop}
1346 \fdsy@DeclareSymbol{\dbigdoublecurlywedge}{largesymbols}{\mathop}
1347 \fdsy@DeclareSymbol{\tbigdoublecurlyvee}{largesymbols}{\mathop}
1348 \fdsy@DeclareSymbol{\dbigdoublecurlyvee}{largesymbols}{\mathop}
```

```
1349 \fdsy@DeclareSymbol{\tbigcap}{largesymbols}{\mathop}
1350 \fdsy@DeclareSymbol{\dbigcap}{largesymbols}{\mathop}
1351 \fdsv@DeclareSymbol{\tbigcup}{largesymbols}{\mathop}
1352 \fdsy@DeclareSymbol{\dbigcup}{largesymbols}{\mathop}
1353 \fdsy@DeclareSymbol{\tbigcapdot}{largesymbols}{\mathop}
1354 \fdsy@DeclareSymbol{\dbigcapdot}{largesymbols}{\mathop}
1355 \fdsy@DeclareSymbol{\tbigcupdot}{largesymbols}{\mathop}
1356 \fdsy@DeclareSymbol{\dbigcupdot}{largesymbols}{\mathop}
1357 \fdsy@DeclareSymbol{\tbigcapplus}{largesymbols}{\mathop}
1358 \fdsy@DeclareSymbol{\dbigcapplus}{largesymbols}{\mathop}
1359 \fdsy@DeclareSymbol{\tbigcupplus}{largesymbols}{\mathop}
          \fdsy@DeclareAlias{\tbiguplus}{largesymbols}{\mathop}
1361 \fdsy@DeclareSymbol{\dbigcupplus}{largesymbols}{\mathop}
          \fdsy@DeclareAlias{\dbiguplus}{largesymbols}{\mathop}
1363 \fdsy@DeclareSymbol{\tbigsqcap}{largesymbols}{\mathop}
1364 \fdsy@DeclareSymbol{\dbigsqcap}{largesymbols}{\mathop}
1365 \fdsy@DeclareSymbol{\tbigsqcup}{largesymbols}{\mathop}
1366 \fdsy@DeclareSymbol{\dbigsqcup}{largesymbols}{\mathop}
1367 \fdsy@DeclareSymbol{\tbigsqcapdot}{largesymbols}{\mathop}
1368 \fdsy@DeclareSymbol{\dbigsqcapdot}{largesymbols}{\mathop}
1369 \fdsy@DeclareSymbol{\tbigsqcupdot}{largesymbols}{\mathop}
1370 \fdsy@DeclareSymbol{\dbigsqcupdot}{largesymbols}{\mathop}
1371 \fdsy@DeclareSymbol{\tbigsqcapplus}{largesymbols}{\mathop}
1372 \fdsy@DeclareSymbol{\dbigsqcapplus}{largesymbols}{\mathop}
1373 \fdsy@DeclareSymbol{\tbigsqcupplus}{largesymbols}{\mathop}
1374 \fdsy@DeclareSymbol{\dbigsqcupplus}{largesymbols}{\mathop}
1375 \fdsy@DeclareSymbol{\tbigoplus}{largesymbols}{\mathop}
1376 \fdsy@DeclareSymbol{\dbigoplus}{largesymbols}{\mathop}
1377 \fdsy@DeclareSymbol{\tbigotimes}{largesymbols}{\mathop}
1378 \fdsy@DeclareSymbol{\dbigotimes}{largesymbols}{\mathop}
1379 \fdsy@DeclareSymbol{\tbigodot}{largesymbols}{\mathop}
\label{largesymbols} $$1380 \foots{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\colored{\c
1381 \fdsy@DeclareSymbol{\tbigoast}{largesymbols}{\mathop}
1382 \fdsy@DeclareSymbol{\dbigoast}{largesymbols}{\mathop}
1383 \fdsv@DeclareSymbol{\tprod}{largesymbols}{\mathop}
1384 \fdsy@DeclareSymbol{\dprod}{largesymbols}{\mathop}
1385 \fdsy@DeclareSymbol{\tcoprod}{largesymbols}{\mathop}
1386 \fdsy@DeclareSymbol{\dcoprod}{largesymbols}{\mathop}
1387 \fdsy@DeclareSymbol{\tsum}{largesymbols}{\mathop}
1388 \fdsy@DeclareSymbol{\dsum}{largesymbols}{\mathop}
1389 \fdsy@DeclareSymbol{\tosum}{largesymbols}{\mathop}
1390 \fdsy@DeclareSymbol{\dosum}{largesymbols}{\mathop}
1391 \fdsy@DeclareSymbol{\tint}{largesymbols}{\mathop}
1392 \fdsy@DeclareSymbol{\dint}{largesymbols}{\mathop}
1393 \fdsy@DeclareSymbol{\tiint}{largesymbols}{\mathop}
```

```
1394 \fdsy@DeclareSymbol{\diint}{largesymbols}{\mathop}
1395 \fdsy@DeclareSymbol{\tiiint}{largesymbols}{\mathop}
1396 \fdsv@DeclareSvmbol{\diint}{largesvmbols}{\mathop}
1397 \fdsy@DeclareSymbol{\tiiiint}{largesymbols}{\mathop}
1398 \fdsy@DeclareSymbol{\diiiint}{largesymbols}{\mathop}
1399 \fdsy@DeclareSymbol{\tidotsint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tdotsint}{largesymbols}{\mathop}
1400
1401\fdsy@DeclareSymbol{\didotsint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\ddotsint}{largesymbols}{\mathop}
1402
   \fdsy@DeclareSymbol{\tlandupint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tintclockwise}{largesymbols}{\mathop}
1404
1405 \fdsy@DeclareSymbol{\dlandupint}{largesymbols}{\mathop}
1406
     \fdsy@DeclareAlias{\dintclockwise}{largesymbols}{\mathop}
1407\fdsy@DeclareSymbol{\tlanddownint}{largesymbols}{\mathop}
1408
     \fdsy@DeclareAlias{\tawint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tintctrclockwise}{largesymbols}{\mathop}
1409
1410 \fdsy@DeclareSymbol{\dlanddownint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\dawint}{largesymbols}{\mathop}
1411
     \fdsv@DeclareAlias{\dintctrclockwise}{largesvmbols}{\mathop}
1413 \fdsy@DeclareSymbol{\tintbar}{largesymbols}{\mathop}
1414 \fdsv@DeclareSvmbol{\dintbar}{largesvmbols}{\mathop}
1415 \fdsy@DeclareSymbol{\tintBar}{largesymbols}{\mathop}
1416 \fdsy@DeclareSymbol{\dintBar}{largesymbols}{\mathop}
1417 \fdsy@DeclareSymbol{\tfint}{largesymbols}{\mathop}
1418 \fdsy@DeclareSymbol{\dfint}{largesymbols}{\mathop}
1419 \fdsy@DeclareSymbol{\toint}{largesymbols}{\mathop}
1420 \fdsy@DeclareSymbol{\doint}{largesymbols}{\mathop}
1421 \fdsy@DeclareSymbol{\toiint}{largesymbols}{\mathop}
1422 \fdsy@DeclareSymbol{\doiint}{largesymbols}{\mathop}
1423 \fdsy@DeclareSymbol{\toiiint}{largesymbols}{\mathop}
1424 \fdsy@DeclareSymbol{\doiiint}{largesymbols}{\mathop}
1425 \fdsy@DeclareSymbol{\trcirclerightint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tointctrclockwise}{largesymbols}{\mathop}
1426
1427 \fdsy@DeclareSymbol{\drcirclerightint}{largesymbols}{\mathop}
     \fdsv@DeclareAlias{\dointctrclockwise}{largesvmbols}{\mathop}
1428
   \fdsy@DeclareSymbol{\tlcirclerightint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tvarointclockwise}{largesymbols}{\mathop}
1430
    fdsy@DeclareSymbol{\dlcirclerightint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\dvarointclockwise}{largesymbols}{\mathop}
1432
    fdsy@DeclareSymbol{\trcircleleftint}{largesymbols}{\mathop}
1433
1434
     \fdsy@DeclareAlias{\tvarointctrclockwise}{largesymbols}{\mathop}
1435 \fdsy@DeclareSymbol{\drcircleleftint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\dvarointctrclockwise}{largesymbols}{\mathop}
1436
1437 \fdsy@DeclareSymbol{\tlcircleleftint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tointclockwise}{largesymbols}{\mathop}
```

```
1439 \fdsy@DeclareSymbol{\dlcircleleftint}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\dointclockwise}{largesymbols}{\mathop}
1441 \fdsy@DeclareSymbol{\tsumint}{largesymbols}{\mathop}
1442 \fdsy@DeclareSymbol{\dsumint}{largesymbols}{\mathop}
1443 \let\intop\tint
1444 \let\ointop\toint
1446 \fdsy@DeclareOperator{\bigplus}{\dbigplus}{\tbigplus}
1447 \fdsy@DeclareOperator{\bigtimes}{\dbigtimes} {\tbigtimes}
1448 \fdsy@DeclareOperator{\bigwedge}{\dbigwedge}{\tbigwedge}
1449 \fdsy@DeclareOperator{\bigvee}{\dbigvee}{\tbigvee}
1450 \fdsy@DeclareOperator{\bigwedgedot}{\dbigwedgedot}{\tbigwedgedot}
1451 \fdsy@DeclareOperator{\bigveedot}{\dbigveedot}{\tbigveedot}
1452 \fdsy@DeclareOperator{\bigdoublewedge}{\dbigdoublewedge}{\tbigdoublewedge}
1453 \fdsy@DeclareOperator{\conjquant}{\dconjquant}{\tconjquant}
1454 \fdsy@DeclareOperator{\bigdoublevee}{\dbigdoublevee} {\tbigdoublevee}
1455 \fdsy@DeclareOperator{\disjquant}{\ddisjquant}{\tdisjquant}
1456 \fdsy@DeclareOperator{\bigcurlywedge}{\dbigcurlywedge}{\tbigcurlywedge}
1457 \fdsy@DeclareOperator{\bigcurlyvee}{\dbigcurlyvee}{\tbigcurlyvee}
1458 \fdsy@DeclareOperator{\bigcurlywedgedot}{\dbigcurlywedgedot}{\tbigcurlywedgedot}
1459 \fdsy@DeclareOperator{\bigcurlyveedot}{\dbigcurlyveedot}{\tbigcurlyveedot}
1460 \fdsy@DeclareOperator{\bigdoublecurlywedge}{\dbigdoublecurlywedge}{\tbigdoublecurlywedge}
1461 \fdsy@DeclareOperator{\bigdoublecurlyvee}{\dbigdoublecurlyvee}{\tbigdoublecurlyvee}
1462 \fdsy@DeclareOperator{\bigcap}{\dbigcap}{\tbigcap}
1463 \fdsy@DeclareOperator{\bigcup}{\dbigcup}{\tbigcup}
1464 \fdsy@DeclareOperator{\bigcapdot}{\dbigcapdot}{\tbigcapdot}
1465 \fdsy@DeclareOperator{\bigcupdot}{\dbigcupdot}{\tbigcupdot}
1466 \fdsy@DeclareOperator{\bigcapplus}{\dbigcapplus}{\tbigcapplus}
1467 \fdsy@DeclareOperator{\bigcupplus}{\dbigcupplus}{\tbigcupplus}
1468 \fdsy@DeclareOperator{\biguplus}{\dbiguplus}{\tbiguplus}
1469 \fdsy@DeclareOperator{\bigsqcap}{\dbigsqcap}{\tbigsqcap}
1470 \fdsy@DeclareOperator{\bigsqcup}{\dbigsqcup}{\tbigsqcup}
1471 \fdsy@DeclareOperator{\bigsqcapdot}{\dbigsqcapdot}{\tbigsqcapdot}
1472 \fdsy@DeclareOperator{\bigsqcupdot}{\dbigsqcupdot}{\tbigsqcupdot}
1473 \fdsy@DeclareOperator{\bigsqcapplus}{\dbigsqcapplus}{\tbigsqcapplus}
1474 \fdsy@DeclareOperator{\bigsqcupplus}{\dbigsqcupplus}{\tbigsqcupplus}
1475 \fdsy@DeclareOperator{\bigoplus}{\dbigoplus}{\tbigoplus}
1476 \fdsy@DeclareOperator{\bigotimes}{\dbigotimes} {\tbigotimes}
1477 \fdsy@DeclareOperator{\bigodot}{\dbigodot}{\tbigodot}
1478 \fdsy@DeclareOperator{\bigoast}{\dbigoast}{\tbigoast}
1479 \fdsy@DeclareOperator{\sum}{\dsum}{\tsum}
1480 \fdsy@DeclareOperator{\osum}{\dosum}{\tosum}
1481 \fdsy@DeclareOperator{\prod}{\dprod}{\tprod}
1482 \fdsy@DeclareOperator{\coprod}{\dcoprod}{\tcoprod}
```

1483 \fdsy@DeclareIntegral{\iint}{\diint}{\tiint}

```
1484 \fdsy@DeclareIntegral{\iiint}{\diiint}{\tiiint}
1485 \fdsy@DeclareIntegral{\iiiint}{\diiint}{\tiiint}
1486 \fdsy@DeclareIntegral{\idotsint}{\didotsint}{\tidotsint}
1487 \fdsy@DeclareIntegral{\dotsint}{\ddotsint}{\tdotsint}
1488 \fdsy@DeclareIntegral{\landupint}{\dlandupint} \tlandupint}
1489 \fdsy@DeclareIntegral{\intclockwise}{\dintclockwise}{\tintclockwise}
1490 \fdsy@DeclareIntegral{\landdownint}{\dlanddownint}{\tlanddownint}
1491 \fdsy@DeclareIntegral {\awint} {\dawint} {\tawint}
1493 \fdsy@DeclareIntegral {\landdownint} {\dlanddownint} {\tlanddownint}
1494 \fdsy@DeclareIntegral{\intbar}{\dintbar}{\tintbar}
1495 \fdsy@DeclareIntegral{\intBar}{\dintBar}{\tintBar}
1496 \fdsy@DeclareIntegral{\fint}{\dfint}{\tfint}
1497 \fdsy@DeclareIntegral{\oiint}{\doiint}{\toiint}
1498 \fdsy@DeclareIntegral{\oiiint}{\doiiint}{\toiiint}
1499 \fdsy@DeclareIntegral{\rcirclerightint}{\drcirclerightint}{\trcirclerightint}
1500 \fdsy@DeclareIntegral{\ointctrclockwise}{\dointctrclockwise}{\tointctrclockwise}
1501 \fdsy@DeclareIntegral{\lcirclerightint}{\dlcirclerightint}{\tlcirclerightint}
1502\fdsy@DeclareIntegral{\varointclockwise}{\tvarointclockwise}{\tvarointclockwise}
1503 \fdsy@DeclareIntegral{\rcircleleftint}{\drcircleleftint}{\trcircleleftint}
1504 \fdsy@DeclareIntegral{\varointctrclockwise}{\dvarointctrclockwise}{\tvarointctrclockwise}
1505 \fdsy@DeclareIntegral{\lcircleleftint}{\dlcircleleftint}{\tlcircleleftint}
1506 \fdsy@DeclareIntegral{\ointclockwise}{\dointclockwise}{\tointclockwise}
1507 \fdsy@DeclareIntegral{\sumint}{\dsumint} \{\tsumint}
1508
1509 \def\intkern@{\mkern-8.5mu\mathchoice{\mkern-1mu}{}{}}}
1510 \def\intdots@{\mkern-6mu%
1511 \mathchoice{\@cdots}%
     {{\cdotp}\mkern0.5mu{\cdotp}\mkern0.5mu{\cdotp}}%
1513 {{\cdotp}{\cdotp}}%
    {{\cdotp}{\cdotp}{\cdotp}}%
1515 \mkern-6mu}
 Math accents.
1516 \DeclareMathAccent{\widehat}{\mathord}{largesymbols}{"72}
1517 \DeclareMathAccent{\widetilde}{\mathord}{largesymbols}{"78}
1518 \DeclareMathAccent{\wideparen}{\mathord}{\largesymbols}{\"7E}
1519 \DeclareMathAccent{\vec}{\mathord}{largesymbols}{"84}
1520 \DeclareMathAccent{\middlebar}{\mathord}{largesymbols}{"85}
1521 \DeclareMathAccent{\middleslash}{\mathord}{largesymbols}{"86}
1522 \DeclareMathAccent{\strokethrough}{\mathord}{\largesymbols}{"87}
 FdSymbolF: delimiters
1523 \let\lfloor\undefined
1524 \let\rfloor\undefined
1525 \let\lceil\undefined
1526 \let\rceil\undefined
```

```
1527 \let\langle\undefined
1528 \let\rangle\undefined
1529 \iffdsv@largedelims
     \fdsy@DeclareOpen{(){delimiters}{"01}
1530
1531
     \fdsv@DeclareClose{)}{delimiters}{"07}
     \fdsy@DeclareOpen{\lparen}{delimiters}{"01}
1532
     \fdsy@DeclareClose{\rparen}{delimiters}{"07}
1533
     \fdsy@DeclareOpen{[}{delimiters}{"13}
1534
     \fdsy@DeclareClose{]}{delimiters}{"19}
1535
1536
     \fdsy@DeclareOpen{\lbrack}{delimiters}{"13}
     \fdsy@DeclareClose{\rbrack}{delimiters}{"19}
1537
     \fdsy@DeclareOpen{\lfloor}{delimiters}{"1F}
1538
1539
     \fdsy@DeclareClose{\rfloor}{delimiters}{"25}
     \fdsy@DeclareOpen{\lceil}{delimiters}{"2B}
1540
     \fdsy@DeclareClose{\rceil}{delimiters}{"31}
1541
     \fdsy@DeclareOpen{\ulcorner}{delimiters}{"37}
1542
     \fdsy@DeclareClose{\urcorner}{delimiters}{"3D}
1543
     \fdsy@DeclareOpen{\llcorner}{delimiters}{"43}
1544
     \fdsv@DeclareClose{\lrcorner}{delimiters}{"49}
1545
1546
     \fdsy@DeclareOpen{\ullcorner}{delimiters}{"4F}
1547
     \fdsv@DeclareClose{\ulrcorner}{delimiters}{"55}
     \fdsy@DeclareOpen{\lsem}{delimiters}{"61}
1548
1549
     \fdsy@DeclareClose{\rsem}{delimiters}{"67}
     \fdsy@DeclareOpen{\lBrack}{delimiters}{"61}
1550
     \fdsy@DeclareClose{\rBrack}{delimiters}{"67}
1551
1552
     \fdsy@DeclareOpen{\lbrace}{delimiters}{"73}
1553
     \fdsy@DeclareClose{\rbrace}{delimiters}{"79}
1554
     \fdsy@DeclareOpen{<}{delimiters}{"86}
     \fdsy@DeclareClose{>}{delimiters}{"8C}
1555
     \fdsy@DeclareOpen{\langle}{delimiters}{"86}
1556
     \fdsy@DeclareClose{\rangle}{delimiters}{"8C}
1557
1558
     \fdsy@DeclareOpen{\lAngle}{delimiters}{"92}
     \fdsy@DeclareClose{\rAngle}{delimiters}{"98}
1559
     \fdsy@DeclareOpen{\langledot}{delimiters}{"9E}
1560
     \fdsv@DeclareClose{\rangledot}{delimiters}{"A4}
1561
1562
     \fdsy@DeclareDelimiter{/}{\mathord}{delimiters}{"AA}
     \fdsy@DeclareDelimiter{\mathslash}{\mathord}{delimiters}{"AA}
1563
     \DeclareMathSymbol{\divslash}{\mathbin}{delimiters}{"AA}
1564
     \fdsy@DeclareDelimiter{\backslash}{\mathord}{delimiters}{"B0}
1565
     \expandafter\DeclareMathDelimiter\@backslashchar%
1566
1567
        {\mathord}{delimiters}{"B0}{delimiters}{"B0}
1568
     \DeclareMathSymbol{\setminus}{\mathbin}{delimiters}{"B0}
     \fdsy@DeclareDelimiter{|}{\mathord}{delimiters}{"B7}
1569
     \fdsy@DeclareDelimiter{\vert}{\mathord}{delimiters}{"B7}
1570
     \fdsy@DeclareOpen{\lvert}{delimiters}{"B7}
```

```
\fdsy@DeclareClose{\rvert}{delimiters}{"B7}
1572
     \DeclareMathSymbol{\mid}{\mathrel}{delimiters}{"B7}
1573
     \DeclareMathSymbol{\nmid}{\mathrel}{delimiters}{"BA}
1574
     \fdsy@DeclareDelimiter{\Vert}{\mathord}{delimiters}{"BE}
1575
     \fdsy@DeclareOpen{\lVert}{delimiters}{"BE}
1576
     \fdsy@DeclareClose{\rVert}{delimiters}{"BE}
1577
     \DeclareMathSymbol{\parallel}{\mathrel}{delimiters}{"BE}
1578
1579
     \DeclareMathSymbol{\nparallel}{\mathrel}{delimiters}{"C1}
     \fdsy@DeclareDelimiter{\Vvert}{\mathord}{delimiters}{"C4}
1580
1581
     \fdsy@DeclareOpen{\lVvert}{delimiters}{"C4}
     \fdsy@DeclareClose{\rVvert}{delimiters}{"C4}
1582
1583 \else
     \fdsy@DeclareOpen{(){delimiters}{"00}
1584
     \fdsv@DeclareClose{)}{delimiters}{"06}
1585
     \fdsy@DeclareOpen{\lparen}{delimiters}{"00}
1586
     \fdsy@DeclareClose{\rparen}{delimiters}{"06}
1587
     \fdsy@DeclareOpen{[}{delimiters}{"12}
1588
     \fdsy@DeclareClose{]}{delimiters}{"18}
1589
     \fdsv@DeclareOpen{\lbrack}{delimiters}{"12}
1590
1591
     \fdsy@DeclareClose{\rbrack}{delimiters}{"18}
     \fdsv@DeclareOpen{\lfloor}{delimiters}{"1E}
1592
     \fdsy@DeclareClose{\rfloor}{delimiters}{"24}
1593
     \fdsy@DeclareOpen{\lceil}{delimiters}{"2A}
1594
     \fdsy@DeclareClose{\rceil}{delimiters}{"30}
1595
     \fdsy@DeclareOpen{\ulcorner}{delimiters}{"36}
1596
1597
     \fdsy@DeclareClose{\urcorner}{delimiters}{"3C}
1598
     \fdsy@DeclareOpen{\llcorner}{delimiters}{"42}
1599
     \fdsy@DeclareClose{\lrcorner}{delimiters}{"48}
     \fdsy@DeclareOpen{\ullcorner}{delimiters}{"4E}
1600
     \fdsv@DeclareClose{\ulrcorner}{delimiters}{"54}
1601
     \fdsy@DeclareOpen{\lsem}{delimiters}{"60}
1602
     \fdsy@DeclareClose{\rsem}{delimiters}{"66}
1603
     \fdsy@DeclareOpen{\lBrack}{delimiters}{"60}
1604
     \fdsy@DeclareClose{\rBrack}{delimiters}{"66}
1605
     \fdsv@DeclareOpen{\lbrace}{delimiters}{"72}
1606
1607
     \fdsy@DeclareClose{\rbrace}{delimiters}{"78}
     \fdsy@DeclareOpen{<}{delimiters}{"85}
1608
     \fdsy@DeclareClose{>}{delimiters}{"8B}
1609
     \fdsy@DeclareOpen{\langle}{delimiters}{"85}
1610
     \fdsy@DeclareClose{\rangle}{delimiters}{"8B}
1611
1612
     \fdsy@DeclareOpen{\lAngle}{delimiters}{"91}
```

\fdsy@DeclareClose{\rAngle}{delimiters}{"97}\fdsy@DeclareOpen{\langledot}{delimiters}{"9D}

\fdsy@DeclareClose{\rangledot}{delimiters}{"A3}

\fdsy@DeclareDelimiter{/}{\mathord}{delimiters}{"A9}

1613

1614

1615 1616

```
\fdsy@DeclareDelimiter{\mathslash}{\mathord}{delimiters}{"A9}
1617
     \DeclareMathSymbol{\divslash}{\mathbin}{delimiters}{"A9}
1618
1619
     \fdsv@DeclareDelimiter{\backslash}{\mathord}{delimiters}{"AF}
     \expandafter\DeclareMathDelimiter\@backslashchar%
1620
        {\mathord}{delimiters}{"AF}{delimiters}{"AF}
1621
     \DeclareMathSymbol{\setminus}{\mathbin}{delimiters}{"AF}
1622
     \fdsy@DeclareDelimiter{|}{\mathord}{delimiters}{"B6}
1623
1624
     \fdsy@DeclareDelimiter{\vert}{\mathord}{delimiters}{"B6}
     \fdsy@DeclareOpen{\lvert}{delimiters}{"B6}
1625
1626
     \fdsy@DeclareClose{\rvert}{delimiters}{"B6}
     \DeclareMathSymbol{\mid}{\mathrel}{delimiters}{"B6}
1627
     \DeclareMathSymbol{\nmid}{\mathrel}{delimiters}{"B9}
1628
     \fdsy@DeclareDelimiter{\Vert}{\mathord}{delimiters}{"BD}
1629
     \fdsy@DeclareOpen{\lVert}{delimiters}{"BD}
1630
1631
     \fdsy@DeclareClose{\rVert}{delimiters}{"BD}
     \DeclareMathSymbol{\parallel}{\mathrel}{delimiters}{"BD}
1632
     \DeclareMathSymbol{\nparallel}{\mathrel}{delimiters}{"C0}
1633
     \fdsy@DeclareDelimiter{\Vvert}{\mathord}{delimiters}{"C3}
1634
     \fdsy@DeclareOpen{\lVvert}{delimiters}{"C3}
1635
1636
     \fdsy@DeclareClose{\rVvert}{delimiters}{"C3}
1637\fi
1638 \let\|\Vert
1639 \let\divides\mid
1640 \let\ndivides\nmid
1641 \DeclareMathSymbol{\shortmid}{\mathrel}{delimiters}{"B5}
1642 \DeclareMathSymbol{\nshortmid}{\mathrel}{delimiters}{"B8}
1643 \DeclareMathSymbol{\shortparallel}{\mathrel}{delimiters}{"BC}
1644 \DeclareMathSymbol{\nshortparallel}{\mathrel}{delimiters}{"BF}
1645 \fdsy@DeclareDelimiter{\arrowvert}{\mathord}{delimiters}{"BB}
1646 \fdsy@DeclareDelimiter{\Arrowvert}{\mathord}{delimiters}{"C2}
1647 \fdsy@DeclareClose{\lgroup}{delimiters}{"7E}
1648 \fdsy@DeclareOpen{\rgroup}{delimiters}{"7F}
1649 \fdsy@DeclareClose{\rmoustache}{delimiters}{"80}
1650 \fdsy@DeclareOpen{\lmoustache}{delimiters}{"81}
1651 \fdsy@DeclareDelimiter{\bracevert}{\mathord}{delimiters}{"84}
1652 \let\uparrow\undefined
1653 \let\downarrow\undefined
1654 \let\updownarrow\undefined
1655 \let\Uparrow\undefined
1656 \let\Downarrow\undefined
1657 \let\Updownarrow\undefined
1658 \DeclareMathDelimiter{\uparrow}{\mathrel}{arrows}{\"01}{delimiters}{\"C6}
1659 \DeclareMathDelimiter{\downarrow}{\mathrel}{arrows}{\"03}{\delimiters}{\"C7}
1660 \DeclareMathDelimiter{\updownarrow}{\mathrel}{arrows}{"11}{delimiters}{"C8}
```

1661 \DeclareMathDelimiter{\Uparrow}{\mathrel}{arrows}{\"09}{delimiters}{\"C9}

```
1662 \DeclareMathDelimiter{\Downarrow}{\mathrel}{arrows}{\"OB}{delimiters}{\"CA}
1663 \DeclareMathDelimiter{\Updownarrow}{\mathrel}{arrows}{\"15}{\delimiters}{\"CB}
   Horizontal braces.
1664 \DeclareMathSymbol{\braceld}{\mathord}{delimiters}{"CC}
1665 \DeclareMathSymbol{\bracelu}{\mathord}{delimiters}{"CD}
1666 \DeclareMathSymbol{\bracerd}{\mathord}{delimiters}{"CE}
1667 \DeclareMathSymbol{\braceru}{\mathord}{delimiters}{"CF}
1668 \DeclareMathSymbol{\bracemd}{\mathord}{delimiters}{"D0}
1669 \DeclareMathSymbol{\bracemu}{\mathord}{delimiters}{"D1}
1670 \DeclareMathSymbol{\bracemid}{\mathord}{delimiters}{"D2}
1671
1672 \def\bracefill0#1#2#3#4#5{$\m0th#5#1\leaders\hbox{$#4$}\hfill#2\leaders\hbox{$#4$}\hfill#3$}
1673 \def\downbracefill@\bracefill@\braceld\bracemd\bracerd\bracemid}
1674 \def\upbracefill@\bracefill@\bracelu\bracemu\braceru\bracemid}
1675 \def \downgroupfill@{\bracefill@\braceld{}\bracerd\bracemid}
1676 \def\upgroupfill@{\bracefill@\bracelu{}\braceru\bracemid}
1677 \def\linesegmentfill@{\arrowfill@\leftfootline\relbar\rightfootline}
1678 \def\leftharpoonfill@{\arrowfill@\leftharpoondown\relbar\relbar}
1679 \def\rightharpoonfill@{\arrowfill@\relbar\rightharpoonup}
1680
1681 \DeclareRobustCommand{\overbrace}[1]{\mathop{\mathpalette{\overarrow@\downbracefill@}{#1}}\limi
\label{localized} \label{localized} $$1682 \end{\mathbf underbrace} [1] {\mathbf underbrace} (\protection \protection \prote
1683 \DeclareRobustCommand{\overgroup}{\mathpalette{\overarrow@\downgroupfill@}}
1684 \DeclareRobustCommand{\undergroup}{\mathpalette{\underarrow@\upgroupfill@}}
1685 \DeclareRobustCommand{\overlinesegment}{\mathpalette{\overarrow@\linesegmentfill@}}
1686 \DeclareRobustCommand{\overleftharpoon}{\mathpalette{\overarrow@\leftharpoonfill@}}
1687 \DeclareRobustCommand{\overrightharpoon}{\mathpalette{\overarrow@\rightharpoonfill@}}
1688 \DeclareRobustCommand{\underlinesegment}{\mathpalette{\underarrow@\linesegmentfill@}}
   Radical symbols.
1689 \iffdsy@largedelims
1690
              \DeclareMathRadical{\sqrtsign}{delimiters}{"D4}{delimiters}{"D4}
              \DeclareMathSymbol{\surd}{\mathop}{delimiters}{"D4}
1691
1692 \else
              \DeclareMathRadical{\sqrtsign}{delimiters}{"D3}{delimiters}{"D3}
1693
              \DeclareMathSymbol{\surd}{\mathop}{delimiters}{"D3}
1694
1695\fi
   In the n-th root, we don't want the n to come too close to the radical (adopted from
   package lucimatx).
1696 \ensuremath{\mathbb{1}} 1696 \ensuremath{\mathbb{1}} 1696 \ensuremath{\mathbb{2}} 1696 \ensuremathbb{\mathbb{2}} 1696 \ensuremathbb{\mathbb{2}} 1696 \ensuremathbb{\mathbb{2}} 1696 \ensuremathbb{\mathbb{2}} 1696 \ensuremathbb{\mathbb{2}} 1696 \ensuremathbb{\mathbb{\mathbb{2}} 1696 \ensuremathbb{\mathbb{\mathbb{2}} 1696 \ensuremathbb{\mathbb{\mathbb{\mathbb{2}}} 1696 \ensuremathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathb
              \dimen@\ht\z@ \advance\dimen@-\dp\z@
1698
              \mkern5mu\raise.6\dimen@\copy\rootbox \mkern-8mu\box\z@}
   Mathchars.
1699 \DeclareMathSymbol{+}{\mathbin}{symbols}{"11}
1700 \DeclareMathSymbol{-}{\mathbin}{symbols}{"OE}
```

```
1701 \DeclareMathSymbol{*}{\mathbin}{symbols}{"93}
1702 \DeclareMathSymbol{:}{\mathrel}{symbols}{"02}
1703 \DeclareMathSymbol{=}{\mathrel}{relations}{"00}
1704 \DeclareMathSymbol {<} {\mathrel} {relations} {"22}
1705 \DeclareMathSymbol{>}{\mathrel}{relations}{"23}
1706 \iffdsy@largedelims
     \DeclareMathSymbol{|}{\mathord}{delimiters}{"B6}
1707
     \DeclareMathSymbol{(){\mathopen}{delimiters}{"01}
     \DeclareMathSymbol{)}{\mathclose}{delimiters}{"07}
1709
1710
     \DeclareMathSymbol{[]}{\mathopen}{delimiters}{"13}
     \DeclareMathSymbol{]}{\mathclose}{delimiters}{"19}
1711
     \DeclareMathSymbol{/}{\mathord}{delimiters}{"AA}
1712
1713 \else
     \DeclareMathSymbol{|}{\mathord}{delimiters}{"B5}
1714
     \DeclareMathSymbol{(){\mathopen}{delimiters}{"00}
     \DeclareMathSymbol{))}{\mathclose}{delimiters}{"06}
1716
     \DeclareMathSymbol{[]{\mathopen}{delimiters}{"12}
1717
     \DeclareMathSymbol{]}{\mathclose}{delimiters}{"18}
1718
1719
     \DeclareMathSymbol{/}{\mathord}{delimiters}{"A9}
1720\fi
```

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