FdSymbol: A Math Symbol Font

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1 Introduction

FdSymbol is a font of mathematical symbols designed as a companion to Typotheque's Fedra family¹, but it might also fit well to other contemporary typefaces. To use this font in a L⁴TEX document, add the command

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

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

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 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/pkg/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
- : \vdots
- ∴ \udots, \adots
- ∴ \ddots
- : \righttherefore
- ∴ \uptherefore, \therefore
- ∴ \lefttherefore
- ∵ \downtherefore, \because
- :: \squaredots
- ¬ \neg, \lnot
- \backneg, \invnot, \invneg
- \turnedneg, \turnednot
- △ \largetriangleup
- ∇ \largetriangledown
- Ø \emptyset, \diameter,
 \varnothing
- \largecircle, \lgwhtcircle
- \largeblackcircle
- ☐ \largesquare, \lgwhtsquare
- \largeblacksquare, \lgblksquare
- ♦ \smalllozenge, \smwhtlozenge
- ♦ \smallblacklozenge, \smblklozenge
- ♦ \medlozenge, \lozenge, \mdlgwhtlozenge,

\mdwhtlozenge

- ♦ \medblacklozenge, \blacklozenge,
 - \mdlgblklozenge,
 \mdblklozenge
- ♦ \lozengeminus
- ☆ \largewhitestar
- ★ \largeblackstar, \bigstar
- ∞ \infty
- ∠ \angle
- ∠ \revangle
- ∡ \measuredangle
- \revmeasuredangle,
 \measuredangleleft
- √ \sphericalangle
- ∀ \sphericalangleup
- \sphericalangleleft,
 \revsphericalangle,\gtlpar
- A \sphericalangledown
- ∟ \rightangle
- ⊾ \rightanglesquare, \rightanglesqr
- \measuredrightangledot,
 \rightanglemdot
- √ \prime
- \backprime
- √ \checkmark

// \lightning, \downzigzagarrow \flat ♦ \diamondsuit \natural ♦ \vardiamondsuit \sharp ♡ \heartsuit א \aleph ♥ \varheartsuit ם \beth ♠ \spadesuit λ \gimel ♠ \clubsuit **★** \maltese ρ \wp ☆ \starofdavid T \top \sector ⊥ \bot ∀ \forall /,\mathslash Ξ \exists **\backslash** ∄ \nexists |,\vert Ь \Finv ∥ \Vert ∂ \Game

4.2 Binary operators

\complement

С

∥ \Vvert

/ \medslash, \smalldivslash x \utimes, \ttimes

 \times \times x \upbowtie,\hourglass

- ∨ \curlyvee
- ⊼ \barwedge

- ∪ \cup
- ∩ \cap
- ⊎ \doublecup, \Cup
- ⊍ \cupdot
- ∩ \capdot
- ⊎ \cupplus, \uplus
- ∩ \capplus
- ⊔ \sqcup
- □ \sqcap
- □ \doublesqcup, \Sqcup
- 同 \doublesqcap, \Sqcap
- ⊔ \sqcupdot
- □ \sqcapdot

- → \pullback
- ▷ \smalltriangleright
- △ \smalltriangleup
- \smalltriangleleft
- √ \smalltriangledown
- ▶ \smallblacktriangleright
- ▲ \smallblacktriangleup
- √ \smallblacktriangleleft
- ▼ \smallblacktriangledown
- △ \medtriangleup,\triangle, \vartriangle
- \medtriangleleft,
 \triangleleft
- ► \medblacktriangleright, \blacktriangleright

- ▲ \medblacktriangleup, \blacktriangle
- ▼ \medblacktriangledown, \blacktriangledown
- △ \bigtriangleup
- \smallcircle, \circ, \smwhtcircle
- \smallblackcircle, \bullet, \smblkcircle
- o \medcircle, \mdlgwhtcircle, \mdwhtcircle
- \medblackcircle, \mdlgblkcircle,\mdblkcircle
- ⊖ \ominus
- ⊘ \oslash
- ⊕ \oplus
- ⊗ \otimes
- ⊙ \odot
- ⊚ \ocirc,\circledcirc
- ⊕ \oast,\circledast
- ⊖ \odash,\circleddash
- \bigcirc
- smallsquare,\smwhtsquare
- \smallblacksquare, \smblksquare
- □ \medsquare,\square,\Box,
 \mdlgwhtsquare,\mdwhtsquare
- \medblacksquare,
 \mdlgblksquare,\mdblksquare
- ⊟ \boxminus
- □ \boxvert, \boxbar
- \boxslash, \boxdiag

\boxdot

\boxbox

\smalldiamond, \diamond, \smwhtdiamond

\smallblackdiamond,

\blackdiamond, \smblkdiamond

♦ \meddiamond, \Diamond,

\mdlgwhtdiamond, \mdwhtdiamond

♦ \medblackdiamond,

\mdlgblkdiamond,

\mdblkdiamond

♦ \diamondminus

♦ \diamondvert

♦ \diamondslash

♦ \diamondbackslash,

\diamondbslash

\diamondplus

\diamondtimes

\diamonddot, \diamondcdot

\diamonddiamond

\smallwhitestar, \smwhitestar

\smallblackstar, \star

\medwhitestar

\medblackstar, \medstar

*,\ast

\intercal Τ

\wreath, \wr

\amalg

\1hd

\rhd D

\unlhd

\unrhd

\divslash

\setminus

4.3 Relations

=, \equal, \Relbar

\equiv ≡

\sim \backsim

\approx ≈

\triplesim, \approxident ≋

~ \simeq

\backsimeq

≂ \eqsim

≅

\cong

\backcong ≅

≐ \dotcong

\approxeq ≊

≏ \bumpeq

≘ \bumpeqq

\Bumpeq ≎

\doteq ÷

\eqdot ÷

\Doteq ÷

\fallingdotseq

\risingdotseq

\coloneq, \coloneqq

\eqcolon, \eqqcolon

\smile, \smallsmile

\frown, \smallfrown

\smilefrown, \asymp

\frownsmile, \closure

\smileeq

\frowneq, \arceq

\eqcirc ш

\circeq

≙ \wedgeq, \hateq

≚ \veeeq

<u>*</u> \stareq

\triangleeq, \triangleq ≜

\in \in

→ \owns, \ni

< <,\less

> >,\gtr

≤ \leq, \le

\geq, \ge ≥ \leqslant ≤ \geqslant ≽ ≦ \leqq ≧ \geqq \lesssim ≲ \gtrsim ≳ ≨ \lessapprox ≳ \gtrapprox ≶ \lessgtr ≷ \gtrless ⋚ \lesseqgtr ⋛ \gtreqless ≨ \lesseqqgtr $\stackrel{\checkmark}{=}$ \gtreqqless

Ş \lesseqslantgtr, \lesq ≿ ⋛ \gtreqslantless, \gesl ≪ \11 >> \gg ⊴ \geqdot

≪ \111, \111ess >>> \ggg, \gggtr

\lessclosed, \vartriangleleft ◁ \gtrclosed, \vartriangleright \triangleright

\leqclosed, \trianglelefteq ⊴ \geqclosed, \trianglerighteq ⊵

\lesscc, \ltcc ◁ \gtrcc, \gtcc \triangleright \legslcc, \lescc Ø \geqslcc, \gescc ⊳

\sqsubset

\sqsupset \Box ⊑

\sqsubseteq ⊒ \sqsupseteq ⊑ \sqsubseteqq ⊒ \sqsupseteqq \Sqsubset ╚ \Sqsupset

 \subset \subset C \supset ⊆ \subseteq

\supseteq

⊒

⊇

\Subset \Supset ∍ \prec < \succ \preceq ≤ \succeq

\subseteqq

\supseteqq

⊆

\preccurlyeq ≾ \succcurlyeq \preceqq ≚ \succeqq ≧

\precsim ≾ ≿ \succsim \precapprox ≾ \succapprox \lessdot \gtrdot \leqdot

\legslantdot, \lesdot \geqslantdot, \gesdot

\eqslantgtr \curlyeqprec \curlyeqsucc \thicksim \thickapprox \rightarrow, \to

\eqslantless

\uparrow

\leftarrow, \gets

\downarrow \nearrow \nwarrow \swarrow \searrow ⇒ \Rightarrow \Uparrow Î ← \Leftarrow **\Downarrow** \parallel

- ↔ \leftrightarrow
- \$ \updownarrow
- ∠ \neswarrow
- \nwsearrow
- \Leftrightarrow \Leftrightarrow
- ① \Updownarrow

- → \twoheadrightarrow
- ↑ \twoheaduparrow
- ← \twoheadleftarrow
- ↓ \twoheaddownarrow
- → \twoheadnearrow
- ∡ \twoheadswarrow
- \\ \twoheadsearrow
- → \rightarrowtail
- 1 \uparrowtail
- ← \leftarrowtail
- \downarrowtail
- √ \nearrowtail
- \nwarrowtail
- √ \searrowtail
- ↑ \upmapsto, \mapsup
- ← \leftmapsto, \mapsfrom
- $\label{eq:local_local_local_local_local} \ensuremath{\mathtt{I}} \qquad \verb"\downmapsto, \verb'\mapsdown"$
- ↑ \Upmapsto, \Mapsup
- $\mathbb{J} \quad \texttt{`Downmapsto, `Mapsdown}$
- → \hookrightarrow
- ↑ \hookuparrow
- \$ \varhookdownarrow
- √ \varhooknearrow
- 5 \hooknwarrow, \hknwarrow

- ∠ \varhookswarrow
- \hooksearrow, \hksearrow
- → \varhookrightarrow
- t \varhookuparrow
- 1 \hookdownarrow
- \varhooknwarrow
- ∠ \hookswarrow, \hkswarrow
- \varhooksearrow
- → \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
- 1 \updownharpoons,
 - \updownharpoonsleftright

- ≒ \leftrightharpoons

- ↑ \downupharpoons, \downupharpoonsleftright
- √ \swneharpoons
- √ \nwseharpoons
- → \rightbkarrow, \dashrightarrow, \dasharrow
- ↑ \upbkarrow
- ↓ \downbkarrow
- /* \nebkarrow
- \nwbkarrow
- √ \swbkarrow
- ` \sebkarrow
- ⊸ \rightspoon, \multimap
- ↑ \upspoon,\cirmid
- \downspoon, \midcir
- → \rightblackspoon
- † \upblackspoon
- ← \leftblackspoon
- ↓ \downblackspoon
- → \leftrightspoon, \dualmap
- → \leftrightblackspoon
- → \whiteblackspoon, \origof
- → \rightpitchfork
- ₼ \uppitchfork,\pitchfork
- ← \leftpitchfork
- Ψ \downpitchfork
- ⇒ \rightrightarrows
- ↑ \upuparrows
- ← \leftleftarrows
- ↓ \downdownarrows
- ↑ \nenearrows
- √ \nwnwarrows
- √ \swswarrows
- √ \sesearrows
- ↑↓ \updownarrows
- √ \nwsearrows

- ≒ \leftrightarrows
- ↓↑ \downuparrows
- √ \swnearrows
- √ \senwarrows
- → \rightwavearrow, \leadsto, \rightsquigarrow, \rightcurvedarrow
- \varupwavearrow
- ← \varleftwavearrow
- \downwavearrow
- → \varrightwavearrow
- \$ \upwavearrow
- ← \leftwavearrow,
 \leftsquigarrow,
 \leftcurvedarrow

- \$ \updownwavearrow
- \$ \varupdownwavearrow
- ~ \cwoverarcarrow, \curvearrowright
- ₹ \cwleftarcarrow
- \cwrightarcarrow
- た \cwswarcarrow, \upleftcurvedarrow
- √ \cwsearcarrow,
 - **\leftdowncurvedarrow**
- √ \cwnearcarrow,
 - \downrightcurvedarrow
- √ \acwunderarcarrow
- \acwrightarcarrow
- - \acwleftarcarrow
- ↑ \acwsearcarrow,
 - \uprightcurvearrow

- \acwnearcarrow, \leftupcurvedarrow
- \acwnwarcarrow. \downleftcurvedarrow
- √ \acwswarcarrow. \rightdowncurvedarrow
- C \bdleftarcarrow
- \bdrightarcarrow

- → \bdsearcarrow
- √ \bdnearcarrow
- ⊢ \leftfootline
- → \rightfootline
- () \acwcirclearrowleft, \circlearrowleft, \acwopencirclearrow
- \acwgapcirclearrow
- \acwcirclearrowright
- \cwcirclearrowdown, \cwgapcirclearrow
- () \cwcirclearrowright, \circlearrowright, \cwopencirclearrow
- \cwcirclearrowleft
- ⇒ \Rrightarrow
- ↑ \Uuparrow
- ← \Lleftarrow
- **\Ddownarrow**
- → \longrightarrow
- ← \longleftarrow
- ⇒ \Longrightarrow
- ← \Longleftarrow
- \longleftrightarrow \longleftrightarrow ⇔ \Longleftrightarrow
- → \longmapsto

- ← \longmapsfrom
- ⇒ \Longmapsto
- ← \Longmapsfrom
- \longrightwavearrow, \longleadsto,
 - \longrightsquigarrow
- \longleftwavearrow, \longleftsquigarrow
- ├─ \longleftfootline, \vlongdash
- ─ \longrightfootline, \longdashv
- \Lsh
- \Rsh
- ا \Ldsh
- \Rdsh
- → \looparrowright
- ← \looparrowleft
- ⊢ \rightvdash,\vdash
- ⊥ \upvdash,\perp
- → \leftvdash, \dashv
- T \downvdash
- \rightassert, \assert, \shortrighttack
- ⊥ \upassert, \shortuptack
- \leftassert, \shortlefttack
- \downassert, \shortdowntack
- ⊨ \rightvDash,\vDash

- \downvDash, \barV
- F \rightmodels, \models
- ⊥ \upmodels
- \leftmodels
- \downmodels

- → \leftVdash, \dashV

- ⊣ \leftAssert
- \downAssert, \Barv

⊫ \rightVDash,\VDash \nowns, \nni \up\Dash \nless ╡ \leftVDash, \DashV \ngtr ₩ \downVDash ≰ \nleq II⊢ \Vvdash \ngeq ≱ ⊣ll \dashVv \nleqslant \vDdash \ngeqslant ⊨ ≱ **■** \Ddashv \nleqq ≰ \nequal, \neq, \ne ≱ \ngeqq # \nlesssim \nequiv ≢ ≴ \nsim \ngtrsim \nbacksim \nlessapprox ≴ \napprox \ngtrapprox * ≉ \ntriplesim, \napproxident ≴ \nlessgtr \nsimeq, \nsime ≹ \ngtrless # * \nbacksimeq \nlesseggtr \neqsim ≹ \ngtreqless **‡** \ncong \nlesseqqgtr ≇ \nbackcong \ngtreqqless # \nlesseqslantgtr, \nlesg \napproxeq ≇ \ngtreqslantless, \ngesl # \nbumpeq ≮ \nll \nbumpeqq ‡ \nBumpeq ≯ \ngg <p \ndoteq ‡ \neqdot >>> \nggg ŧ \nDoteq \nlessclosed, \ntriangleleft ‡ \ngtrclosed, \ntriangleright \nfallingdotseq ¥.

\nsmile \ngeqclosed, \ntrianglerighteq 4 \nfrown \nlesscc, \nltcc + ϕ \nsmilefrown, \nasymp \ngtrcc, \ngtcc * \nfrownsmile, \nclosure \nleqslcc, \nlescc # \nsmileeq ≇ \ngeqslcc, \ngescc

ŧ

\nrisingdotseq

\nfrowneq, \narceq ≇ ¢ \nsqsubset \neqcirc \nsqsupset **#** ⊅ # \ncirceq \nsqsubseteq ⋢ \nwedgeq, \nhateq # ⊉ \nsqsupseteq ¥ \nveeeq \nsqsubseteqq # \nstareq \nsqsupseteqq # \ntriangleeq \nSqsubset \nin, \notin \nSqsupset

\nleqclosed, \ntrianglelefteq

\nsubset \sqsupsetneq ¢ ⊅ \nsupset \sqsubsetneqq ⊈ \nsubseteq ⋥ \sqsupsetneqq

⊉ \nsupseteq ⊊ \subsetneq, \varsubsetneq \nsubseteqq \supsetneq, \varsupsetneq ⊈ ⊋ ⊉ \nsupseteqq \subsetneqq, \varsubsetneqq ⊊ \nSubset \supsetneqq, \varsupsetneqq ∉ ⊋

\nSupset ∌ \precneq ⋨ * \nprec \succneq ≽ \nsucc * \precneqq \npreceq \succnegg ≰ ≩ ¥ \nsucceq \precnsim \npreccurlyeq \succnsim ≭ ⋩ ¥ \nsucccurlyeq ≨ \precnapprox \npreceqq \succnapprox ≰ ≨ ≱ \nsucceqq \nrightarrow, \nto

≴ \nprecsim \nuparrow \nsuccsim \nleftarrow, \ngets *

≵ \nprecapprox \ndownarrow ŧ \nsuccapprox \nnearrow \nlessdot \nnwarrow \ngtrdot \nswarrow ≰ \nleqdot \nsearrow

≵

≮

≯

≆ ≨

≥

≨

\ngeqdot \nRightarrow ≱ \nleqslantdot, \nlesdot \nUparrow ≰ \ngeqslantdot, \ngesdot * \nDownarrow ŧ \neqslantless √ \nNearrow * \neqslantgtr \ncurlyegprec ∖nNwarrow * ⋡ \ncurlyeqsucc \nSwarrow \simneqq ≆

\backsimneqq ↔ \nleftrightarrow \lneq Ŧ \nupdownarrow \gneq \nneswarrow \lneqq,\lvertneqq \nnwsearrow

⇔ \nLeftrightarrow ≩ \gneqq, \gvertneqq ⋦ \lnsim \nUpdownarrow ⋧ \gnsim \lnapprox \nNwsearrow ≨

\gnapprox \ntwoheadrightarrow ⋧ \sqsubsetneq \ntwoheaduparrow

- \ntwoheadleftarrow
- √ \ntwoheadnearrow
- ∿x \ntwoheadnwarrow
- پر \ntwoheadswarrow
- ¼ \ntwoheadsearrow
- → \nrightarrowtail
- ↑ \nuparrowtail
- ₹ \ndownarrowtail
- √ \nnearrowtail
- ¼ \nnwarrowtail
- ⅓ \nsearrowtail
- ↑ \nupmapsto, \nmapsup
- ← \nleftmapsto, \nmapsfrom
- ₹ \ndownmapsto,\nmapsdown
- ↑ \nUpmapsto, \nMapsup
- ⟨
 □ \nLeftmapsto, \nMapsfrom
- → \nhookrightarrow
- † \nhookuparrow
- ↔ \nvarhookleftarrow
- √ \nvarhooknearrow
- ∿ \nhooknwarrow, \nhknwarrow
- % \nhooksearrow, \nhksearrow
- → \nvarhookrightarrow
- ↑ \nvarhookuparrow
- ↔ \nhookleftarrow
- t \nhookdownarrow
- ∿ \nvarhooknwarrow
- √ \nvarhooksearrow
- → \nrightharpoonup
- 1 \nupharpoonleft
- → \nleftharpoondown

- t \ndownharpoonright
- x \nneharpoonnw
- ∖nnwharpoonsw
- x \nswharpoonse
- ¼ \nseharpoonne
- → \nrightharpoondown
- \nupharpoonright,
 \nrestriction
- ← \nleftharpoonup
- ∤ \ndownharpoonleft
- \nnwharpoonne
- *x* \nswharpoonnw
- √ \nseharpoonsw
- → \nleftrightharpoonupdown
- † \nupdownharpoonleftright
- x \nneswharpoonnwse
- ¼ \nnwseharpoonnesw
- → \nleftrightharpoondownup
- ∤ \nupdownharpoonrightleft
- \nnwseharpoonswne
- ₩ \nupdownharpoons,
 - \nupdownharpoonsleftright

- ♯ \nleftrightharpoons
- ∦ \ndownupharpoons,
 - \ndownupharpoonsleftright
- \nnwseharpoons
- -/> \nrightbkarrow, \ndasharrow,
 \ndashrightarrow
- \nupbkarrow
- </- \nleftbkarrow, \ndashleftarrow</pre>
- √ \nnebkarrow
- \nnwbkarrow
- ∡ \nswbkarrow
- ⅓ \nsebkarrow

- ֈ \nupspoon,\ncirmid
- → \nleftspoon, \nmultimapinv
- t \ndownspoon, \nmidcir
- → \nrightblackspoon
- ♪ \nupblackspoon
- ◆
 ✓ \nleftblackspoon
- t \ndownblackspoon
- → \nleftrightspoon, \ndualmap
- •/• \nleftrightblackspoon
- → \nblackwhitespoon, \nimageof
- → \nwhiteblackspoon, \norigof
- → \nrightpitchfork
- → \nuppitchfork, \npitchfork
- → \nleftpitchfork
- ♥ \ndownpitchfork
- ↑ \nupuparrows
- ♯ \nleftleftarrows
- ♦ \nnenearrows
- √ \nnwnwarrows
- √ \nswswarrows
- ♦ \nsesearrows
- ↑ \nupdownarrows
- √ \nnwsearrows
- ☆ \nleftrightarrows
- ♯ \ndownuparrows
- ⋄ \nswnearrows
- √ \nsenwarrows
- \nvarupwavearrow
- \nvarleftwavearrow
- ★ \ndownwavearrow
- → \nvarrightwavearrow
- \$ \nupwavearrow

- \$ \nvardownwavearrow
- \$ \nupdownwavearrow
- ⟨→ \nvarleftrightwavearrow
- \nvarupdownwavearrow
- ↑ \ncwoverarcarrow, \ncurvearrowright
- ₹ \ncwleftarcarrow
- √ \ncwunderarcarrow

- % \ncwswarcarrow,
 \nupleftcurvedarrow
- \ncwnearcarrow,
 \ndownrightcurvedarrow
- √ \nacwunderarcarrow
- ኑ \nacwrightarcarrow
- √ \nacwleftarcarrow
- প \nacwnearcarrow, \nleftupcurvedarrow
- \nacwnwarcarrow,
 \ndownleftcurvedarrow
- % \nacwswarcarrow,
 \nrightdowncurvedarrow
- ₹ \nbdleftarcarrow
- √ \nbdunderarcarrow
- {
 \nbdrightarcarrow
- \nbdswarcarrow

∢ \nbdsearcarrow

⟨√ \nbdnearcarrow

⊬ \nleftfootline

→ \nrightfootline

♠ \nacwcirclearrowup

\nacwcirclearrowleft,
 \ncirclearrowleft,
 \nacwopencirclearrow

 \nacwcirclearrowdown, \nacwgapcirclearrow

\nacwcirclearrowright

\ncwcirclearrowdown,
 \ncwgapcirclearrow

\ncwcirclearrowright,
 \ncirclearrowright,
 \ncwopencirclearrow

∅ \ncwcirclearrowleft

⇒ \nRrightarrow

↑ \nUuparrow

⊭ \nLleftarrow

→ \nlongrightarrow

 \leftarrow \nlongleftarrow

→ \nLongrightarrow

← \nLongleftarrow

←→ \nlongleftrightarrow

⇔ \nLongleftrightarrow

←/¬ \nlongmapsfrom

← \nLongmapsfrom

⟨¬→ \nlongrightwavearrow, \nlongleadsto,

\nlongrightsquigarrow

\modelsize
\nlongleftwavearrow,

\nlongleftsquigarrow

\nvlongdash

⊬ \nrightvdash, \nvdash

→ \nleftvdash, \ndashv

₹ \ndownvdash

\nrightassert, \nassert,
\nshortrighttack

\nleftassert, \nshortlefttack

⊭ \nrightvDash,\nvDash

业 \nupvDash, \nVbar

♯ \nleftvDash, \nDashv

₮ \ndownvDash,\nbarV

\nrightmodels, \nmodels

\nleftmodels

₩ \ndownmodels

± \nup\dash

₼ \nleftVdash, \ndashV

₹ \ndownVdash

₩ \nrightAssert, \nAssert

\nleftAssert

₹ \ndownAssert,\nBarv

⊯ \nrightVDash,\nVDash

♯ \nleftVDash, \nDashV

〒 \ndownVDash

II⊬ \nVvdash

∦∥ \ndashVv

⊭ \nvDdash

∄ \nDdashv

:,\mathratio

:: \Colon

- \relbar

⋈ \rJoin

⋈ \bowtie,\Join

4.4 Punctuation symbols

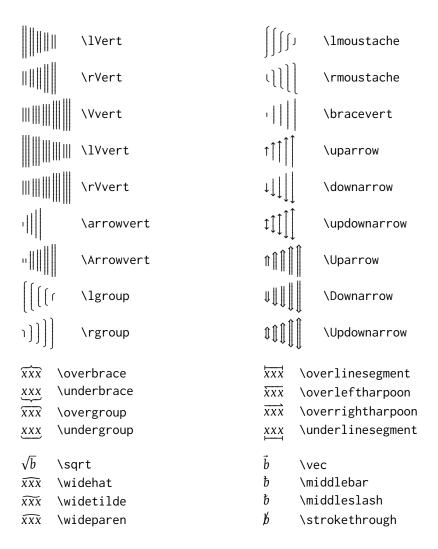
· \cdotp : \colon, \mathcolon

4.5 Large operators

$+\times \wedge \vee \wedge \vee \wedge \otimes \vee \wedge \vee \wedge \vee \wedge \vee \wedge \vee \wedge \vee \wedge \vee \wedge$	$+\times<><:$	<pre>\bigplus \bigtimes \bigwedge \bigwedge \bigwedgedot \bigwedgedot \bigdoublewedge, \conjquant \bigdoublevee, \disjquant \bigcurlywedge \bigcurlywedge \bigcup \bigcap \bigcap \bigcapdot \bigcapplus \bigcupplus, \biguplus \bigsqcap \bigsqcapdot \bigsqcapplus \bigsqcapplus \bigsqcapplus \bigsqcapplus \bigsqcapplus \bigsqcapplus \bigsqcapplus \bigsqcupplus \bigsqcupplus \bigsqcupplus \bigsqcapplus</pre>			<pre>\bigoast \prod \coprod \sum \osum, \modtwosum \int \iint \iiint \iiint \iiint \idotsint, \dotsint \landupint, \intclockwise \landdownint, \awint, \intctrclockwise \intbar \intBar \fint \oint \oint \oiint</pre>
		\bigoplus \bigotimes	∰	₩	\oiiint
	\bigotimes	\bigotimes \bigodot	yyy ∳	∳ }}}	\rcirclerightint,

4.6 Delimiters and accents

(((((,\lparen		\rsem, \rBrack
$)))\Big)\Big)$),\rparen	$\bigg\{ \bigg\{ \big\{ \big\{ \big\{ \big\} \bigg\}$	\lbrace,\{
]]]]	[,\lbrack	}}}}	\rbrace, \}
]]]]]],\rbrack	$\langle \langle $	\langle
	\lfloor	$\rangle\rangle\rangle\rangle$	\rangle
_ J]]]]	\rfloor	\\\\	\lAngle
	\lceil	»»»»»»	\rAngle
]]]]]	\rceil	\·\\\\\	\langledot
	\ulcorner) } } }	\rangledot
77777	\urcorner	/////	/,\mathslash
Lucui	\llcorner	/////	\backslash
ا ددد	\lrcorner	-	,\vert
'r _{rr}	\ullcorner		\lvert
1111	\ulrcorner		\rvert
	\lsem,\lBrack		\Vert, \



4.7 Faked symbols

The following symbols are taken from the text font or another math font (in case of \Bbbk, \Re and \Im).

†	\dagger	k	\Bbbk
‡	\ddagger	\mathfrak{R}	∖Re
9	\mathparagraph	\mathfrak{I}	\Im
\int	\mathsection	ħ	\hbar
\$	\mathdollar	ħ	\hslash
£	\mathsterling	R	\circledR
¥	\yen	\bigcirc	\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	\rhook
\nabla	\backepsilon	\diagup
\eth	\mapstochar	\diagdown

\digamma \lhook

5 Implementation

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

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

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

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

```
7 \newcommand{\fdsy@scale}\{1.0\}
```

```
 8 \end{fdsymbol.sty} { scale} {\end{fdsy@scale} $ \end{fdsy@scale} } \\
```

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

```
9 \newcommand\fdsy@mweight@normal{Book}
10 \newcommand\fdsy@mweight@small{Book}
11 \newcommand\fdsy@bweight@normal{Medium}
12 \newcommand\fdsy@bweight@small{Medium}
13 \fdsy@choicekey{normalweight}{book,regular,auto}{%
   \ifcase\@tempb\relax
14
      \renewcommand\fdsy@mweight@normal{Book}%
15
      \renewcommand\fdsy@mweight@small{Book}%
16
17
      \renewcommand\fdsy@mweight@normal{Regular}%
18
      \renewcommand\fdsy@mweight@small{Regular}%
19
   \or
20
      \renewcommand\fdsy@mweight@normal{Book}%
21
      \renewcommand\fdsy@mweight@small{Regular}%
22
   \fi
23
24 }
25 \fdsy@choicekey{boldweight}{medium,bold,auto}{%
  \ifcase\@tempb\relax
```

```
\renewcommand\fdsy@bweight@normal{Medium}%
27
      \renewcommand\fdsy@bweight@small{Medium}%
28
29
   \or
      \renewcommand\fdsy@bweight@normal{Bold}%
30
      \renewcommand\fdsy@bweight@small{Bold}%
31
32
      \renewcommand\fdsy@bweight@normal{Medium}%
33
34
      \renewcommand\fdsy@bweight@small{Bold}%
35
   \fi
36 }
37 \ExecuteOptionsX{largedelims=false}
38 \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.
39 \@ifpackageloaded{amsmath}{}{\RequirePackage{amsmath}}
40 \@ifpackageloaded{textcomp}{}{\RequirePackage{textcomp}}
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.
41 \iffdsy@largedelims
    \label{lig} $$\operatorname{\Bigg}(1.25)$
    \renewcommand{\bigg}{\bBigg@{1.66}}
    \renewcommand{\Bigg}{\bBigg@{2.08}}
45 \fi
Some symbols missing from FdSymbol can be obtained from other fonts or by
combining several other symbols.
46 \DeclareRobustCommand{\dagger}{\fdsy@text{\textdagger}}
47 \DeclareRobustCommand{\ddagger}{\fdsy@text{\textdaggerdbl}}
48 \DeclareRobustCommand{\mathparagraph}{\fdsy@text{\textparagraph}}
49 \DeclareRobustCommand{\mathsection}{\fdsy@text{\textsection}}
50 \DeclareRobustCommand{\mathdollar}{\fdsy@text{\textdollar}}
51\DeclareRobustCommand{\mathsterling}{\fdsy@text{\textsterling}}
52 \DeclareRobustCommand{\yen}{\fdsy@text{\textyen}}
53 \DeclareRobustCommand{\circledR}{\fdsy@text{\textcircled{%
    \check@mathfonts\fontsize\sf@size\z@\math@fontsfalse\selectfont R}}}
55 \DeclareRobustCommand{\circledS}{\fdsy@text{\textcircled{%
    \check@mathfonts\fontsize\sf@size\z@\math@fontsfalse\selectfont S}}}
57 \DeclareRobustCommand{\Re}{\mathfrak{R}}
58 \DeclareRobustCommand{\Im}{\mathfrak{I}}
59 \DeclareRobustCommand{\dotcong}{\mathrel{\dot{\cong}}}
60 \DeclareRobustCommand{\thicksim}{\mathrel{\text{\boldmath$\m@th\sim$}}}
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{\centerdot}{\mathbin{\rule{0.15em}{0.15em}}}
Unneeded partial symbols.
67 \let\mapstochar\undefined
68 \let\lhook\undefined
69 \let\rhook\undefined
Shorthands to simplify the definitions below.
70 \newcommand\fdsy@setslot[1]{\@tempcnta #1\relax}
71 \newcommand\fdsy@nextslot{\advance\@tempcnta 1\relax}
72 \newcommand\fdsy@prevslot{\advance\@tempcnta-1\relax}
73
\label{lem:command} $$74 \newcommand\fdsy@DeclareSymbol[4]_{\DeclareMathSymbol\{\#2\}\{\#3\}\{\#4\}\{\#1\}\}$} $$
75 \newcommand\fdsy@DeclareSymbol[3]{%
    \if\relax\noexpand#1\let#1\undefined\fi
    77
    \fdsy@nextslot
78
79 }
80 \newcommand\fdsy@DeclareAlias[3]{\fdsy@prevslot\fdsy@DeclareSymbol{#1}{#2}{#3}}
{\tt 81 \ loss 23} \\ {\tt 100TSB#3\ limits@}}
82 \newcommand\fdsy@DeclareIntegral[3]{\def#1{\DOTSI#3\ilimits@}}
83 \newcommand\fdsy@DeclareDelimiter[4]{%
    \if\relax\noexpand#1\let#1\undefined\fi
    \DeclareMathDelimiter{#1}{#2}{#3}{#4}{#3}{#4}%
85
86 }
87\newcommand\fdsy@DeclareOpen[3]{\fdsy@DeclareDelimiter{#1}{\mathopen}{#2}{#3}}
88 \newcommand\fdsy@DeclareClose[3]{\fdsy@DeclareDelimiter{#1}{\mathclose}{#2}{#3}}
Font definitions.
89 \DeclareFontFamily{U}{FdSymbolA}{}
90 \DeclareFontFamily{U}{FdSymbolB}{}
91 \DeclareFontFamily{U}{FdSymbolC}{}
92 \DeclareFontFamily{U}{FdSymbolD}{}
93 \DeclareFontFamily{U}{FdSymbolE}{}
94 \DeclareFontFamily{U}{FdSymbolF}{}
96 \DeclareFontShape{U}{FdSymbolA}{m}{n}{
      <-7.1> s * [\fdsy@scale] FdSymbolA-\fdsy@mweight@small
97
      <7.1-> s * [\fdsy@scale] FdSymbolA-\fdsy@mweight@normal
98
99 }{}
100 \DeclareFontShape{U}{FdSymbolA}{b}{n}{
      <-7.1> s * [\fdsy@scale] FdSymbolA-\fdsy@bweight@small
      <7.1-> s * [\fdsy@scale] FdSymbolA-\fdsy@bweight@normal
102
103 }{}
104 \DeclareFontShape{U}{FdSymbolB}{m}{n}{
      <-7.1> s * [\fdsy@scale] FdSymbolB-\fdsy@mweight@small
```

```
<7.1-> s * [\fdsy@scale] FdSymbolB-\fdsy@mweight@normal
106
107 }{}
108 \DeclareFontShape{U}{FdSymbolB}{b}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolB-\fdsy@bweight@small
109
       <7.1-> s * [\fdsy@scale] FdSymbolB-\fdsy@bweight@normal
110
111 }{}
112 \DeclareFontShape{U}{FdSymbolC}{m}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolC-\fdsy@mweight@small
      <7.1-> s * [\fdsy@scale] FdSymbolC-\fdsy@mweight@normal
114
115 }{}
116 \DeclareFontShape{U}{FdSymbolC}{b}{n}{
      <-7.1> s * [\fdsy@scale] FdSymbolC-\fdsy@bweight@small
      <7.1-> s * [\fdsy@scale] FdSymbolC-\fdsy@bweight@normal
118
119 }{}
120 \DeclareFontShape{U}{FdSymbolD}{m}{n}{
      <-7.1> s * [\fdsy@scale] FdSymbolD-\fdsy@mweight@small
121
       <7.1-> s * [\fdsy@scale] FdSymbolD-\fdsy@mweight@normal
122
123 }{}
124 \DeclareFontShape{U}{FdSymbolD}{b}{n}{
125
       <-7.1> s * [\fdsy@scale] FdSymbolD-\fdsy@bweight@small
       <7.1-> s * [\fdsy@scale] FdSymbolD-\fdsy@bweight@normal
126
127 }{}
128 \DeclareFontShape{U}{FdSymbolE}{m}{n}{
      <-7.1> s * [\fdsy@scale] FdSymbolE-\fdsy@mweight@small
129
      <7.1-> s * [\fdsy@scale] FdSymbolE-\fdsy@mweight@normal
130
131 }{}
132 \DeclareFontShape{U}{FdSymbolE}{b}{n}{
      <-7.1> s * [\fdsy@scale] FdSymbolE-\fdsy@bweight@small
133
       <7.1-> s * [\fdsy@scale] FdSymbolE-\fdsy@bweight@normal
134
135 }{}
136 \DeclareFontShape{U}{FdSymbolF}{m}{n}{
       <-7.1> s * [\fdsy@scale] FdSymbolF-\fdsy@mweight@small
137
       <7.1-> s * [\fdsy@scale] FdSymbolF-\fdsy@mweight@normal
138
139 } { }
140 \DeclareFontShape{U}{FdSymbolF}{b}{n}{
141
       <-7.1> s * [\fdsy@scale] FdSymbolF-\fdsy@bweight@small
      <7.1-> s * [\fdsy@scale] FdSymbolF-\fdsy@bweight@normal
142
143 }{}
144
145 \DeclareSymbolFont{symbols}{U}{FdSymbolA}{m}{n}
146 \DeclareSymbolFont{relations}{U}{FdSymbolB}{m}{n}
147 \DeclareSymbolFont{arrows}{U}{FdSymbolC}{m}{n}
148 \DeclareSymbolFont{narrows}{U}{FdSymbolD}{m}{n}
149 \DeclareSymbolFont{largesymbols}{U}{FdSymbolE}{m}{n}
150 \DeclareSymbolFont{delimiters}{U}{FdSymbolF}{m}{n}
```

```
151 \SetSymbolFont{symbols}{bold}{U}{FdSymbolA}{b}{n}
152 \SetSymbolFont{relations}{bold}{U}{FdSymbolB}{b}{n}
153 \SetSymbolFont{arrows}{bold}{U}{FdSymbolC}{b}{n}
154 \SetSymbolFont{narrows}{bold}{U}{FdSymbolD}{b}{n}
\label{largesymbols} $$ \operatorname{SetSymbolFont{largesymbols}{bold}{U}{FdSymbolE}{b}{n}$ $$
156 \SetSymbolFont{delimiters}{bold}{U}{FdSymbolF}{b}{n}
At the moment, we still use cmsy for the calligraphic alphabet, msb for the black-
board bold alphabet, and euf for the Fraktur alphabet.
157 \let\mathcal\undefined
158 \DeclareMathAlphabet{\mathcal}{OMS}{cmsy}{m}{n}
159 \end{athAlphabet{\mathbb{GMS}{cmsy}{b}{n}}} \label{local} $$ \end{athAlphabet{\mathbb{GMS}{cmsy}{b}{n}}} $$
160 \let\mathbb\undefined
161 \DeclareMathAlphabet{\mathbb}{U}{msb}{m}{n}
162 \let\Bbbk\undefined
163 \newcommand{\Bbbk}{\mathbb{\mathchar"717C}}
164 \let\mathfrak\undefined
165 \DeclareMathAlphabet{\mathfrak}{U}{euf}{m}{n}
166 \SetMathAlphabet{\mathfrak}{bold}{U}{euf}{b}{n}
A command to take math symbols from text fonts.
167 \newcommand\fdsy@bold{bold}
168 \newcommand\fdsy@text[1]{%
     \footnote{ifx\fdsy@bold\math@version}
169
       \text{\bfseries#1}%
170
     \else
171
       \text{\mdseries#1}%
172
173
     \fi
174 }
FdSymbolA: binary operators and ordinary symbols
175 \fdsy@setslot{0}
176 \fdsy@DeclareSymbol{\cdot}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\cdotp}{symbols}{\mathpunct}
178 \fdsy@DeclareSymbol{\hdotdot}{symbols}{\mathbin}
179 \fdsy@DeclareSymbol{\vdotdot}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\colon}{symbols}{\mathpunct}
     \fdsy@DeclareAlias{\mathcolon}{symbols}{\mathpunct}
181
     \fdsy@DeclareAlias{\mathratio}{symbols}{\mathrel}
183 \fdsy@DeclareSymbol{\udotdot}{symbols}{\mathbin}
184 \fdsy@DeclareSymbol{\ddotdot}{symbols}{\mathbin}
185 \fdsy@DeclareSymbol{\hdots}{symbols}{\mathord}
     \fdsy@DeclareAlias{\@cdots}{symbols}{\mathinner}
186
     \let\cdots\@cdots
188 \fdsy@DeclareSymbol{\@vdots}{symbols}{\mathord}
189 \DeclareRobustCommand{\vdots}{\ifmmode\@vdots\else\hbox{$\@vdots$}\fi}
190 \fdsy@DeclareSymbol{\udots}{symbols}{\mathord}
```

```
\fdsy@DeclareAlias{\adots}{symbols}{\mathord}
192 \fdsy@DeclareSymbol{\ddots}{symbols}{\mathord}
193 \fdsy@DeclareSymbol{\righttherefore}{symbols}{\mathord}
194 \fdsy@DeclareSymbol{\uptherefore}{symbols}{\mathord}
    \fdsy@DeclareAlias{\therefore}{symbols}{\mathord}
196 \fdsy@DeclareSymbol{\lefttherefore}{symbols}{\mathord}
197 \fdsy@DeclareSymbol{\downtherefore}{symbols}{\mathord}
     \fdsy@DeclareAlias{\because}{symbols}{\mathord}
199 \fdsy@DeclareSymbol{\squaredots}{symbols}{\mathord}
    \fdsy@DeclareAlias{\Colon}{symbols}{\mathrel}
201 \fdsy@DeclareSymbol{\minus}{symbols}{\mathbin}
202 \fdsy@DeclareSymbol{\medslash}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\smalldivslash}{symbols}{\mathbin}
204 \fdsy@DeclareSymbol{\medbackslash}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\smallsetminus}{symbols}{\mathbin}
206 \fdsy@DeclareSymbol{\plus}{symbols}{\mathbin}
207 \fdsy@DeclareSymbol{\times}{symbols}{\mathbin}
208 \fdsy@DeclareSymbol{\dotminus}{symbols}{\mathbin}
209 \fdsy@DeclareSymbol{\minusdot}{symbols}{\mathbin}
210 \fdsy@DeclareSymbol{\div}{symbols}{\mathbin}
211 \fdsy@DeclareSymbol{\minusfdots}{symbols}{\mathbin}
212 \fdsy@DeclareSymbol{\minusrdots}{symbols}{\mathbin}
213 \fdsy@DeclareSymbol{\dotsminusdots}{symbols}{\mathrel}
214 \fdsy@DeclareSymbol{\pm}{symbols}{\mathbin}
215 \fdsy@DeclareSymbol{\mp}{symbols}{\mathbin}
216 \fdsy@DeclareSymbol{\dotplus}{symbols}{\mathbin}
217 \fdsy@DeclareSymbol{\plusdot}{symbols}{\mathbin}
218 \fdsy@DeclareSymbol{\dottimes}{symbols}{\mathbin}
219 \fdsy@DeclareSymbol{\timesbar}{symbols}{\mathbin}
220 \fdsy@DeclareSymbol{\divideontimes}{symbols}{\mathbin}
221 \fdsy@DeclareSymbol{\neg}{symbols}{\mathord}
    \fdsy@DeclareAlias{\lnot}{symbols}{\mathord}
    \fdsy@DeclareAlias{\minushookdown}{symbols}{\mathbin}
223
224 \fdsy@DeclareSymbol{\backneg}{symbols}{\mathord}
    \fdsy@DeclareAlias{\hookdownminus}{symbols}{\mathbin}
225
    \fdsy@DeclareAlias{\invneg}{symbols}{\mathord}
    \fdsy@DeclareAlias{\invnot}{symbols}{\mathord}
227
   fdsy@DeclareSymbol{\intprod}{symbols}{\mathbin}
228
    \fdsy@DeclareAlias{\minushookup}{symbols}{\mathbin}
229
230
    \fdsy@DeclareAlias{\turnedneg}{symbols}{\mathord}
231
    \fdsy@DeclareAlias{\turnednot}{symbols}{\mathord}
232 \fdsy@DeclareSymbol{\intprodr}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\hookupminus}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\turnedbackneg}{symbols}{\mathord}
235 \fdsy@DeclareSymbol{\leftthreetimes}{symbols}{\mathbin}
```

```
236 \fdsy@DeclareSymbol{\rightthreetimes}{symbols}{\mathbin}
237 \fdsy@DeclareSymbol{\dtimes}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\btimes}{symbols}{\mathbin}
    fdsy@DeclareSymbol{\rtimes}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\rJoin}{symbols}{\mathrel}
240
241 \fdsy@DeclareSymbol{\utimes}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\ttimes}{symbols}{\mathbin}
243 \fdsy@DeclareSymbol{\ltimes}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\lJoin}{symbols}{\mathrel}
245 \fdsy@DeclareSymbol{\bowtie}{symbols}{\mathrel}
    \fdsy@DeclareAlias{\Join}{symbols}{\mathrel}
    \fdsy@DeclareAlias{\lrtimes}{symbols}{\mathbin}
247
248 \fdsy@DeclareSymbol{\upbowtie}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\hourglass}{symbols}{\mathbin}
250 \fdsy@DeclareSymbol{\rightY}{symbols}{\mathbin}
251 \fdsy@DeclareSymbol{\upY}{symbols}{\mathbin}
252 \fdsy@DeclareSymbol{\leftY}{symbols}{\mathbin}
253 \fdsy@DeclareSymbol{\downY}{symbols}{\mathbin}
254 \fdsy@DeclareSymbol{\wedge}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\land}{symbols}{\mathbin}
{\tt 256 \fdsy@DeclareSymbol{\vee}{symbols}{\tt \mathbin}}
     \fdsy@DeclareAlias{\lor}{symbols}{\mathbin}
258 \fdsy@DeclareSymbol{\wedgedot}{symbols}{\mathbin}
259 \fdsy@DeclareSymbol{\veedot}{symbols}{\mathbin}
260 \fdsy@DeclareSymbol{\doublewedge}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\wedgeonwedge}{symbols}{\mathbin}
262 \fdsy@DeclareSymbol{\doublevee}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\veeonvee}{symbols}{\mathbin}
264 \fdsy@DeclareSymbol{\curlywedge}{symbols}{\mathbin}
265 \fdsy@DeclareSymbol{\curlyvee}{symbols}{\mathbin}
266 \fdsy@DeclareSymbol{\barwedge}{symbols}{\mathbin}
267 \fdsy@DeclareSymbol{\veebar}{symbols}{\mathbin}
268 \fdsy@DeclareSymbol{\doublebarwedge}{symbols}{\mathbin}
269 \fdsy@DeclareSymbol{\veedoublebar}{symbols}{\mathbin}
270 \fdsy@DeclareSymbol{\cup}{symbols}{\mathbin}
271 \fdsy@DeclareSymbol{\cap}{symbols}{\mathbin}
272 \fdsy@DeclareSymbol{\doublecup}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\Cup}{symbols}{\mathbin}
274 \fdsy@DeclareSymbol{\doublecap}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\Cap}{symbols}{\mathbin}
276 \fdsy@DeclareSymbol{\cupdot}{symbols}{\mathbin}
277 \fdsy@DeclareSymbol{\capdot}{symbols}{\mathbin}
278 \fdsy@DeclareSymbol{\cupplus}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\uplus}{symbols}{\mathbin}
280 \fdsy@DeclareSymbol{\capplus}{symbols}{\mathbin}
```

```
281 \fdsy@DeclareSymbol{\sqcup}{symbols}{\mathbin}
282 \fdsy@DeclareSymbol{\sqcap}{symbols}{\mathbin}
283 \fdsy@DeclareSymbol{\doublesqcup}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\Sqcup}{symbols}{\mathbin}
285 \fdsy@DeclareSymbol{\doublesqcap}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\Sqcap}{symbols}{\mathbin}
287 \fdsy@DeclareSymbol{\sqcupdot}{symbols}{\mathbin}
288 \fdsy@DeclareSymbol{\sqcapdot}{symbols}{\mathbin}
289 \fdsy@DeclareSymbol{\sqcupplus}{symbols}{\mathbin}
290 \fdsy@DeclareSymbol{\sqcapplus}{symbols}{\mathbin}
291 \fdsy@DeclareSymbol{\pullback}{symbols}{\mathbin}
292 \fdsy@DeclareSymbol{\pushout}{symbols}{\mathbin}
293 \fdsy@DeclareSymbol{\smalltriangleright}{symbols}{\mathbin}
294 \fdsy@DeclareSymbol{\smalltriangleup}{symbols}{\mathbin}
295 \fdsy@DeclareSymbol{\smalltriangleleft}{symbols}{\mathbin}
296 \fdsy@DeclareSymbol{\smalltriangledown}{symbols}{\mathbin}
297 \fdsy@DeclareSymbol{\smallblacktriangleright}{symbols}{\mathbin}
298 \fdsy@DeclareSymbol{\smallblacktriangleup}{symbols}{\mathbin}
299 \fdsy@DeclareSymbol{\smallblacktriangleleft}{symbols}{\mathbin}
300 \fdsy@DeclareSymbol{\smallblacktriangledown}{symbols}{\mathbin}
{\tt 301 \fdsy@DeclareSymbol{\medtriangleright}\{symbols\}\{\mathbin\}} \\
302
     \fdsy@DeclareAlias{\triangleright}{symbols}{\mathbin}
303 \fdsy@DeclareSymbol{\medtriangleup}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\triangle}{symbols}{\mathbin}
304
305
    \fdsy@DeclareAlias{\vartriangle}{symbols}{\mathbin}
306\fdsy@DeclareSymbol{\medtriangleleft}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\triangleleft}{symbols}{\mathbin}
308 \fdsy@DeclareSymbol{\medtriangledown}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\triangledown}{symbols}{\mathbin}
   fdsy@DeclareSymbol{\medblacktriangleright}{symbols}{\mathbin}
310
     \fdsy@DeclareAlias{\blacktriangleright}{symbols}{\mathbin}
    fdsy@DeclareSymbol{\medblacktriangleup}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\blacktriangle}{symbols}{\mathbin}
313
314\fdsy@DeclareSymbol{\medblacktriangleleft}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\blacktriangleleft}{symbols}{\mathbin}
315
316 \fdsy@DeclareSymbol{\medblacktriangledown}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\blacktriangledown}{symbols}{\mathbin}
317
  \fdsy@DeclareSymbol{\largetriangleup}{symbols}{\mathord}
    \fdsy@DeclareAlias{\bigtriangleup}{symbols}{\mathbin}
319
320 \
   fdsy@DeclareSymbol{\largetriangledown}{symbols}{\mathord}
    \fdsy@DeclareAlias{\bigtriangledown}{symbols}{\mathbin}
322 \fdsy@DeclareSymbol{\smallcircle}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circ}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\smwhtcircle}{symbols}{\mathbin}
325 \fdsy@DeclareSymbol{\smallblackcircle}{symbols}{\mathbin}
```

```
\fdsy@DeclareAlias{\bullet}{symbols}{\mathbin}
326
    \fdsy@DeclareAlias{\smblkcircle}{symbols}{\mathbin}
327
328 \fdsy@DeclareSymbol{\medcircle}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\mdlgwhtcircle}{symbols}{\mathbin}
330 \fdsy@DeclareSymbol{\medblackcircle}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\mdlgblkcircle}{symbols}{\mathbin}
332 \fdsy@DeclareSymbol{\ominus}{symbols}{\mathbin}
    fdsy@DeclareSymbol{\overt}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circledvert}{symbols}{\mathbin}
335 \fdsy@DeclareSymbol{\oslash}{symbols}{\mathbin}
336\fdsy@DeclareSymbol{\obackslash}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\obslash}{symbols}{\mathbin}
338 \fdsy@DeclareSymbol{\oplus}{symbols}{\mathbin}
339 \fdsy@DeclareSymbol{\otimes}{symbols}{\mathbin}
340 \fdsy@DeclareSymbol{\odot}{symbols}{\mathbin}
341 \fdsy@DeclareSymbol{\ocirc}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circledcirc}{symbols}{\mathbin}
    fdsy@DeclareSymbol{\oast}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\circledast}{symbols}{\mathbin}
344
345 \fdsy@DeclareSymbol{\odash}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circleddash}{symbols}{\mathbin}
346
    fdsy@DeclareSymbol{\oequal}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\circledequal}{symbols}{\mathbin}
348
  \fdsy@DeclareSymbol{\emptyset}{symbols}{\mathord}
349
    350
    \fdsy@DeclareAlias{\varnothing}{symbols}{\mathord}
351
352 \fdsy@DeclareSymbol{\revemptyset}{symbols}{\mathord}
353 \fdsy@DeclareSymbol{\largecircle}{symbols}{\mathord}
     \fdsy@DeclareAlias{\bigcirc}{symbols}{\mathord}
354
    \fdsy@DeclareAlias{\lgwhtcircle}{symbols}{\mathord}
355
   fdsy@DeclareSymbol{\largeblackcircle}{symbols}{\mathord}
356
    \fdsy@DeclareAlias{\lgblkcircle}{symbols}{\mathord}
357
    fdsy@DeclareSymbol{\smallsquare}{symbols}{\mathbin}
358
    \fdsy@DeclareAlias{\smwhtsquare}{symbols}{\mathbin}
359
   fdsy@DeclareSymbol{\smallblacksquare}{symbols}{\mathbin}
360 \
    \fdsy@DeclareAlias{\smblksquare}{symbols}{\mathbin}
   fdsy@DeclareSymbol{\medsquare}{symbols}{\mathbin}
362 \
    \fdsy@DeclareAlias{\square}{symbols}{\mathbin}
363
    \fdsy@DeclareAlias{\Box}{symbols}{\mathbin}
364
365
    \fdsy@DeclareAlias{\mdlgwhtsquare}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\mdwhtsquare}{symbols}{\mathbin}
366
367 \fdsy@DeclareSymbol{\medblacksquare}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\mdlgblksquare}{symbols}{\mathbin}
368
     \fdsy@DeclareAlias{\mdblksquare}{symbols}{\mathbin}
369
370 \fdsy@DeclareSymbol{\boxminus}{symbols}{\mathbin}
```

```
371 \fdsy@DeclareSymbol{\boxvert}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\boxbar}{symbols}{\mathbin}
373 \fdsy@DeclareSymbol{\boxslash}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\boxdiag}{symbols}{\mathbin}
375\fdsy@DeclareSymbol{\boxbackslash}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\boxbslash}{symbols}{\mathbin}
377 \fdsy@DeclareSymbol{\boxplus}{symbols}{\mathbin}
378 \fdsy@DeclareSymbol{\boxtimes}{symbols}{\mathbin}
379 \fdsy@DeclareSymbol{\boxdot}{symbols}{\mathbin}
380 \fdsy@DeclareSymbol{\boxbox}{symbols}{\mathbin}
381 \fdsy@DeclareSymbol{\largesquare}{symbols}{\mathord}
    \fdsy@DeclareAlias{\lgwhtsquare}{symbols}{\mathord}
382
383 \fdsy@DeclareSymbol{\largeblacksquare}{symbols}{\mathord}
     \fdsy@DeclareAlias{\lgblksquare}{symbols}{\mathord}
384
385
   .fdsy@DeclareSymbol{\smalldiamond}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\diamond}{symbols}{\mathbin}
386
387
    \fdsy@DeclareAlias{\smwhtdiamond}{symbols}{\mathbin}
    fdsy@DeclareSymbol{\smallblackdiamond}{symbols}{\mathbin}
388
    \fdsy@DeclareAlias{\blackdiamond}{symbols}{\mathbin}
389
    \fdsy@DeclareAlias{\smblkdiamond}{symbols}{\mathbin}
390
   fdsy@DeclareSymbol{\meddiamond}{symbols}{\mathbin}
391
392
    \fdsy@DeclareAlias{\Diamond}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\mdlgwhtdiamond}{symbols}{\mathbin}
393
    \fdsy@DeclareAlias{\mdwhtdiamond}{symbols}{\mathbin}
394
    fdsy@DeclareSymbol{\medblackdiamond}{symbols}{\mathbin}
395
    \fdsy@DeclareAlias{\mdlgblkdiamond}{symbols}{\mathbin}
396
397
    \fdsy@DeclareAlias{\mdblkdiamond}{symbols}{\mathbin}
{\tt 398 \fdsy@DeclareSymbol{\diamondminus}{symbols}{\tt \mathbin}}
399 \fdsy@DeclareSymbol{\diamondvert}{symbols}{\mathbin}
400 \fdsy@DeclareSymbol{\diamondslash}{symbols}{\mathbin}
401 \fdsy@DeclareSymbol{\diamondbackslash}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\diamondbslash}{symbols}{\mathbin}
403 \fdsy@DeclareSymbol{\diamondplus}{symbols}{\mathbin}
404 \fdsy@DeclareSymbol{\diamondtimes}{symbols}{\mathbin}
405 \fdsy@DeclareSymbol{\diamonddot}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\diamondcdot}{symbols}{\mathbin}
407 \fdsy@DeclareSymbol{\diamonddiamond}{symbols}{\mathbin}
  \fdsy@DeclareSymbol{\smalllozenge}{symbols}{\mathord}
     \fdsy@DeclareAlias{\smwhtlozenge}{symbols}{\mathord}
410
   fdsy@DeclareSymbol{\smallblacklozenge}{symbols}{\mathord}
    \fdsy@DeclareAlias{\smblklozenge}{symbols}{\mathord}
412 \fdsy@DeclareSymbol{\medlozenge}{symbols}{\mathord}
     \fdsy@DeclareAlias{\lozenge}{symbols}{\mathord}
     \fdsy@DeclareAlias{\mdlgwhtlozenge}{symbols}{\mathord}
414
    \fdsy@DeclareAlias{\mdwhtlozenge}{symbols}{\mathord}
```

```
416 \fdsy@DeclareSymbol{\medblacklozenge}{symbols}{\mathord}
    \fdsy@DeclareAlias{\blacklozenge}{symbols}{\mathord}
418
    \fdsy@DeclareAlias{\mdlgblklozenge}{symbols}{\mathord}
    \fdsy@DeclareAlias{\mdblklozenge}{symbols}{\mathord}
420 \fdsy@DeclareSymbol{\lozengeminus}{symbols}{\mathord}
421 \fdsy@DeclareSymbol{\smallwhitestar}{symbols}{\mathbin}
     \fdsy@DeclareAlias{\smwhitestar}{symbols}{\mathbin}
423 \fdsy@DeclareSymbol{\smallblackstar}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\star}{symbols}{\mathbin}
425 \fdsy@DeclareSymbol{\medwhitestar}{symbols}{\mathbin}
426 \fdsy@DeclareSymbol{\medblackstar}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\medstar}{symbols}{\mathbin}
428 \fdsy@DeclareSymbol{\largewhitestar}{symbols}{\mathord}
429 \fdsy@DeclareSymbol{\largeblackstar}{symbols}{\mathord}
     \fdsy@DeclareAlias{\bigstar}{symbols}{\mathord}
431 \fdsy@DeclareSymbol{\ast}{symbols}{\mathbin}
432 \fdsy@DeclareSymbol{\infty}{symbols}{\mathord}
433 \fdsy@DeclareSymbol{\propto}{symbols}{\mathrel}
    \fdsy@DeclareAlias{\varpropto}{symbols}{\mathrel}
435 \fdsy@DeclareSymbol{\backpropto}{symbols}{\mathrel}
    \fdsy@DeclareAlias{\propfrom}{symbols}{\mathrel}
437 \fdsy@DeclareSymbol{\crossing}{symbols}{\mathrel}
438 \fdsy@DeclareSymbol{\between}{symbols}{\mathrel}
439 \fdsy@DeclareSymbol{\intercal}{symbols}{\mathbin}
440 \fdsy@DeclareSymbol{\wreath}{symbols}{\mathbin}
    \fdsy@DeclareAlias{\wr}{symbols}{\mathbin}
442 \fdsy@DeclareSymbol{\angle}{symbols}{\mathord}
443 \fdsy@DeclareSymbol{\revangle}{symbols}{\mathord}
444 \fdsy@DeclareSymbol{\measuredangle}{symbols}{\mathord}
445 \fdsy@DeclareSymbol{\revmeasuredangle}{symbols}{\mathord}
    \fdsy@DeclareAlias{\measuredangleleft}{symbols}{\mathord}
447 \fdsy@DeclareSymbol{\sphericalangle}{symbols}{\mathord}
448 \fdsy@DeclareSymbol{\sphericalangleup}{symbols}{\mathord}
449 \fdsy@DeclareSymbol{\sphericalangleleft}{symbols}{\mathord}
    \fdsy@DeclareAlias{\revsphericalangle}{symbols}{\mathord}
    \fdsy@DeclareAlias{\gtlpar}{symbols}{\mathord}
452 \fdsy@DeclareSymbol{\sphericalangledown}{symbols}{\mathord}
453 \fdsy@DeclareSymbol{\rightangle}{symbols}{\mathord}
454 \fdsy@DeclareSymbol{\measuredrightangle}{symbols}{\mathord}
455 \fdsy@DeclareSymbol{\rightanglesquare}{symbols}{\mathord}
    \fdsy@DeclareAlias{\rightanglesqr}{symbols}{\mathord}
457 \fdsy@DeclareSymbol{\measuredrightangledot}{symbols}{\mathord}
    \fdsy@DeclareAlias{\rightanglemdot}{symbols}{\mathord}
459 \fdsy@DeclareSymbol{\prime}{symbols}{\mathord}
460 \fdsy@DeclareSymbol{\backprime}{symbols}{\mathord}
```

```
461 \fdsy@DeclareSymbol{\smallprod}{symbols}{\mathop}
462 \fdsy@DeclareSymbol{\smallcoprod}{symbols}{\mathop}
        \fdsy@DeclareAlias{\amalg}{symbols}{\mathbin}
464 \fdsy@DeclareSymbol{\smallint}{symbols}{\mathop}
465 \fdsy@DeclareSymbol{\checkmark}{symbols}{\mathord}
466 \fdsy@DeclareSymbol{\lightning}{symbols}{\mathord}
        \fdsy@DeclareAlias{\downzigzagarrow}{symbols}{\mathord}
468 \fdsy@DeclareSymbol{\diamondsuit}{symbols}{\mathord}
469 \fdsy@DeclareSymbol{\vardiamondsuit}{symbols}{\mathord}
470 \fdsy@DeclareSymbol{\heartsuit}{symbols}{\mathord}
471 \fdsy@DeclareSymbol{\varheartsuit}{symbols}{\mathord}
472 \fdsy@DeclareSymbol{\spadesuit}{symbols}{\mathord}
473 \fdsy@DeclareSymbol{\clubsuit}{symbols}{\mathord}
474 \fdsy@DeclareSymbol{\maltese}{symbols}{\mathord}
475 \fdsy@DeclareSymbol{\starofdavid}{symbols}{\mathord}
476 \fdsy@DeclareSymbol{\sector}{symbols}{\mathord}
477 \fdsy@DeclareSymbol{\forall}{symbols}{\mathord}
478 \fdsy@DeclareSymbol{\exists}{symbols}{\mathord}
479 \fdsy@DeclareSymbol{\nexists}{symbols}{\mathord}
480 \fdsy@DeclareSymbol{\Finv}{symbols}{\mathord}
481 \fdsy@DeclareSymbol{\Game}{symbols}{\mathord}
482 \fdsy@DeclareSymbol{\complement}{symbols}{\mathord}
483 \fdsy@DeclareSymbol{\flat}{symbols}{\mathord}
484 \fdsy@DeclareSymbol{\natural}{symbols}{\mathord}
485 \fdsy@DeclareSymbol{\sharp}{symbols}{\mathord}
486 \fdsy@DeclareSymbol{\aleph}{symbols}{\mathord}
487 \fdsy@DeclareSymbol{\beth}{symbols}{\mathord}
488 \fdsy@DeclareSymbol{\gimel}{symbols}{\mathord}
489 \fdsy@DeclareSymbol{\daleth}{symbols}{\mathord}
490 \fdsy@DeclareSymbol{\wp}{symbols}{\mathord}
FdSymbolB: relations
491 \fdsy@setslot{0}
492 \fdsy@DeclareSymbol{\equal}{relations}{\mathrel}
493 \fdsy@DeclareSymbol{\equiv}{relations}{\mathrel}
494 \fdsy@DeclareSymbol{\sim}{relations}{\mathrel}
495 \fdsy@DeclareSymbol{\backsim}{relations}{\mathrel}
496 \fdsy@DeclareSymbol{\approx}{relations}{\mathrel}
497 \fdsy@DeclareSymbol{\triplesim}{relations}{\mathrel}
498 \fdsy@DeclareAlias{\approxident}{relations}{\mathrel}
499 \fdsy@DeclareSymbol{\simeq}{relations}{\mathrel}
500 \fdsy@DeclareSymbol{\backsimeq}{relations}{\mathrel}
501 \fdsy@DeclareSymbol{\eqsim}{relations}{\mathrel}
\label{lem:solding} $$ 102 \end{\cong}{relations}{\mathbb {T}} $$ 100 \end{\cong} $$ 100 \end
503 \fdsy@DeclareSymbol{\backcong}{relations}{\mathrel}
504 \fdsy@DeclareSymbol{\approxeq}{relations}{\mathrel}
```

```
505 \fdsy@DeclareSymbol{\bumpeq}{relations}{\mathrel}
506 \fdsy@DeclareSymbol{\bumpeqq}{relations}{\mathrel}
507 \fdsy@DeclareSymbol{\Bumpeq}{relations}{\mathrel}
508 \fdsy@DeclareSymbol{\doteq}{relations}{\mathrel}
{\tt 509 \fdsy@DeclareSymbol{\eqdot}{relations}\{\mbox{\tt mathrel}\}}
510 \fdsy@DeclareSymbol{\Doteq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\doteqdot}{relations}{\mathrel}
512 \fdsy@DeclareSymbol{\fallingdotseq}{relations}{\mathrel}
513 \fdsy@DeclareSymbol{\risingdotseq}{relations}{\mathrel}
514 \fdsy@DeclareSymbol{\coloneq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\coloneqq}{relations}{\mathrel}
516 \fdsy@DeclareSymbol{\eqcolon}{relations}{\mathrel}
    \fdsy@DeclareAlias{\eqqcolon}{relations}{\mathrel}
518 \fdsy@DeclareSymbol{\smile}{relations}{\mathrel}
     \fdsy@DeclareAlias{\smallsmile}{relations}{\mathrel}
520 \fdsy@DeclareSymbol{\frown}{relations}{\mathrel}
    \fdsy@DeclareAlias{\smallfrown}{relations}{\mathrel}
522 \fdsy@DeclareSymbol{\smilefrown}{relations}{\mathrel}
    \fdsy@DeclareAlias{\asymp}{relations}{\mathrel}
524 \fdsy@DeclareSymbol{\frownsmile}{relations}{\mathrel}
    \fdsy@DeclareAlias{\closure}{relations}{\mathrel}
526 \fdsy@DeclareSymbol{\smileeq}{relations}{\mathrel}
527 \fdsy@DeclareSymbol{\frowneq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\arceq}{relations}{\mathrel}
529 \fdsy@DeclareSymbol{\eqcirc}{relations}{\mathrel}
530 \fdsy@DeclareSymbol{\circeq}{relations}{\mathrel}
531 \fdsy@DeclareSymbol{\wedgeq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\hateq}{relations}{\mathrel}
533 \fdsy@DeclareSymbol{\veeeq}{relations}{\mathrel}
534 \fdsy@DeclareSymbol{\stareq}{relations}{\mathrel}
535 \fdsy@DeclareSymbol{\triangleeq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\triangleq}{relations}{\mathrel}
537 \fdsy@DeclareSymbol{\in}{relations}{\mathrel}
538 \fdsy@DeclareSymbol{\owns}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ni}{relations}{\mathrel}
540 \fdsy@DeclareSymbol{\less}{relations}{\mathrel}
541 \fdsy@DeclareSymbol{\gtr}{relations}{\mathrel}
542 \fdsy@DeclareSymbol{\leq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\le}{relations}{\mathrel}
544 \fdsy@DeclareSymbol{\geq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ge}{relations}{\mathrel}
546 \fdsy@DeclareSymbol{\leqslant}{relations}{\mathrel}
547 \fdsy@DeclareSymbol{\geqslant}{relations}{\mathrel}
548 \fdsy@DeclareSymbol{\leqq}{relations}{\mathrel}
549 \fdsy@DeclareSymbol{\geqq}{relations}{\mathrel}
```

```
550 \fdsy@DeclareSymbol{\lesssim}{relations}{\mathrel}
551 \fdsy@DeclareSymbol{\gtrsim}{relations}{\mathrel}
552 \fdsy@DeclareSymbol{\lessapprox}{relations}{\mathrel}
553 \fdsy@DeclareSymbol{\gtrapprox}{relations}{\mathrel}
\verb| fdsy@DeclareSymbol{\lessgtr}{relations}{\label{lessgtr}| } \\
555 \fdsy@DeclareSymbol{\gtrless}{relations}{\mathrel}
556 \fdsy@DeclareSymbol{\lesseqgtr}{relations}{\mathrel}
557 \fdsy@DeclareSymbol{\gtreqless}{relations}{\mathrel}
558 \fdsy@DeclareSymbol{\lesseqqgtr}{relations}{\mathrel}
559 \fdsy@DeclareSymbol{\gtreqqless}{relations}{\mathrel}
560 \fdsy@DeclareSymbol{\lesseqslantgtr}{relations}{\mathrel}
        \fdsy@DeclareAlias{\lesg}{relations}{\mathrel}
        \fdsy@DeclareAlias{\lesseggtrslant}{relations}{\mathrel}
563 \fdsy@DeclareSymbol{\gtreqslantless}{relations}{\mathrel}
564
        \fdsy@DeclareAlias{\gesl}{relations}{\mathrel}
        \fdsy@DeclareAlias{\gtreqlessslant}{relations}{\mathrel}
565
566 \fdsy@DeclareSymbol{\ll}{relations}{\mathrel}
567 \fdsy@DeclareSymbol{\gg}{relations}{\mathrel}
568 \fdsy@DeclareSymbol{\lll}{relations}{\mathrel}
        \fdsy@DeclareAlias{\llless}{relations}{\mathrel}
\label{lem:state} \begin{tabular} $$ 10 \ \end{tabular} {\colored} $$ 10 \ \end{tabular} $$$ 10 \ \end{t
         \fdsy@DeclareAlias{\gggtr}{relations}{\mathrel}
572 \fdsy@DeclareSymbol{\lessclosed}{relations}{\mathrel}
         \fdsy@DeclareAlias{\lhd}{relations}{\mathbin}
573
574
         \fdsy@DeclareAlias{\vartriangleleft}{relations}{\mathrel}
575 \fdsy@DeclareSymbol{\gtrclosed}{relations}{\mathrel}
        \fdsy@DeclareAlias{\rhd}{relations}{\mathbin}
576
        \fdsy@DeclareAlias{\vartriangleright}{relations}{\mathrel}
577
578 \fdsy@DeclareSymbol{\leqclosed}{relations}{\mathrel}
        \fdsy@DeclareAlias{\unlhd}{relations}{\mathbin}
579
        \fdsy@DeclareAlias{\trianglelefteq}{relations}{\mathrel}
580
       fdsy@DeclareSymbol{\geqclosed}{relations}{\mathrel}
581
        \fdsy@DeclareAlias{\unrhd}{relations}{\mathbin}
582
        \fdsy@DeclareAlias{\trianglerighteq}{relations}{\mathrel}
583
584 \fdsy@DeclareSymbol{\lesscc}{relations}{\mathrel}
        \fdsy@DeclareAlias{\ltcc}{relations}{\mathrel}
586 \fdsy@DeclareSymbol{\gtrcc}{relations}{\mathrel}
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587
       .fdsy@DeclareSymbol{\leqslcc}{relations}{\mathrel}
589
        \fdsy@DeclareAlias{\lescc}{relations}{\mathrel}
590 \fdsy@DeclareSymbol{\geqslcc}{relations}{\mathrel}
        \fdsy@DeclareAlias{\gescc}{relations}{\mathrel}
592 \fdsy@DeclareSymbol{\sqsubset}{relations}{\mathrel}
593 \fdsy@DeclareSymbol{\sqsupset}{relations}{\mathrel}
594 \fdsy@DeclareSymbol{\sqsubseteq}{relations}{\mathrel}
```

```
595 \fdsy@DeclareSymbol{\sqsupseteq}{relations}{\mathrel}
596 \fdsy@DeclareSymbol{\sqsubseteqq}{relations}{\mathrel}
597 \fdsy@DeclareSymbol{\sqsupseteqq}{relations}{\mathrel}
598 \fdsy@DeclareSymbol{\Sqsubset}{relations}{\mathrel}
599 \fdsy@DeclareSymbol{\Sqsupset}{relations}{\mathrel}
600 \fdsy@DeclareSymbol{\subset}{relations}{\mathrel}
601 \fdsy@DeclareSymbol{\supset}{relations}{\mathrel}
602 \fdsy@DeclareSymbol{\subseteq}{relations}{\mathrel}
603 \fdsy@DeclareSymbol{\supseteq}{relations}{\mathrel}
604 \fdsy@DeclareSymbol{\subseteqq}{relations}{\mathrel}
605 \fdsy@DeclareSymbol{\supseteqq}{relations}{\mathrel}
606 \fdsy@DeclareSymbol{\Subset}{relations}{\mathrel}
607 \fdsy@DeclareSymbol{\Supset}{relations}{\mathrel}
608 \fdsy@DeclareSymbol{\prec}{relations}{\mathrel}
609 \fdsy@DeclareSymbol{\succ}{relations}{\mathrel}
610 \fdsy@DeclareSymbol{\preceq}{relations}{\mathrel}
611 \fdsy@DeclareSymbol{\succeq}{relations}{\mathrel}
612 \fdsy@DeclareSymbol{\preccurlyeq}{relations}{\mathrel}
613 \fdsy@DeclareSymbol{\succcurlyeq}{relations}{\mathrel}
614 \fdsy@DeclareSymbol{\preceqq}{relations}{\mathrel}
615 \fdsy@DeclareSymbol{\succeqq}{relations}{\mathrel}
616 \fdsy@DeclareSymbol{\precsim}{relations}{\mathrel}
617 \fdsy@DeclareSymbol{\succsim}{relations}{\mathrel}
618 \fdsy@DeclareSymbol{\precapprox}{relations}{\mathrel}
619 \fdsy@DeclareSymbol{\succapprox}{relations}{\mathrel}
620 \fdsy@DeclareSymbol{\lessdot}{relations}{\mathrel}
621 \fdsy@DeclareSymbol{\gtrdot}{relations}{\mathrel}
622 \fdsy@DeclareSymbol{\leqdot}{relations}{\mathrel}
623 \fdsy@DeclareSymbol{\geqdot}{relations}{\mathrel}
624 \fdsy@DeclareSymbol{\leqslantdot}{relations}{\mathrel}
    \fdsy@DeclareAlias{\lesdot}{relations}{\mathrel}
626\fdsy@DeclareSymbol{\geqslantdot}{relations}{\mathrel}
    \fdsy@DeclareAlias{\gesdot}{relations}{\mathrel}
628 \fdsy@DeclareSymbol{\eqslantless}{relations}{\mathrel}
629 \fdsy@DeclareSymbol{\eqslantgtr}{relations}{\mathrel}
630 \fdsy@DeclareSymbol{\curlyeqprec}{relations}{\mathrel}
631 \fdsy@DeclareSymbol{\curlyeqsucc}{relations}{\mathrel}
632 \fdsy@DeclareSymbol{\nequal}{relations}{\mathrel}
    \fdsy@DeclareAlias{\neq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ne}{relations}{\mathrel}
635 \fdsy@DeclareSymbol{\nequiv}{relations}{\mathrel}
{\tt 636 \fdsy@DeclareSymbol{\nsim}{relations}{\tt \mathrel}}
637 \fdsy@DeclareSymbol{\nbacksim}{relations}{\mathrel}
638 \fdsy@DeclareSymbol{\napprox}{relations}{\mathrel}
639 \fdsy@DeclareSymbol{\ntriplesim}{relations}{\mathrel}
```

```
\fdsy@DeclareAlias{\napproxident}{relations}{\mathrel}
641 \fdsy@DeclareSymbol{\nsimeq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\nsime}{relations}{\mathrel}
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644 \fdsy@DeclareSymbol{\neqsim}{relations}{\mathrel}
645 \fdsy@DeclareSymbol{\ncong}{relations}{\mathrel}
646 \fdsy@DeclareSymbol{\nbackcong}{relations}{\mathrel}
647 \fdsy@DeclareSymbol{\napproxeq}{relations}{\mathrel}
648 \fdsy@DeclareSymbol{\nbumpeq}{relations}{\mathrel}
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650 \fdsy@DeclareSymbol{\nBumpeq}{relations}{\mathrel}
651 \fdsy@DeclareSymbol{\ndoteq}{relations}{\mathrel}
652 \fdsy@DeclareSymbol{\neqdot}{relations}{\mathrel}
653 \fdsy@DeclareSymbol{\nDoteq}{relations}{\mathrel}
654 \fdsy@DeclareSymbol{\nfallingdotseq}{relations}{\mathrel}
655 \fdsy@DeclareSymbol{\nrisingdotseq}{relations}{\mathrel}
656 \fdsy@DeclareSymbol{\nsmile}{relations}{\mathrel}
657 \fdsy@DeclareSymbol{\nfrown}{relations}{\mathrel}
658 \fdsy@DeclareSymbol{\nsmilefrown}{relations}{\mathrel}
    \fdsy@DeclareAlias{\nasymp}{relations}{\mathrel}
660 \fdsy@DeclareSymbol{\nfrownsmile}{relations}{\mathrel}
    \fdsy@DeclareAlias{\nclosure}{relations}{\mathrel}
662 \fdsy@DeclareSymbol{\nsmileeq}{relations}{\mathrel}
663 \fdsy@DeclareSymbol{\nfrowneq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\narceq}{relations}{\mathrel}
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666 \fdsy@DeclareSymbol{\ncirceq}{relations}{\mathrel}
667 \fdsy@DeclareSymbol{\nwedgeq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\nhateq}{relations}{\mathrel}
669 \fdsy@DeclareSymbol{\nveeeq}{relations}{\mathrel}
670 \fdsy@DeclareSymbol{\nstareq}{relations}{\mathrel}
671 \fdsy@DeclareSymbol{\ntriangleeq}{relations}{\mathrel}
672 \fdsy@DeclareSymbol{\nin}{relations}{\mathrel}
    \fdsy@DeclareAlias{\notin}{relations}{\mathrel}
674 \fdsy@DeclareSymbol{\nowns}{relations}{\mathrel}
    \fdsy@DeclareAlias{\nni}{relations}{\mathrel}
676 \fdsy@DeclareSymbol{\nless}{relations}{\mathrel}
677 \fdsy@DeclareSymbol{\ngtr}{relations}{\mathrel}
678 \fdsy@DeclareSymbol{\nleq}{relations}{\mathrel}
679 \fdsy@DeclareSymbol{\ngeq}{relations}{\mathrel}
680 \fdsy@DeclareSymbol{\nleqslant}{relations}{\mathrel}
681 \fdsy@DeclareSymbol{\ngeqslant}{relations}{\mathrel}
682 \fdsy@DeclareSymbol{\nleqq}{relations}{\mathrel}
683 \fdsy@DeclareSymbol{\ngeqq}{relations}{\mathrel}
684 \fdsy@DeclareSymbol{\nlesssim}{relations}{\mathrel}
```

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685 \fdsy@DeclareSymbol{\ngtrsim}{relations}{\mathrel}
686 \fdsy@DeclareSymbol{\nlessapprox}{relations}{\mathrel}
687 \fdsy@DeclareSymbol{\ngtrapprox}{relations}{\mathrel}
688 \fdsy@DeclareSymbol{\nlessgtr}{relations}{\mathrel}
689 \fdsy@DeclareSymbol{\ngtrless}{relations}{\mathrel}
690 \fdsy@DeclareSymbol{\nlesseqgtr}{relations}{\mathrel}
691 \fdsy@DeclareSymbol{\ngtreqless}{relations}{\mathrel}
692 \fdsy@DeclareSymbol{\nlesseqqgtr}{relations}{\mathrel}
693 \fdsy@DeclareSymbol{\ngtreqqless}{relations}{\mathrel}
694 \fdsy@DeclareSymbol{\nlesseqslantgtr}{relations}{\mathrel}
    \fdsy@DeclareAlias{\nlesg}{relations}{\mathrel}
    \fdsy@DeclareAlias{\nlesseqgtrslant}{relations}{\mathrel}
696
697 \fdsy@DeclareSymbol{\ngtreqslantless}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ngesl}{relations}{\mathrel}
698
699
    \fdsy@DeclareAlias{\ngtreqlessslant}{relations}{\mathrel}
700 \fdsy@DeclareSymbol{\nll}{relations}{\mathrel}
701 \fdsy@DeclareSymbol{\ngg}{relations}{\mathrel}
702 \fdsy@DeclareSymbol{\nlll}{relations}{\mathrel}
703 \fdsy@DeclareSymbol{\nggg}{relations}{\mathrel}
704 \fdsy@DeclareSymbol{\nlessclosed}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ntriangleleft}{relations}{\mathrel}
706 \fdsy@DeclareSymbol{\ngtrclosed}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ntriangleright}{relations}{\mathrel}
707
708 \fdsy@DeclareSymbol{\nleqclosed}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ntrianglelefteq}{relations}{\mathrel}
710 \fdsy@DeclareSymbol{\ngeqclosed}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ntrianglerighteq}{relations}{\mathrel}
712 \fdsy@DeclareSymbol{\nlesscc}{relations}{\mathrel}
     \fdsy@DeclareAlias{\nltcc}{relations}{\mathrel}
714 \fdsy@DeclareSymbol{\ngtrcc}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ngtcc}{relations}{\mathrel}
716 \fdsy@DeclareSymbol{\nleqslcc}{relations}{\mathrel}
    \fdsy@DeclareAlias{\nlescc}{relations}{\mathrel}
718 \fdsy@DeclareSymbol{\ngeqslcc}{relations}{\mathrel}
    \fdsy@DeclareAlias{\ngescc}{relations}{\mathrel}
720 \fdsy@DeclareSymbol{\nsqsubset}{relations}{\mathrel}
721 \fdsy@DeclareSymbol{\nsqsupset}{relations}{\mathrel}
722 \fdsy@DeclareSymbol{\nsqsubseteq}{relations}{\mathrel}
723 \fdsy@DeclareSymbol{\nsqsupseteq}{relations}{\mathrel}
724 \fdsy@DeclareSymbol{\nsqsubseteqq}{relations}{\mathrel}
725 \fdsy@DeclareSymbol{\nsqsupseteqq}{relations}{\mathrel}
726 \fdsy@DeclareSymbol{\nSqsubset}{relations}{\mathrel}
727 \fdsy@DeclareSymbol{\nSqsupset}{relations}{\mathrel}
728 \fdsy@DeclareSymbol{\nsubset}{relations}{\mathrel}
729 \fdsy@DeclareSymbol{\nsupset}{relations}{\mathrel}
```

```
730 \fdsy@DeclareSymbol{\nsubseteq}{relations}{\mathrel}
731 \fdsy@DeclareSymbol{\nsupseteq}{relations}{\mathrel}
732 \fdsy@DeclareSymbol{\nsubseteqq}{relations}{\mathrel}
733 \fdsy@DeclareSymbol{\nsupseteqq}{relations}{\mathrel}
\label{lem:continuous} $$734 \footnote{\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{\colore
735 \fdsy@DeclareSymbol{\nSupset}{relations}{\mathrel}
736 \fdsy@DeclareSymbol{\nprec}{relations}{\mathrel}
737 \fdsy@DeclareSymbol{\nsucc}{relations}{\mathrel}
738 \fdsy@DeclareSymbol{\npreceq}{relations}{\mathrel}
739 \fdsy@DeclareSymbol{\nsucceq}{relations}{\mathrel}
740 \fdsy@DeclareSymbol{\npreccurlyeq}{relations}{\mathrel}
741 \fdsy@DeclareSymbol{\nsucccurlyeq}{relations}{\mathrel}
742 \fdsy@DeclareSymbol{\npreceqq}{relations}{\mathrel}
743 \fdsy@DeclareSymbol{\nsucceqq}{relations}{\mathrel}
744 \fdsy@DeclareSymbol{\nprecsim}{relations}{\mathrel}
745 \fdsy@DeclareSymbol{\nsuccsim}{relations}{\mathrel}
746 \fdsy@DeclareSymbol{\nprecapprox}{relations}{\mathrel}
747 \fdsy@DeclareSymbol{\nsuccapprox}{relations}{\mathrel}
748 \fdsy@DeclareSymbol{\nlessdot}{relations}{\mathrel}
749 \fdsy@DeclareSymbol{\ngtrdot}{relations}{\mathrel}
750 \fdsy@DeclareSymbol{\nleqdot}{relations}{\mathrel}
751 \fdsy@DeclareSymbol{\ngeqdot}{relations}{\mathrel}
752 \fdsy@DeclareSymbol{\nleqslantdot}{relations}{\mathrel}
        \fdsy@DeclareAlias{\nlesdot}{relations}{\mathrel}
754 \fdsy@DeclareSymbol{\ngeqslantdot}{relations}{\mathrel}
        \fdsy@DeclareAlias{\ngesdot}{relations}{\mathrel}
756 \fdsy@DeclareSymbol{\neqslantless}{relations}{\mathrel}
757 \fdsy@DeclareSymbol{\neqslantgtr}{relations}{\mathrel}
758 \fdsy@DeclareSymbol{\ncurlyeqprec}{relations}{\mathrel}
759 \fdsy@DeclareSymbol{\ncurlyeqsucc}{relations}{\mathrel}
760 \fdsy@DeclareSymbol{\simneqq}{relations}{\mathrel}
761 \fdsy@DeclareSymbol{\backsimneqq}{relations}{\mathrel}
762 \fdsy@DeclareSymbol{\lneq}{relations}{\mathrel}
763 \fdsy@DeclareSymbol{\gneq}{relations}{\mathrel}
764 \fdsy@DeclareSymbol{\lneqq}{relations}{\mathrel}
        \fdsy@DeclareAlias{\lvertneqq}{relations}{\mathrel}
766 \fdsy@DeclareSymbol{\gneqq}{relations}{\mathrel}
        \fdsy@DeclareAlias{\gvertneqq}{relations}{\mathrel}
768 \fdsy@DeclareSymbol{\lnsim}{relations}{\mathrel}
769 \fdsy@DeclareSymbol{\gnsim}{relations}{\mathrel}
770 \fdsy@DeclareSymbol{\lnapprox}{relations}{\mathrel}
\label{lem:continuous} $$ 771 \footnote{\gnapprox}{relations}{\mathbb {}} $$
772 \fdsy@DeclareSymbol{\sqsubsetneq}{relations}{\mathrel}
773 \fdsy@DeclareSymbol{\sqsupsetneq}{relations}{\mathrel}
774 \fdsy@DeclareSymbol{\sqsubsetneqq}{relations}{\mathrel}
```

```
775 \fdsy@DeclareSymbol{\sqsupsetneqq}{relations}{\mathrel}
776 \fdsy@DeclareSymbol{\subsetneq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\varsubsetneq}{relations}{\mathrel}
778 \fdsy@DeclareSymbol{\supsetneq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\varsupsetneq}{relations}{\mathrel}
780 \fdsy@DeclareSymbol{\subsetneqq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\varsubsetneqq}{relations}{\mathrel}
782 \fdsy@DeclareSymbol{\supsetneqq}{relations}{\mathrel}
    \fdsy@DeclareAlias{\varsupsetneqq}{relations}{\mathrel}
784 \fdsy@DeclareSymbol{\precneq}{relations}{\mathrel}
785 \fdsy@DeclareSymbol{\succneq}{relations}{\mathrel}
786 \fdsy@DeclareSymbol{\precneqq}{relations}{\mathrel}
787 \fdsy@DeclareSymbol{\succneqq}{relations}{\mathrel}
788 \fdsy@DeclareSymbol{\precnsim}{relations}{\mathrel}
789 \fdsy@DeclareSymbol{\succnsim}{relations}{\mathrel}
790 \fdsy@DeclareSymbol{\precnapprox}{relations}{\mathrel}
791 \fdsy@DeclareSymbol{\succnapprox}{relations}{\mathrel}
FdSymbolC: arrows and turnstile symbols
792 \fdsy@setslot{0}
793 \fdsy@DeclareSymbol{\rightarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\to}{arrows}{\mathrel}
795 \fdsy@DeclareSymbol{\uparrow}{arrows}{\mathrel}
796 \fdsy@DeclareSymbol{\leftarrow}{arrows}{\mathrel}
797 \fdsy@DeclareAlias{\gets}{arrows}{\mathrel}
798 \fdsy@DeclareSymbol{\downarrow}{arrows}{\mathrel}
799 \fdsy@DeclareSymbol{\nearrow}{arrows}{\mathrel}
800 \fdsy@DeclareSymbol{\nwarrow}{arrows}{\mathrel}
801 \fdsy@DeclareSymbol{\swarrow}{arrows}{\mathrel}
802 \fdsy@DeclareSymbol{\searrow}{arrows}{\mathrel}
803 \fdsy@DeclareSymbol{\Rightarrow}{arrows}{\mathrel}
804 \fdsy@DeclareSymbol{\Uparrow}{arrows}{\mathrel}
805 \fdsy@DeclareSymbol{\Leftarrow}{arrows}{\mathrel}
806 \fdsy@DeclareSymbol{\Downarrow}{arrows}{\mathrel}
807 \fdsy@DeclareSymbol{\Nearrow}{arrows}{\mathrel}
808 \fdsy@DeclareSymbol{\Nwarrow}{arrows}{\mathrel}
809 \fdsy@DeclareSymbol{\Swarrow}{arrows}{\mathrel}
810 \fdsy@DeclareSymbol{\Searrow}{arrows}{\mathrel}
811 \fdsy@DeclareSymbol{\leftrightarrow}{arrows}{\mathrel}
812 \fdsy@DeclareSymbol{\updownarrow}{arrows}{\mathrel}
813 \fdsy@DeclareSymbol{\neswarrow}{arrows}{\mathrel}
814 \fdsy@DeclareSymbol{\nwsearrow}{arrows}{\mathrel}
815 \fdsy@DeclareSymbol{\Leftrightarrow}{arrows}{\mathrel}
816 \fdsy@DeclareSymbol{\Updownarrow}{arrows}{\mathrel}
817 \fdsy@DeclareSymbol{\Neswarrow}{arrows}{\mathrel}
818 \fdsy@DeclareSymbol{\Nwsearrow}{arrows}{\mathrel}
```

```
819 \fdsy@DeclareSymbol{\twoheadrightarrow}{arrows}{\mathrel}
820 \fdsy@DeclareSymbol{\twoheaduparrow}{arrows}{\mathrel}
821 \fdsy@DeclareSymbol{\twoheadleftarrow}{arrows}{\mathrel}
822 \fdsy@DeclareSymbol{\twoheaddownarrow}{arrows}{\mathrel}
823 \fdsy@DeclareSymbol{\twoheadnearrow}{arrows}{\mathrel}
824 \fdsy@DeclareSymbol{\twoheadnwarrow}{arrows}{\mathrel}
825 \fdsy@DeclareSymbol{\twoheadswarrow}{arrows}{\mathrel}
826 \fdsy@DeclareSymbol{\twoheadsearrow}{arrows}{\mathrel}
827 \fdsy@DeclareSymbol{\rightarrowtail}{arrows}{\mathrel}
828 \fdsy@DeclareSymbol{\uparrowtail}{arrows}{\mathrel}
829 \fdsy@DeclareSymbol{\leftarrowtail}{arrows}{\mathrel}
830 \fdsy@DeclareSymbol{\downarrowtail}{arrows}{\mathrel}
831 \fdsy@DeclareSymbol{\nearrowtail}{arrows}{\mathrel}
832 \fdsy@DeclareSymbol{\nwarrowtail}{arrows}{\mathrel}
833 \fdsy@DeclareSymbol{\swarrowtail}{arrows}{\mathrel}
834 \fdsy@DeclareSymbol{\searrowtail}{arrows}{\mathrel}
835 \fdsy@DeclareSymbol{\rightmapsto}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\mapsto}{arrows}{\mathrel}
837 \fdsy@DeclareSymbol{\upmapsto}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\mapsup}{arrows}{\mathrel}
{\tt 839 \fdsy@DeclareSymbol{\leftmapsto}\{arrows\}\{\mbox{\tt mathrel}\}} \\
     \fdsy@DeclareAlias{\mapsfrom}{arrows}{\mathrel}
841 \fdsy@DeclareSymbol{\downmapsto}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\mapsdown}{arrows}{\mathrel}
842
    fdsy@DeclareSymbol{\Rightmapsto}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\Mapsto}{arrows}{\mathrel}
844
845 \fdsy@DeclareSymbol{\Upmapsto}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\Mapsup}{arrows}{\mathrel}
846
847 \fdsy@DeclareSymbol{\Leftmapsto}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\Mapsfrom}{arrows}{\mathrel}
848
849
  \fdsy@DeclareSymbol{\Downmapsto}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\Mapsdown}{arrows}{\mathrel}
850
   fdsy@DeclareSymbol{\hookrightarrow}{arrows}{\mathrel}
851 \
    \fdsy@DeclareAlias{\lhookrightarrow}{arrows}{\mathrel}
853 \fdsy@DeclareSymbol{\hookuparrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\lhookuparrow}{arrows}{\mathrel}
855 \fdsy@DeclareSymbol{\varhookleftarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\lhookleftarrow}{arrows}{\mathrel}
856
   fdsy@DeclareSymbol{\varhookdownarrow}{arrows}{\mathrel}
857
858
    \fdsy@DeclareAlias{\lhookdownarrow}{arrows}{\mathrel}
859 \fdsy@DeclareSymbol{\varhooknearrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\lhooknearrow}{arrows}{\mathrel}
860
861 \fdsy@DeclareSymbol{\hooknwarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\hknwarrow}{arrows}{\mathrel}
862
863
    \fdsy@DeclareAlias{\lhooknwarrow}{arrows}{\mathrel}
```

```
864 \fdsy@DeclareSymbol{\varhookswarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\lhookswarrow}{arrows}{\mathrel}
866 \fdsy@DeclareSymbol{\hooksearrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\hksearrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\lhooksearrow}{arrows}{\mathrel}
868
869 \fdsy@DeclareSymbol{\varhookrightarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\rhookrightarrow}{arrows}{\mathrel}
870
   fdsy@DeclareSymbol{\varhookuparrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\rhookuparrow}{arrows}{\mathrel}
  \fdsy@DeclareSymbol{\hookleftarrow}{arrows}{\mathrel}
873
    \fdsy@DeclareAlias{\rhookleftarrow}{arrows}{\mathrel}
875 \fdsy@DeclareSymbol{\hookdownarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\rhookdownarrow}{arrows}{\mathrel}
877 \fdsy@DeclareSymbol{\hooknearrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\hknearrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\rhooknearrow}{arrows}{\mathrel}
879
880
  \fdsy@DeclareSymbol{\varhooknwarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\rhooknwarrow}{arrows}{\mathrel}
882 \fdsy@DeclareSymbol{\hookswarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\hkswarrow}{arrows}{\mathrel}
883
    \fdsy@DeclareAlias{\rhookswarrow}{arrows}{\mathrel}
884
885 \fdsy@DeclareSymbol{\varhooksearrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\rhooksearrow}{arrows}{\mathrel}
887 \fdsy@DeclareSymbol{\rightharpoonup}{arrows}{\mathrel}
888 \fdsy@DeclareSymbol{\upharpoonleft}{arrows}{\mathrel}
889 \fdsy@DeclareSymbol{\leftharpoondown}{arrows}{\mathrel}
890 \fdsy@DeclareSymbol{\downharpoonright}{arrows}{\mathrel}
891 \fdsy@DeclareSymbol{\neharpoonnw}{arrows}{\mathrel}
892 \fdsy@DeclareSymbol{\nwharpoonsw}{arrows}{\mathrel}
893 \fdsy@DeclareSymbol{\swharpoonse}{arrows}{\mathrel}
894 \fdsy@DeclareSymbol{\seharpoonne}{arrows}{\mathrel}
895 \fdsy@DeclareSymbol{\rightharpoondown}{arrows}{\mathrel}
896 \fdsy@DeclareSymbol{\upharpoonright}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\restriction}{arrows}{\mathrel}
898 \fdsy@DeclareSymbol{\leftharpoonup}{arrows}{\mathrel}
899 \fdsy@DeclareSymbol{\downharpoonleft}{arrows}{\mathrel}
900 \fdsy@DeclareSymbol{\neharpoonse}{arrows}{\mathrel}
901 \fdsy@DeclareSymbol{\nwharpoonne}{arrows}{\mathrel}
902 \fdsy@DeclareSymbol{\swharpoonnw}{arrows}{\mathrel}
903 \fdsy@DeclareSymbol{\seharpoonsw}{arrows}{\mathrel}
904 \fdsy@DeclareSymbol{\leftrightharpoonupdown}{arrows}{\mathrel}
905 \fdsy@DeclareSymbol{\updownharpoonleftright} {arrows} {\mbox{\mbox{$mathrel}$}} \\
906 \fdsy@DeclareSymbol{\neswharpoonnwse}{arrows}{\mathrel}
907 \fdsy@DeclareSymbol{\nwseharpoonnesw}{arrows}{\mathrel}
908 \fdsy@DeclareSymbol{\leftrightharpoondownup}{arrows}{\mathrel}
```

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909 \fdsy@DeclareSymbol{\updownharpoonrightleft}{arrows}{\mathrel}
910 \fdsy@DeclareSymbol{\neswharpoonsenw}{arrows}{\mathrel}
911 \fdsy@DeclareSymbol{\nwseharpoonswne}{arrows}{\mathrel}
912 \fdsy@DeclareSymbol{\rightleftharpoons}{arrows}{\mathrel}
{\tt 913 \fdsy@DeclareSymbol{\updownharpoons}{arrows}\{\mbox{\tt mathrel}\}} \\
    \fdsy@DeclareAlias{\updownharpoonsleftright}{arrows}{\mathrel}
915 \fdsy@DeclareSymbol{\neswharpoons}{arrows}{\mathrel}
916 \fdsy@DeclareSymbol{\senwharpoons}{arrows}{\mathrel}
917 \fdsy@DeclareSymbol{\leftrightharpoons}{arrows}{\mathrel}
918 \fdsy@DeclareSymbol{\downupharpoons}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\downupharpoonsleftright}{arrows}{\mathrel}
920 \footnote{Mathrel} \
921 \fdsy@DeclareSymbol{\nwseharpoons}{arrows}{\mathrel}
922 \fdsy@DeclareSymbol{\rightbkarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\dasharrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\dashrightarrow}{arrows}{\mathrel}
925 \fdsy@DeclareSymbol{\upbkarrow}{arrows}{\mathrel}
926 \fdsy@DeclareSymbol{\leftbkarrow}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\dashleftarrow}{arrows}{\mathrel}
928 \fdsy@DeclareSymbol{\downbkarrow}{arrows}{\mathrel}
929 \fdsy@DeclareSymbol{\nebkarrow}{arrows}{\mathrel}
930 \fdsy@DeclareSymbol{\nwbkarrow}{arrows}{\mathrel}
931 \fdsy@DeclareSymbol{\swbkarrow}{arrows}{\mathrel}
932 \fdsy@DeclareSymbol{\sebkarrow}{arrows}{\mathrel}
933 fdsy@DeclareSymbol{\rightspoon}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\multimap}{arrows}{\mathrel}
935 \fdsy@DeclareSymbol{\upspoon}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\cirmid}{arrows}{\mathrel}
937 \fdsy@DeclareSymbol{\leftspoon}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\multimapinv}{arrows}{\mathrel}
939 \fdsy@DeclareSymbol{\downspoon}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\midcir}{arrows}{\mathrel}
941 \fdsy@DeclareSymbol{\rightblackspoon}{arrows}{\mathrel}
942 \fdsy@DeclareSymbol{\upblackspoon}{arrows}{\mathrel}
943 \fdsy@DeclareSymbol{\leftblackspoon}{arrows}{\mathrel}
944 \fdsy@DeclareSymbol{\downblackspoon}{arrows}{\mathrel}
945 \fdsy@DeclareSymbol{\leftrightspoon}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\dualmap}{arrows}{\mathrel}
947 \fdsy@DeclareSymbol{\leftrightblackspoon}{arrows}{\mathrel}
948 \fdsy@DeclareSymbol{\blackwhitespoon}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\imageof}{arrows}{\mathrel}
950 \fdsy@DeclareSymbol{\whiteblackspoon}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\origof}{arrows}{\mathrel}
952 \fdsy@DeclareSymbol{\rightpitchfork}{arrows}{\mathrel}
953 \fdsy@DeclareSymbol{\uppitchfork}{arrows}{\mathrel}
```

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\fdsy@DeclareAlias{\pitchfork}{arrows}{\mathrel}
955 \fdsy@DeclareSymbol{\leftpitchfork}{arrows}{\mathrel}
956 \fdsy@DeclareSymbol{\downpitchfork}{arrows}{\mathrel}
957 \fdsy@DeclareSymbol{\rightrightarrows}{arrows}{\mathrel}
958 \footnote{\verb| upuparrows|{arrows}{arrows}{mathrel}|} \\
959 \fdsy@DeclareSymbol{\leftleftarrows}{arrows}{\mathrel}
960 \fdsy@DeclareSymbol{\downdownarrows}{arrows}{\mathrel}
961 \fdsy@DeclareSymbol{\nenearrows}{arrows}{\mathrel}
962 \footnote{\mbol{\nwnwarrows}{\arrows}{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mbol{\mb}}\mbol{\mbol{\mbol{\mbol{\mbol}\mbol{\mbol{\mbol}\mbol}\mbol{\mbol}\mbol{\mbol}\mbol{\mbol}\mbol{\mbol}\mbol{\mbol}\mbol}\mbol{\mbol}\mbol{\mbol}\mbol}\mbol}\mbol{\mbol}\mbol{\mbol}\mb}\mbol{\mbol}\mbol}\mbol{\mbol}\mbol}\mbol{\mbol}\mbol}\mbol}\
963 \fdsy@DeclareSymbol{\swswarrows}{arrows}{\mathrel}
964 \fdsy@DeclareSymbol{\sesearrows}{arrows}{\mathrel}
966 \fdsy@DeclareSymbol{\updownarrows}{arrows}{\mathrel}
967 \fdsy@DeclareSymbol{\neswarrows}{arrows}{\mathrel}
968 \fdsy@DeclareSymbol{\nwsearrows}{arrows}{\mathrel}
969 \fdsy@DeclareSymbol{\leftrightarrows}{arrows}{\mathrel}
970 \fdsy@DeclareSymbol{\downuparrows}{arrows}{\mathrel}
971 \fdsy@DeclareSymbol{\swnearrows}{arrows}{\mathrel}
972 \fdsy@DeclareSymbol{\senwarrows}{arrows}{\mathrel}
973 \fdsy@DeclareSymbol{\rightwavearrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\leadsto}{arrows}{\mathrel}
974
975
        \fdsy@DeclareAlias{\rightsquigarrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\rightcurvedarrow}{arrows}{\mathrel}
976
977
        \fdsy@DeclareAlias{\rightlsquigarrow}{arrows}{\mathrel}
       fdsy@DeclareSymbol{\varupwavearrow}{arrows}{\mathrel}
978
        \fdsy@DeclareAlias{\uplsquigarrow}{arrows}{\mathrel}
979
980 \fdsy@DeclareSymbol{\varleftwavearrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\leftlsquigarrow}{arrows}{\mathrel}
981
982 \fdsy@DeclareSymbol{\downwavearrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\downlsquigarrow}{arrows}{\mathrel}
983
984
      .fdsy@DeclareSymbol{\varrightwavearrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\rightrsquigarrow}{arrows}{\mathrel}
985
       fdsy@DeclareSymbol{\upwavearrow}{arrows}{\mathrel}
986
        \fdsy@DeclareAlias{\uprsquigarrow}{arrows}{\mathrel}
987
988 \fdsy@DeclareSymbol{\leftwavearrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\leftsquigarrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\leftcurvedarrow}{arrows}{\mathrel}
990
        \fdsy@DeclareAlias{\leftrsquigarrow}{arrows}{\mathrel}
991
       fdsy@DeclareSymbol{\vardownwavearrow}{arrows}{\mathrel}
992
993
        \fdsy@DeclareAlias{\downrsquigarrow}{arrows}{\mathrel}
994 \fdsy@DeclareSymbol{\leftrightwavearrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\leftrightsquigarrow}{arrows}{\mathrel}
995
      fdsy@DeclareSymbol{\updownwavearrow}{arrows}{\mathrel}
        \fdsy@DeclareAlias{\updownsquigarrow}{arrows}{\mathrel}
998 \fdsy@DeclareSymbol{\varleftrightwavearrow}{arrows}{\mathrel}
```

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\fdsy@DeclareAlias{\rightleftsquigarrow}{arrows}{\mathrel}
999
1000 \fdsy@DeclareSymbol{\varupdownwavearrow}{arrows}{\mathrel}
     fdsy@DeclareSymbol{\cwoverarcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\curvearrowright}{arrows}{\mathrel}
1003
     \fdsy@DeclareAlias{\rightlcurvearrow}{arrows}{\mathrel}
1004
    fdsy@DeclareSymbol{\cwleftarcarrow}{arrows}{\mathrel}
1005
     \fdsy@DeclareAlias{\uplcurvearrow}{arrows}{\mathrel}
1006
{\tt 1007 \fdsy@DeclareSymbol{\cwunderarcarrow}{arrows}{\mbox{mathrel}}}
     \fdsy@DeclareAlias{\leftlcurvearrow}{arrows}{\mathrel}
1008
    fdsy@DeclareSymbol{\cwrightarcarrow}{arrows}{\mathrel}
1010
     \fdsy@DeclareAlias{\downlcurvearrow}{arrows}{\mathrel}
1011 \fdsy@DeclareSymbol{\cwnwarcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\rightupcurvedarrow}{arrows}{\mathrel}
1012
1013
     \fdsy@DeclareAlias{\nelcurvearrow}{arrows}{\mathrel}
{\tt 1014 \fdsy@DeclareSymbol{\cwswarcarrow}{arrows}{\mbox{\cmathrel}}}
1015
     \fdsy@DeclareAlias{\upleftcurvedarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\nwlcurvearrow}{arrows}{\mathrel}
{\tt 1017 \fdsy@DeclareSymbol{\cwsearcarrow}{arrows}{\mbox{\cwsearcarrow}}} \\
     \fdsy@DeclareAlias{\leftdowncurvedarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\swlcurvearrow}{arrows}{\mathrel}
1019
1020 \fdsy@DeclareSymbol{\cwnearcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\downrightcurvedarrow}{arrows}{\mathrel}
1021
     \fdsy@DeclareAlias{\selcurvearrow}{arrows}{\mathrel}
1022
1023
    fdsy@DeclareSymbol{\acwunderarcarrow}{arrows}{\mathrel}
     1024
1025 \fdsy@DeclareSymbol{\acwrightarcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\uprcurvearrow}{arrows}{\mathrel}
1026
1027 \fdsy@DeclareSymbol{\acwoverarcarrow}{arrows}{\mathrel}
1028
     \fdsy@DeclareAlias{\curvearrowleft}{arrows}{\mathrel}
1029
     \fdsy@DeclareAlias{\leftrcurvearrow}{arrows}{\mathrel}
    fdsy@DeclareSymbol{\acwleftarcarrow}{arrows}{\mathrel}
1030
     \fdsy@DeclareAlias{\downrcurvearrow}{arrows}{\mathrel}
1031
1032 \fdsy@DeclareSymbol{\acwsearcarrow}{arrows}{\mathrel}
1033
     \fdsy@DeclareAlias{\uprightcurvearrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\nercurvearrow}{arrows}{\mathrel}
1035 \fdsy@DeclareSymbol{\acwnearcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\leftupcurvedarrow}{arrows}{\mathrel}
1036
1037
     \fdsy@DeclareAlias{\nwrcurvearrow}{arrows}{\mathrel}
1038
    fdsy@DeclareSymbol{\acwnwarcarrow}{arrows}{\mathrel}
1039
     \fdsy@DeclareAlias{\downleftcurvedarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\swrcurvearrow}{arrows}{\mathrel}
1040
    fdsy@DeclareSymbol{\acwswarcarrow}{arrows}{\mathrel}
1042
     \fdsy@DeclareAlias{\rightdowncurvedarrow}{arrows}{\mathrel}
1043
     \fdsy@DeclareAlias{\sercurvearrow}{arrows}{\mathrel}
```

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1044 \fdsy@DeclareSymbol{\bdoverarcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\leftrightcurvearrow}{arrows}{\mathrel}
1046 \fdsy@DeclareSymbol{\bdleftarcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\updowncurvearrow}{arrows}{\mathrel}
{\tt 1048 \fdsy@DeclareSymbol{\bdunderarcarrow}{arrows}{\tt \mathrel}}
     \fdsy@DeclareAlias{\rightleftcurvearrow}{arrows}{\mathrel}
1050 \fdsy@DeclareSymbol{\bdrightarcarrow}{arrows}{\mathrel}
      \fdsy@DeclareAlias{\downupcurvearrow}{arrows}{\mathrel}
1052 \fdsy@DeclareSymbol{\bdnwarcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\neswcurvearrow}{arrows}{\mathrel}
1053
1054 \fdsy@DeclareSymbol{\bdswarcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\nwsecurvearrow}{arrows}{\mathrel}
1055
1056 \fdsy@DeclareSymbol{\bdsearcarrow}{arrows}{\mathrel}
      \fdsy@DeclareAlias{\swnecurvearrow}{arrows}{\mathrel}
1057
1058 \fdsy@DeclareSymbol{\bdnearcarrow}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\senwcurvearrow}{arrows}{\mathrel}
1060 \fdsy@DeclareSymbol{\leftfootline}{arrows}{\mathrel}
1061 \fdsy@DeclareSymbol{\rightfootline}{arrows}{\mathrel}
1062 \fdsy@DeclareSymbol{\acwcirclearrowup}{arrows}{\mathrel}
1063 \fdsy@DeclareSymbol{\acwcirclearrowleft}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\circlearrowleft}{arrows}{\mathrel}
1065
     \fdsy@DeclareAlias{\acwopencirclearrow}{arrows}{\mathrel}
1066 \fdsy@DeclareSymbol{\acwcirclearrowdown}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\acwgapcirclearrow}{arrows}{\mathrel}
1068 \fdsy@DeclareSymbol{\acwcirclearrowright}{arrows}{\mathrel}
1069 \fdsy@DeclareSymbol{\cwcirclearrowdown}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\cwgapcirclearrow}{arrows}{\mathrel}
1071 \fdsy@DeclareSymbol{\cwcirclearrowright}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\circlearrowright}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\cwopencirclearrow}{arrows}{\mathrel}
1074 \fdsy@DeclareSymbol{\cwcirclearrowup}{arrows}{\mathrel}
1075 \fdsy@DeclareSymbol{\cwcirclearrowleft}{arrows}{\mathrel}
1076 \fdsy@DeclareSymbol{\Rrightarrow}{arrows}{\mathrel}
1077 \fdsy@DeclareSymbol{\Uuparrow}{arrows}{\mathrel}
1078 \fdsy@DeclareSymbol{\Lleftarrow}{arrows}{\mathrel}
1079 \fdsy@DeclareSymbol{\Ddownarrow}{arrows}{\mathrel}
1080 \fdsy@DeclareSymbol{\longrightarrow}{arrows}{\mathrel}
1081 \fdsy@DeclareSymbol{\longleftarrow}{arrows}{\mathrel}
1082 \fdsy@DeclareSymbol{\Longrightarrow}{arrows}{\mathrel}
1083 \fdsy@DeclareSymbol{\Longleftarrow}{arrows}{\mathrel}
1084 \fdsy@DeclareSymbol{\longleftrightarrow}{arrows}{\mathrel}
1085 \fdsy@DeclareSymbol{\Longleftrightarrow}{arrows}{\mathrel}
1086 \fdsy@DeclareSymbol{\longmapsto}{arrows}{\mathrel}
1087 \fdsy@DeclareSymbol{\longmapsfrom}{arrows}{\mathrel}
1088 \fdsy@DeclareSymbol{\Longmapsto}{arrows}{\mathrel}
```

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1089 \fdsy@DeclareSymbol{\Longmapsfrom}{arrows}{\mathrel}
\label{longright} 1090 \fdsy@DeclareSymbol{\longrightwavearrow} {arrows} {\mbox{\mbox{$mathrel$}}} \\
           \fdsy@DeclareAlias{\longleadsto}{arrows}{\mathrel}
           \fdsy@DeclareAlias{\longrightsquigarrow}{arrows}{\mathrel}
\label{longleftwavearrow} $$1093 \footnote{\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{\co
          \fdsy@DeclareAlias{\longleftsquigarrow}{arrows}{\mathrel}
1095 \fdsy@DeclareSymbol{\longleftfootline}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\vlongdash}{arrows}{\mathrel}
1097 \fdsy@DeclareSymbol{\longrightfootline}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\longdashv}{arrows}{\mathrel}
1099 \fdsy@DeclareSymbol{\Lsh}{arrows}{\mathrel}
1100 \fdsy@DeclareSymbol{\Rsh}{arrows}{\mathrel}
1101 \fdsy@DeclareSymbol{\Ldsh}{arrows}{\mathrel}
1102 \fdsy@DeclareSymbol{\Rdsh}{arrows}{\mathrel}
1103 \fdsy@DeclareSymbol{\looparrowright}{arrows}{\mathrel}
1104\fdsy@DeclareSymbol{\looparrowleft}{arrows}{\mathrel}
1105 \fdsy@setslot{224}
1106 \fdsy@DeclareSymbol{\rightvdash}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\vdash}{arrows}{\mathrel}
1108 \fdsy@DeclareSymbol{\upvdash}{arrows}{\mathrel}
           \fdsy@DeclareAlias{\perp}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\bot}{arrows}{\mathord}
1111 \fdsy@DeclareSymbol{\leftvdash}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\dashv}{arrows}{\mathrel}
1113 \fdsy@DeclareSymbol{\downvdash}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\top}{arrows}{\mathord}
1115 \fdsy@DeclareSymbol{\rightassert}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\assert}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\shortrighttack}{arrows}{\mathrel}
1118 \fdsy@DeclareSymbol{\upassert}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\shortuptack}{arrows}{\mathrel}
1120 \fdsy@DeclareSymbol{\leftassert}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\shortlefttack}{arrows}{\mathrel}
1122 \fdsy@DeclareSymbol{\downassert}{arrows}{\mathrel}
           \fdsy@DeclareAlias{\shortdowntack}{arrows}{\mathrel}
1124 \fdsy@DeclareSymbol{\rightvDash}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\vDash}{arrows}{\mathrel}
1126 \fdsy@DeclareSymbol{\upvDash}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\Vbar}{arrows}{\mathrel}
1128 \fdsy@DeclareSymbol{\leftvDash}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\Dashv}{arrows}{\mathrel}
1130 \fdsy@DeclareSymbol{\downvDash}{arrows}{\mathrel}
           \fdsy@DeclareAlias{\barV}{arrows}{\mathrel}
1132 \fdsy@DeclareSymbol{\rightmodels}{arrows}{\mathrel}
          \fdsy@DeclareAlias{\models}{arrows}{\mathrel}
```

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1134 \fdsy@DeclareSymbol{\upmodels}{arrows}{\mathrel}
1135 \fdsy@DeclareSymbol{\leftmodels}{arrows}{\mathrel}
1136 \fdsy@DeclareSymbol{\downmodels}{arrows}{\mathrel}
1137 \fdsy@DeclareSymbol{\rightVdash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\Vdash}{arrows}{\mathrel}
1139 \fdsy@DeclareSymbol{\upVdash}{arrows}{\mathrel}
1140 \fdsy@DeclareSymbol{\leftVdash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\dashV}{arrows}{\mathrel}
1142 \fdsy@DeclareSymbol{\downVdash}{arrows}{\mathrel}
1143 \fdsy@DeclareSymbol{\rightAssert}{arrows}{\mathrel}
1144 \fdsy@DeclareAlias{\Assert}{arrows}{\mathrel}
1145 \fdsy@DeclareSymbol{\upAssert}{arrows}{\mathrel}
    \fdsy@DeclareAlias{\vBar}{arrows}{\mathrel}
1147 \fdsy@DeclareSymbol{\leftAssert}{arrows}{\mathrel}
1148 \fdsy@DeclareSymbol{\downAssert}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\Barv}{arrows}{\mathrel}
1150 \fdsy@DeclareSymbol{\rightVDash}{arrows}{\mathrel}
     \fdsy@DeclareAlias{\VDash}{arrows}{\mathrel}
1152 \fdsy@DeclareSymbol{\upVDash}{arrows}{\mathrel}
1153 \fdsy@DeclareSymbol{\leftVDash}{arrows}{\mathrel}
1154 \fdsy@DeclareAlias{\DashV}{arrows}{\mathrel}
1155 \fdsy@DeclareSymbol{\downVDash}{arrows}{\mathrel}
1156 \fdsy@DeclareSymbol{\Vvdash}{arrows}{\mathrel}
1157 \fdsy@DeclareSymbol{\dashVv}{arrows}{\mathrel}
1158 \fdsy@DeclareSymbol{\vDdash}{arrows}{\mathrel}
1159 \fdsy@DeclareSymbol{\Ddashv}{arrows}{\mathrel}
1161 \DeclareRobustCommand{\relbar}{\mathrel{\smash-}}
1162 \DeclareRobustCommand{\Relbar}{\mathrel=}
1163 \let\joinrel\undefined
1164 \DeclareRobustCommand\joinrel{\mathrel{\mkern-4mu}}
 FdSymbolD: stroked arrows
1165 \fdsy@setslot{0}
1166 \fdsy@DeclareSymbol{\nrightarrow}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nto}{narrows}{\mathrel}
1168 \fdsy@DeclareSymbol{\nuparrow}{\narrows}{\mathrel}
1169 \fdsy@DeclareSymbol{\nleftarrow}{narrows}{\mathrel}
1170 \fdsy@DeclareAlias{\ngets}{\narrows}{\mathrel}
1171 \fdsy@DeclareSymbol{\ndownarrow}{\narrows}{\mathrel}
1172 \fdsy@DeclareSymbol{\nnearrow}{\narrows}{\mathrel}
1173 \fdsy@DeclareSymbol{\nnwarrow}{\narrows}{\mathrel}
1174 \fdsy@DeclareSymbol{\nswarrow}{\narrows}{\mathrel}
1175 \fdsy@DeclareSymbol{\nsearrow}{narrows}{\mathrel}
1176 \fdsy@DeclareSymbol{\nRightarrow}{narrows}{\mathrel}
1177 \fdsy@DeclareSymbol{\nUparrow}{narrows}{\mathrel}
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1178 \fdsy@DeclareSymbol{\nLeftarrow}{narrows}{\mathrel}
1179 \fdsy@DeclareSymbol{\nDownarrow}{narrows}{\mathrel}
1180 \fdsy@DeclareSymbol{\nNearrow}{narrows}{\mathrel}
1181 \fdsy@DeclareSymbol{\nNwarrow}{narrows}{\mathrel}
1182 \fdsy@DeclareSymbol{\nSwarrow}{narrows}{\mathrel}
1183 \fdsy@DeclareSymbol{\nSearrow}{narrows}{\mathrel}
1184 \fdsy@DeclareSymbol{\nleftrightarrow}{narrows}{\mathrel}
1185 \fdsy@DeclareSymbol{\nupdownarrow}{\narrows}{\mathrel}
1186 \fdsy@DeclareSymbol{\nneswarrow}{\narrows}{\mathrel}
1187 \fdsy@DeclareSymbol{\nnwsearrow}{narrows}{\mathrel}
1188 \fdsy@DeclareSymbol{\nLeftrightarrow}{narrows}{\mathrel}
{\tt 1189 \ fdsy@DeclareSymbol \{\ nUpdownarrow\} \{ narrows \} \{ \ mathrel \} }
1190 \fdsy@DeclareSymbol{\nNeswarrow}{narrows}{\mathrel}
1191 \fdsy@DeclareSymbol{\nNwsearrow}{narrows}{\mathrel}
1192 \fdsy@DeclareSymbol{\ntwoheadrightarrow}{narrows}{\mathrel}
1193 \fdsy@DeclareSymbol{\ntwoheaduparrow}{narrows}{\mathrel}
1194 \fdsy@DeclareSymbol{\ntwoheadleftarrow}{narrows}{\mathrel}
1195 \fdsy@DeclareSymbol{\ntwoheaddownarrow}{narrows}{\mathrel}
1196 \fdsy@DeclareSymbol{\ntwoheadnearrow}{narrows}{\mathrel}
1197 \fdsy@DeclareSymbol{\ntwoheadnwarrow}{narrows}{\mathrel}
1198 \fdsy@DeclareSymbol{\ntwoheadswarrow}{narrows}{\mathrel}
1199 \fdsy@DeclareSymbol{\ntwoheadsearrow}{narrows}{\mathrel}
1200 \fdsy@DeclareSymbol{\nrightarrowtail}{narrows}{\mathrel}
1201 \fdsy@DeclareSymbol{\nuparrowtail}{narrows}{\mathrel}
1202 \fdsy@DeclareSymbol{\nleftarrowtail}{narrows}{\mathrel}
1203 \fdsy@DeclareSymbol{\ndownarrowtail}{narrows}{\mathrel}
1204 \fdsy@DeclareSymbol{\nnearrowtail}{narrows}{\mathrel}
1205 \fdsy@DeclareSymbol{\nnwarrowtail}{narrows}{\mathrel}
1206 \fdsy@DeclareSymbol{\nswarrowtail}{narrows}{\mathrel}
1207 \fdsy@DeclareSymbol{\nsearrowtail}{narrows}{\mathrel}
1208 \fdsy@DeclareSymbol{\nrightmapsto}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nmapsto}{\narrows}{\mathrel}
1210 \fdsy@DeclareSymbol{\nupmapsto}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nmapsup}{narrows}{\mathrel}
1212 \fdsy@DeclareSymbol{\nleftmapsto}{\narrows}{\mathrel}
      \fdsy@DeclareAlias{\nmapsfrom}{narrows}{\mathrel}
1214 \fdsy@DeclareSymbol{\ndownmapsto}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nmapsdown}{narrows}{\mathrel}
1216 \fdsy@DeclareSymbol{\nRightmapsto}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nMapsto}{\narrows}{\mathrel}
1218 \fdsy@DeclareSymbol{\nUpmapsto}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nMapsup}{narrows}{\mathrel}
1220 \fdsy@DeclareSymbol{\nLeftmapsto}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nMapsfrom}{narrows}{\mathrel}
1222 \fdsy@DeclareSymbol{\nDownmapsto}{narrows}{\mathrel}
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\fdsy@DeclareAlias{\nMapsdown}{narrows}{\mathrel}
1225 \fdsy@DeclareSymbol{\nhookuparrow}{\narrows}{\mathrel}
1226 \fdsy@DeclareSymbol{\nvarhookleftarrow}{narrows}{\mathrel}
1227 \fdsy@DeclareSymbol{\nvarhookdownarrow}{narrows}{\mathrel}
1228 \fdsy@DeclareSymbol{\nvarhooknearrow}{narrows}{\mathrel}
1229 \fdsy@DeclareSymbol{\nhooknwarrow}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nhknwarrow}{narrows}{\mathrel}
1231 \fdsy@DeclareSymbol{\nvarhookswarrow}{narrows}{\mathrel}
1232 \fdsy@DeclareSymbol{\nhooksearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nhksearrow}{narrows}{\mathrel}
1234 \fdsy@DeclareSymbol{\nvarhookrightarrow}{narrows}{\mathrel}
1235 \fdsy@DeclareSymbol{\nvarhookuparrow}{narrows}{\mathrel}
1236 \fdsy@DeclareSymbol{\nhookleftarrow}{narrows}{\mathrel}
1237 \fdsy@DeclareSymbol{\nhookdownarrow}{\narrows}{\mathrel}
1238 \fdsy@DeclareSymbol{\nhooknearrow}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nhknearrow}{narrows}{\mathrel}
1240 \fdsy@DeclareSymbol{\nvarhooknwarrow}{narrows}{\mathrel}
1241 \fdsy@DeclareSymbol{\nhookswarrow}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nhkswarrow}{narrows}{\mathrel}
1244 \fdsy@DeclareSymbol{\nrightharpoonup}{narrows}{\mathrel}
1245 \fdsy@DeclareSymbol{\nupharpoonleft}{narrows}{\mathrel}
1246 \fdsy@DeclareSymbol{\nleftharpoondown}{narrows}{\mathrel}
1247 \fdsy@DeclareSymbol{\ndownharpoonright}{narrows}{\mathrel}
1248 \fdsy@DeclareSymbol{\nneharpoonnw}{narrows}{\mathrel}
1249 \fdsy@DeclareSymbol{\nnwharpoonsw}{\narrows}{\mathrel}
1250 \fdsy@DeclareSymbol{\nswharpoonse}{narrows}{\mathrel}
1251 \fdsy@DeclareSymbol{\nseharpoonne}{narrows}{\mathrel}
1252 \fdsy@DeclareSymbol{\nrightharpoondown}{narrows}{\mathrel}
1253 \fdsy@DeclareSymbol{\nupharpoonright}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nrestriction}{narrows}{\mathrel}
1255 \fdsy@DeclareSymbol{\nleftharpoonup}{narrows}{\mathrel}
1256 \fdsy@DeclareSymbol{\ndownharpoonleft}{narrows}{\mathrel}
1257 \fdsy@DeclareSymbol{\nneharpoonse}{\narrows}{\mathrel}
1258 \fdsy@DeclareSymbol{\nnwharpoonne}{narrows}{\mathrel}
1259 \fdsy@DeclareSymbol{\nswharpoonnw}{narrows}{\mathrel}
1260 \fdsy@DeclareSymbol{\nseharpoonsw}{narrows}{\mathrel}
1261 \fdsy@DeclareSymbol{\nleftrightharpoonupdown}{narrows}{\mathrel}
1262 \fdsy@DeclareSymbol{\nupdownharpoonleftright}{narrows}{\mathrel}
1263 \fdsy@DeclareSymbol{\nneswharpoonnwse}{narrows}{\mathrel}
1265 \fdsy@DeclareSymbol{\nleftrightharpoondownup}{narrows}{\mathrel}
1266 \fdsy@DeclareSymbol{\nupdownharpoonrightleft}{narrows}{\mathrel}
1267 \fdsy@DeclareSymbol{\nneswharpoonsenw}{narrows}{\mathrel}
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1268 \fdsy@DeclareSymbol{\nnwseharpoonswne}{narrows}{\mathrel}
{\tt 1269 \ fdsy@DeclareSymbol{\nrightleftharpoons}\{narrows\}\{\mbox{\tt mathrel}\}} \\
1270 \fdsy@DeclareSymbol{\nupdownharpoons}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\nupdownharpoonsleftright}{narrows}{\mathrel}
1273 \fdsy@DeclareSymbol{\nsenwharpoons}{narrows}{\mathrel}
1274 \fdsy@DeclareSymbol{\nleftrightharpoons}{narrows}{\mathrel}
1275 \fdsy@DeclareSymbol{\ndownupharpoons}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\ndownupharpoonsleftright}{narrows}{\mathrel}
1277 \fdsy@DeclareSymbol{\nswneharpoons}{narrows}{\mathrel}
1278 \fdsy@DeclareSymbol{\nnwseharpoons}{narrows}{\mathrel}
1279 \fdsy@DeclareSymbol{\nrightbkarrow}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\ndasharrow}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\ndashrightarrow}{narrows}{\mathrel}
1282 \fdsy@DeclareSymbol{\nupbkarrow}{\narrows}{\mathrel}
1283 \fdsy@DeclareSymbol{\nleftbkarrow}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\ndashleftarrow}{narrows}{\mathrel}
1285 \fdsy@DeclareSymbol{\ndownbkarrow}{\narrows}{\mathrel}
1286 \fdsy@DeclareSymbol{\nnebkarrow}{\narrows}{\mathrel}
1287 \fdsy@DeclareSymbol{\nnwbkarrow}{narrows}{\mathrel}
1288 \fdsy@DeclareSymbol{\nswbkarrow}{narrows}{\mathrel}
1289 \fdsy@DeclareSymbol{\nsebkarrow}{narrows}{\mathrel}
1290 \fdsy@DeclareSymbol{\nrightspoon}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nmultimap}{narrows}{\mathrel}
\label{localize} $$1292 \footnote{\conjumbol{\narrows}{\mbol{\narrows}{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\conjumbol{\con
          \fdsy@DeclareAlias{\ncirmid}{narrows}{\mathrel}
1294 \fdsy@DeclareSymbol{\nleftspoon}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nmultimapinv}{narrows}{\mathrel}
1296 \fdsy@DeclareSymbol{\ndownspoon}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nmidcir}{narrows}{\mathrel}
1298 \fdsy@DeclareSymbol{\nrightblackspoon}{narrows}{\mathrel}
1299 \fdsy@DeclareSymbol{\nupblackspoon}{narrows}{\mathrel}
1300 \fdsy@DeclareSymbol{\nleftblackspoon}{narrows}{\mathrel}
1301 \fdsy@DeclareSymbol{\ndownblackspoon}{narrows}{\mathrel}
1302 \fdsy@DeclareSymbol{\nleftrightspoon}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\ndualmap}{narrows}{\mathrel}
1304 \fdsy@DeclareSymbol{\nleftrightblackspoon}{narrows}{\mathrel}
1305 \fdsy@DeclareSymbol{\nblackwhitespoon}{narrows}{\mathrel}
          \fdsy@DeclareAlias{\nimageof}{narrows}{\mathrel}
1307 \fdsy@DeclareSymbol{\nwhiteblackspoon}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\norigof}{narrows}{\mathrel}
1309 \fdsy@DeclareSymbol{\nrightpitchfork}{narrows}{\mathrel}
1310 \fdsy@DeclareSymbol{\nuppitchfork}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\npitchfork}{narrows}{\mathrel}
1312 \fdsy@DeclareSymbol{\nleftpitchfork}{narrows}{\mathrel}
```

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1313 \fdsy@DeclareSymbol{\ndownpitchfork}{narrows}{\mathrel}
1314 \fdsy@DeclareSymbol{\nrightrightarrows}{narrows}{\mathrel}
1315 \fdsy@DeclareSymbol{\nupuparrows}{narrows}{\mathrel}
1316 \fdsy@DeclareSymbol{\nleftleftarrows}{\narrows}{\mathrel}
1317 \fdsy@DeclareSymbol{\ndowndownarrows}{\narrows}{\mathrel}
1318 \fdsy@DeclareSymbol{\nnenearrows}{\narrows}{\mathrel}
1319 \fdsy@DeclareSymbol{\nnwnwarrows}{\narrows}{\mathrel}
1320 \fdsy@DeclareSymbol{\nswswarrows}{\narrows}{\mathrel}
1321 \fdsy@DeclareSymbol{\nsesearrows}{\narrows}{\mathrel}
1322 \fdsy@DeclareSymbol{\nrightleftarrows}{narrows}{\mathrel}
1323 \fdsy@DeclareSymbol{\nupdownarrows}{\narrows}{\mathrel}
1324 \fdsy@DeclareSymbol{\nneswarrows}{\narrows}{\mathrel}
1325 \fdsy@DeclareSymbol{\nnwsearrows}{\narrows}{\mathrel}
1326 \fdsy@DeclareSymbol{\nleftrightarrows}{\narrows}{\mathrel}
1327 \fdsy@DeclareSymbol{\ndownuparrows}{\narrows}{\mathrel}
{\tt 1328 \fdsy@DeclareSymbol{\nswnearrows}{narrows}{\tt \{narrows\}{\tt \{}}} \\
1329 \fdsy@DeclareSymbol{\nsenwarrows}{\narrows}{\mathrel}
1330 \fdsy@DeclareSymbol{\nrightwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nleadsto}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nrightsquigarrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nrightcurvedarrow}{arrows}{\mathrel}
1333
     \fdsy@DeclareAlias{\nrightlsquigarrow}{narrows}{\mathrel}
1335 \fdsy@DeclareSymbol{\nvarupwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nuplsquigarrow}{narrows}{\mathrel}
1337 \fdsy@DeclareSymbol{\nvarleftwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nleftlsquigarrow}{narrows}{\mathrel}
1339 \fdsy@DeclareSymbol{\ndownwavearrow}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\ndownlsquigarrow}{narrows}{\mathrel}
1340
1341 \fdsy@DeclareSymbol{\nvarrightwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nrightrsquigarrow}{narrows}{\mathrel}
1343 \fdsy@DeclareSymbol{\nupwavearrow}{\narrows}{\mathrel}
     \fdsy@DeclareAlias{\nuprsquigarrow}{\narrows}{\mathrel}
1345 \fdsy@DeclareSymbol{\nleftwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nleftsquigarrow}{narrows}{\mathrel}
     1347
     \fdsy@DeclareAlias{\nleftrsquigarrow}{narrows}{\mathrel}
1349 \fdsy@DeclareSymbol{\nvardownwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ndownrsquigarrow}{narrows}{\mathrel}
    fdsy@DeclareSymbol{\nleftrightwavearrow}{narrows}{\mathrel}
1351 \
1352
     \fdsy@DeclareAlias{\nleftrightsquigarrow}{narrows}{\mathrel}
1353 \fdsy@DeclareSymbol{\nupdownwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nupdownsquigarrow}{narrows}{\mathrel}
1355 \fdsy@DeclareSymbol{\nvarleftrightwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nrightleftsquigarrow}{narrows}{\mathrel}
1357 \fdsy@DeclareSymbol{\nvarupdownwavearrow}{narrows}{\mathrel}
```

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\fdsy@DeclareAlias{\ndownupsquigarrow}{narrows}{\mathrel}
1359 \fdsy@DeclareSymbol{\ncwoverarcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\ncurvearrowright}{narrows}{\mathrel}
1360
      \fdsy@DeclareAlias{\nrightlcurvearrow}{narrows}{\mathrel}
1362 \fdsy@DeclareSymbol{\ncwleftarcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nuplcurvearrow}{narrows}{\mathrel}
1363
1364 \fdsy@DeclareSymbol{\ncwunderarcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nleftlcurvearrow}{narrows}{\mathrel}
1366 \fdsy@DeclareSymbol{\ncwrightarcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\ndownlcurvearrow}{narrows}{\mathrel}
1367
     fdsy@DeclareSymbol{\ncwnwarcarrow}{narrows}{\mathrel}
1369
      \fdsy@DeclareAlias{\nrightupcurvedarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nnelcurvearrow}{narrows}{\mathrel}
1370
1371 \fdsy@DeclareSymbol{\ncwswarcarrow}{narrows}{\mathrel}
1372
      \fdsy@DeclareAlias{\nupleftcurvedarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nnwlcurvearrow}{narrows}{\mathrel}
1373
1374 \fdsy@DeclareSymbol{\ncwsearcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nleftdowncurvedarrow}{narrows}{\mathrel}
1375
      \fdsy@DeclareAlias{\nswlcurvearrow}{narrows}{\mathrel}
1376
1377 \fdsy@DeclareSymbol{\ncwnearcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\ndownrightcurvedarrow}{narrows}{\mathrel}
1378
1379
      \fdsy@DeclareAlias{\nselcurvearrow}{narrows}{\mathrel}
\label{localize} 1380 \fdsy@DeclareSymbol{\nacwunderarcarrow} {narrows} {\mbox{$\mathrel}$} \\
      \fdsy@DeclareAlias{\nrightrcurvearrow}{narrows}{\mathrel}
1381
     fdsy@DeclareSymbol{\nacwrightarcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nuprcurvearrow}{narrows}{\mathrel}
1383
1384 \fdsy@DeclareSymbol{\nacwoverarcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\ncurvearrowleft}{narrows}{\mathrel}
1385
      \fdsy@DeclareAlias{\nleftrcurvearrow}{narrows}{\mathrel}
1386
1387 \fdsy@DeclareSymbol{\nacwleftarcarrow}{narrows}{\mathrel}
1388
      \fdsy@DeclareAlias{\ndownrcurvearrow}{narrows}{\mathrel}
1389
     fdsy@DeclareSymbol{\nacwsearcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nuprightcurvearrow}{narrows}{\mathrel}
1390
      \fdsy@DeclareAlias{\nnercurvearrow}{narrows}{\mathrel}
1391
{\tt 1392 \ fdsy@DeclareSymbol{\nacwnearcarrow}\{narrows}\{\mbox{\tt mathrel}\} \\
      \fdsy@DeclareAlias{\nleftupcurvedarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nnwrcurvearrow}{narrows}{\mathrel}
1394
    \fdsy@DeclareSymbol{\nacwnwarcarrow}{narrows}{\mathrel}
1395
      \fdsy@DeclareAlias{\ndownleftcurvedarrow}{narrows}{\mathrel}
1396
1397
      \fdsy@DeclareAlias{\nswrcurvearrow}{narrows}{\mathrel}
1398 \fdsy@DeclareSymbol{\nacwswarcarrow}{\narrows}{\mathrel}
      \fdsy@DeclareAlias{\nrightdowncurvedarrow}{narrows}{\mathrel}
1399
      \fdsy@DeclareAlias{\nsercurvearrow}{narrows}{\mathrel}
1400
1401 \fdsy@DeclareSymbol{\nbdoverarcarrow}{narrows}{\mathrel}
      \fdsy@DeclareAlias{\nleftrightcurvearrow}{narrows}{\mathrel}
```

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1403 \fdsy@DeclareSymbol{\nbdleftarcarrow}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\nupdowncurvearrow}{narrows}{\mathrel}
1405 \fdsy@DeclareSymbol{\nbdunderarcarrow}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\nrightleftcurvearrow}{narrows}{\mathrel}
1407 \fdsy@DeclareSymbol{\nbdrightarcarrow}{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}{\
         \fdsy@DeclareAlias{\ndownupcurvearrow}{narrows}{\mathrel}
1409 \fdsy@DeclareSymbol{\nbdnwarcarrow}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\nneswcurvearrow}{narrows}{\mathrel}
1411 \fdsy@DeclareSymbol{\nbdswarcarrow}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\nnwsecurvearrow}{narrows}{\mathrel}
1413 \fdsy@DeclareSymbol{\nbdsearcarrow}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\nswnecurvearrow}{narrows}{\mathrel}
1415 \fdsy@DeclareSymbol{\nbdnearcarrow}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\nsenwcurvearrow}{narrows}{\mathrel}
1417 \fdsy@DeclareSymbol{\nleftfootline}{narrows}{\mathrel}
1418 \fdsy@DeclareSymbol{\nrightfootline}{narrows}{\mathrel}
1419 \fdsy@DeclareSymbol{\nacwcirclearrowup}{narrows}{\mathrel}
1420 \fdsy@DeclareSymbol{\nacwcirclearrowleft}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\ncirclearrowleft}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\nacwopencirclearrow}{narrows}{\mathrel}
\fdsy@DeclareAlias{\nacwgapcirclearrow}{narrows}{\mathrel}
1425 \fdsy@DeclareSymbol{\nacwcirclearrowright}{narrows}{\mathrel}
1426 \fdsy@DeclareSymbol{\ncwcirclearrowdown}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\ncwgapcirclearrow}{narrows}{\mathrel}
1428 \fdsy@DeclareSymbol{\ncwcirclearrowright}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\ncirclearrowright}{narrows}{\mathrel}
         \fdsy@DeclareAlias{\ncwopencirclearrow}{narrows}{\mathrel}
1431 \fdsy@DeclareSymbol{\ncwcirclearrowup}{narrows}{\mathrel}
1432 \fdsy@DeclareSymbol{\ncwcirclearrowleft}{narrows}{\mathrel}
1433 \fdsy@DeclareSymbol{\nRrightarrow}{\narrows}{\mathrel}
1435 \fdsy@DeclareSymbol{\nLleftarrow}{narrows}{\mathrel}
1436 \fdsy@DeclareSymbol{\nDdownarrow}{narrows}{\mathrel}
1437 \fdsy@DeclareSymbol{\nlongrightarrow}{narrows}{\mathrel}
1438 \fdsy@DeclareSymbol{\nlongleftarrow}{\narrows}{\mathrel}
1439 \fdsy@DeclareSymbol{\nLongrightarrow}{narrows}{\mathrel}
1440 \fdsy@DeclareSymbol{\nLongleftarrow}{narrows}{\mathrel}
1441 \fdsy@DeclareSymbol{\nlongleftrightarrow}{narrows}{\mathrel}
1442 \fdsy@DeclareSymbol{\nLongleftrightarrow}{narrows}{\mathrel}
1443 \fdsy@DeclareSymbol{\nlongmapsto}{narrows}{\mathrel}
1445 \fdsy@DeclareSymbol{\nLongmapsto}{narrows}{\mathrel}
1446 \fdsy@DeclareSymbol{\nLongmapsfrom}{narrows}{\mathrel}
1447 \fdsy@DeclareSymbol{\nlongrightwavearrow}{narrows}{\mathrel}
```

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\fdsy@DeclareAlias{\nlongleadsto}{narrows}{\mathrel}
1448
     \fdsy@DeclareAlias{\nlongrightsquigarrow}{\narrows}{\mathrel}
1449
1450 \fdsy@DeclareSymbol{\nlongleftwavearrow}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nlongleftsquigarrow}{narrows}{\mathrel}
\fdsy@DeclareAlias{\nvlongdash}{narrows}{\mathrel}
1454 \fdsy@DeclareSymbol{\nlongrightfootline}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nlongdashv}{narrows}{\mathrel}
1456 \fdsy@setslot{224}
1457 \fdsy@DeclareSymbol{\nrightvdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nvdash}{narrows}{\mathrel}
1459 \fdsy@DeclareSymbol{\nupvdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nperp}{narrows}{\mathrel}
1461 \fdsy@DeclareSymbol{\nleftvdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ndashv}{narrows}{\mathrel}
1463 \fdsy@DeclareSymbol{\ndownvdash}{narrows}{\mathrel}
1464 \fdsy@DeclareSymbol{\nrightassert}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nassert}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nshortrighttack}{narrows}{\mathrel}
1466
1467 \fdsy@DeclareSymbol{\nupassert}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nshortuptack}{narrows}{\mathrel}
1469 \fdsy@DeclareSymbol{\nleftassert}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nshortlefttack}{narrows}{\mathrel}
1470
1471 \fdsy@DeclareSymbol{\ndownassert}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nshortdowntack}{narrows}{\mathrel}
1473 \fdsy@DeclareSymbol{\nrightvDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nvDash}{narrows}{\mathrel}
1475 \fdsy@DeclareSymbol{\nupvDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nVbar}{narrows}{\mathrel}
1477 \fdsy@DeclareSymbol{\nleftvDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nDashv}{narrows}{\mathrel}
1479 \fdsy@DeclareSymbol{\ndownvDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nbarV}{narrows}{\mathrel}
1481 \fdsy@DeclareSymbol{\nrightmodels}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nmodels}{\narrows}{\mathrel}
1483 \fdsy@DeclareSymbol{\nupmodels}{narrows}{\mathrel}
1484 \fdsy@DeclareSymbol{\nleftmodels}{narrows}{\mathrel}
1486 \fdsy@DeclareSymbol{\nrightVdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nVdash}{narrows}{\mathrel}
1488 \fdsy@DeclareSymbol{\nupVdash}{narrows}{\mathrel}
1489 \fdsy@DeclareSymbol{\nleftVdash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\ndashV}{narrows}{\mathrel}
1491 \fdsy@DeclareSymbol{\ndownVdash}{narrows}{\mathrel}
1492 \fdsy@DeclareSymbol{\nrightAssert}{narrows}{\mathrel}
```

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1493 \fdsy@DeclareAlias{\nAssert}{narrows}{\mathrel}
1494 \fdsy@DeclareSymbol{\nupAssert}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nvBar}{narrows}{\mathrel}
1496 \fdsy@DeclareSymbol{\nleftAssert}{narrows}{\mathrel}
\fdsy@DeclareAlias{\nBarv}{narrows}{\mathrel}
1499 \fdsy@DeclareSymbol{\nrightVDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nVDash}{narrows}{\mathrel}
1501 \fdsy@DeclareSymbol{\nupVDash}{narrows}{\mathrel}
1502 \fdsy@DeclareSymbol{\nleftVDash}{narrows}{\mathrel}
     \fdsy@DeclareAlias{\nDashV}{narrows}{\mathrel}
1504\fdsy@DeclareSymbol{\ndownVDash}{narrows}{\mathrel}
1505 \fdsy@DeclareSymbol{\nVvdash}{narrows}{\mathrel}
1506 \fdsy@DeclareSymbol{\ndashVv}{narrows}{\mathrel}
1507 \fdsy@DeclareSymbol{\nvDdash}{narrows}{\mathrel}
1508 \fdsy@DeclareSymbol{\nDdashv}{narrows}{\mathrel}
 FdSymbolE: large operators
1509 fdsy@setslot{0}
1510 \fdsy@DeclareSymbol{\tbigplus}{largesymbols}{\mathop}
1511 \fdsy@DeclareSymbol{\dbigplus}{largesymbols}{\mathop}
1512 \fdsy@DeclareSymbol{\tbigtimes}{largesymbols}{\mathop}
1513 \fdsy@DeclareSymbol{\dbigtimes}{largesymbols}{\mathop}
1514\fdsy@DeclareSymbol{\tbigwedge}{largesymbols}{\mathop}
1515 \fdsy@DeclareSymbol{\dbigwedge}{largesymbols}{\mathop}
1516 \fdsy@DeclareSymbol{\tbigvee}{largesymbols}{\mathop}
1517 \fdsy@DeclareSymbol{\dbigvee}{largesymbols}{\mathop}
1518 \fdsy@DeclareSymbol{\tbigwedgedot}{largesymbols}{\mathop}
1519 \fdsy@DeclareSymbol{\dbigwedgedot}{largesymbols}{\mathop}
1520 \fdsy@DeclareSymbol{\tbigveedot}{largesymbols}{\mathop}
1521 \fdsy@DeclareSymbol{\dbigveedot}{largesymbols}{\mathop}
1522 \fdsy@DeclareSymbol{\tbigdoublewedge}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tconjquant}{largesymbols}{\mathop}
1524\fdsy@DeclareSymbol{\dbigdoublewedge}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\dconjquant}{largesymbols}{\mathop}
1526 \fdsy@DeclareSymbol{\tbigdoublevee}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\tdisjquant}{largesymbols}{\mathop}
1528 \fdsy@DeclareSymbol{\dbigdoublevee}{largesymbols}{\mathop}
     \fdsy@DeclareAlias{\ddisjquant}{largesymbols}{\mathop}
1530 \fdsy@DeclareSymbol{\tbigcurlywedge}{largesymbols}{\mathop}
1531 \fdsy@DeclareSymbol{\dbigcurlywedge}{largesymbols}{\mathop}
1532 \fdsy@DeclareSymbol{\tbigcurlyvee}{largesymbols}{\mathop}
1533 \fdsy@DeclareSymbol{\dbigcurlyvee}{largesymbols}{\mathop}
1534\fdsy@DeclareSymbol{\tbigcap}{largesymbols}{\mathop}
1535 \fdsy@DeclareSymbol{\dbigcap}{largesymbols}{\mathop}
1536 \fdsy@DeclareSymbol{\tbigcup}{largesymbols}{\mathop}
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1537 \fdsy@DeclareSymbol{\dbigcup}{largesymbols}{\mathop}
1538 \fdsy@DeclareSymbol{\tbigcapdot}{largesymbols}{\mathop}
1539 \fdsy@DeclareSymbol{\dbigcapdot}{largesymbols}{\mathop}
1540 \fdsy@DeclareSymbol{\tbigcupdot}{largesymbols}{\mathop}
\label{largesymbol} $$1541 \footnote{\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{
1542 \fdsy@DeclareSymbol{\tbigcapplus}{largesymbols}{\mathop}
1543 \fdsy@DeclareSymbol{\dbigcapplus}{largesymbols}{\mathop}
1544 \fdsy@DeclareSymbol{\tbigcupplus}{largesymbols}{\mathop}
             \fdsy@DeclareAlias{\tbiguplus}{largesymbols}{\mathop}
1546 \fdsy@DeclareSymbol{\dbigcupplus}{largesymbols}{\mathop}
             \fdsy@DeclareAlias{\dbiguplus}{largesymbols}{\mathop}
1548 \fdsy@DeclareSymbol{\tbigsqcap}{largesymbols}{\mathop}
1549 \fdsy@DeclareSymbol{\dbigsqcap}{largesymbols}{\mathop}
1550 \fdsy@DeclareSymbol{\tbigsqcup}{largesymbols}{\mathop}
1551 \fdsy@DeclareSymbol{\dbigsqcup}{largesymbols}{\mathop}
1552 \fdsy@DeclareSymbol{\tbigsqcapdot}{largesymbols}{\mathop}
1553 \fdsy@DeclareSymbol{\dbigsqcapdot}{largesymbols}{\mathop}
1554\fdsy@DeclareSymbol{\tbigsqcupdot}{largesymbols}{\mathop}
1555 \fdsy@DeclareSymbol{\dbigsqcupdot}{largesymbols}{\mathop}
1556 \fdsy@DeclareSymbol{\tbigsqcapplus}{largesymbols}{\mathop}
\label{largesymbols} Is fdsy @ Declare Symbol {\dbigsqcapplus} {large symbols} {\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$}\mbox{$\mbox{$\mbox{$}\mbox{$}\mbox{$\mbox{$}\mbox{$\mbox{$}\mbox{$}\mbox{$\mbox{$}\mbox{$}\mbox{$\mbox{$}\mbox{$}\mbox{$}\mbox{$\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mb
1558 \fdsy@DeclareSymbol{\tbigsqcupplus}{largesymbols}{\mathop}
1559 \fdsy@DeclareSymbol{\dbigsqcupplus}{largesymbols}{\mathop}
1560 \fdsy@DeclareSymbol{\tbigoplus}{largesymbols}{\mathop}
1561 \fdsy@DeclareSymbol{\dbigoplus}{largesymbols}{\mathop}
1562 \fdsy@DeclareSymbol{\tbigotimes}{largesymbols}{\mathop}
1563 \fdsy@DeclareSymbol{\dbigotimes}{largesymbols}{\mathop}
1564\fdsy@DeclareSymbol{\tbigodot}{largesymbols}{\mathop}
1565 \fdsy@DeclareSymbol{\dbigodot}{largesymbols}{\mathop}
1566 \fdsy@DeclareSymbol{\tbigoast}{largesymbols}{\mathop}
1567 \fdsy@DeclareSymbol{\dbigoast}{largesymbols}{\mathop}
1568 \fdsy@DeclareSymbol{\tprod}{largesymbols}{\mathop}
1569 \fdsy@DeclareSymbol{\dprod}{largesymbols}{\mathop}
1570 \fdsy@DeclareSymbol{\tcoprod}{largesymbols}{\mathop}
1571 \fdsy@DeclareSymbol{\dcoprod}{largesymbols}{\mathop}
1572 \fdsy@DeclareSymbol{\tsum}{largesymbols}{\mathop}
1573 \fdsy@DeclareSymbol{\\dsum}{\largesymbols}{\\mathop}
1574 \fdsy@DeclareSymbol{\tosum}{largesymbols}{\mathop}
             \fdsy@DeclareAlias{\tmodtwosum}{largesymbols}{\mathop}
1576 \fdsy@DeclareSymbol{\dosum}{largesymbols}{\mathop}
             \fdsy@DeclareAlias{\dmodtwosum}{largesymbols}{\mathop}
1578 \fdsy@DeclareSymbol{\tint}{largesymbols}{\mathop}
1579 \fdsy@DeclareSymbol{\dint}{largesymbols}{\mathop}
1580 \fdsy@DeclareSymbol{\tiint}{largesymbols}{\mathop}
1581 \fdsy@DeclareSymbol{\diint}{largesymbols}{\mathop}
```

```
1582 \fdsy@DeclareSymbol{\tiiint}{largesymbols}{\mathop}
1583 \fdsy@DeclareSymbol{\diiint}{largesymbols}{\mathop}
1584 \fdsy@DeclareSymbol{\tiiiint}{largesymbols}{\mathop}
1585 \fdsy@DeclareSymbol{\diiiint}{largesymbols}{\mathop}
\label{largesymbols} $$1586 \footsint}{largesymbols}{\mathbf{hop}}$
         \fdsy@DeclareAlias{\tdotsint}{largesymbols}{\mathop}
1588 \fdsy@DeclareSymbol{\didotsint}{largesymbols}{\mathop}
          \fdsy@DeclareAlias{\ddotsint}{largesymbols}{\mathop}
1590 \fdsy@DeclareSymbol{\tlandupint}{largesymbols}{\mathop}
         \fdsy@DeclareAlias{\tintclockwise}{largesymbols}{\mathop}
1592 \fdsy@DeclareSymbol{\dlandupint}{largesymbols}{\mathop}
         \fdsy@DeclareAlias{\dintclockwise}{largesymbols}{\mathop}
1593
1594 \fdsy@DeclareSymbol{\tlanddownint}{largesymbols}{\mathop}
          \fdsy@DeclareAlias{\tawint}{largesymbols}{\mathop}
1595
1596
         \fdsy@DeclareAlias{\tintctrclockwise}{largesymbols}{\mathop}
1597 \fdsy@DeclareSymbol{\dlanddownint}{largesymbols}{\mathop}
1598
         \fdsy@DeclareAlias{\dawint}{largesymbols}{\mathop}
         \fdsy@DeclareAlias{\dintctrclockwise}{largesymbols}{\mathop}
1600 \fdsy@DeclareSymbol{\tintbar}{largesymbols}{\mathop}
1601 \fdsy@DeclareSymbol{\dintbar}{largesymbols}{\mathop}
\label{largesymbols} $$1602 \footnote{\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
1603 \fdsy@DeclareSymbol{\dintBar}{largesymbols}{\mathop}
1604 \fdsy@DeclareSymbol{\tfint}{largesymbols}{\mathop}
1605 \fdsy@DeclareSymbol{\dfint}{largesymbols}{\mathop}
1606 \fdsy@DeclareSymbol{\toint}{largesymbols}{\mathop}
1607 \fdsy@DeclareSymbol{\doint}{largesymbols}{\mathop}
1608 \fdsy@DeclareSymbol{\toiint}{largesymbols}{\mathop}
1609 \fdsy@DeclareSymbol{\doiint}{largesymbols}{\mathop}
1610 \fdsy@DeclareSymbol{\toiiint}{largesymbols}{\mathop}
1611 \fdsy@DeclareSymbol{\doiiint}{largesymbols}{\mathop}
1612 \fdsy@DeclareSymbol{\trcirclerightint}{largesymbols}{\mathop}
         \fdsy@DeclareAlias{\tointctrclockwise}{largesymbols}{\mathop}
1614 \fdsy@DeclareSymbol{\drcirclerightint}{largesymbols}{\mathop}
         \fdsy@DeclareAlias{\dointctrclockwise}{largesymbols}{\mathop}
1616 \fdsy@DeclareSymbol{\tlcirclerightint}{largesymbols}{\mathop}
          \fdsy@DeclareAlias{\tvarointclockwise}{largesymbols}{\mathop}
1618 \fdsy@DeclareSymbol{\dlcirclerightint}{largesymbols}{\mathop}
          \fdsy@DeclareAlias{\dvarointclockwise}{largesymbols}{\mathop}
1620 \fdsy@DeclareSymbol{\trcircleleftint}{largesymbols}{\mathop}
1621
         \fdsy@DeclareAlias{\tvarointctrclockwise}{largesymbols}{\mathop}
1622 \fdsy@DeclareSymbol{\drcircleleftint}{largesymbols}{\mathop}
         \fdsy@DeclareAlias{\dvarointctrclockwise}{largesymbols}{\mathop}
1623
1624\fdsy@DeclareSymbol{\tlcircleleftint}{largesymbols}{\mathop}
         \fdsy@DeclareAlias{\tointclockwise}{largesymbols}{\mathop}
1626 \fdsy@DeclareSymbol{\dlcircleleftint}{largesymbols}{\mathop}
```

```
\fdsy@DeclareAlias{\dointclockwise}{largesymbols}{\mathop}
1628 \fdsy@DeclareSymbol{\tsumint}{largesymbols}{\mathop}
1629 \fdsy@DeclareSymbol{\dsumint}{largesymbols}{\mathop}
1630 \let\intop\tint
1631 \let\ointop\toint
1633 \fdsy@DeclareOperator{\bigplus}{\dbigplus}{\tbigplus}
1634 \fdsy@DeclareOperator{\bigtimes}{\dbigtimes}{\tbigtimes}
1635 \fdsy@DeclareOperator{\bigwedge}{\dbigwedge}{\tbigwedge}
1636 \fdsy@DeclareOperator{\bigvee}{\dbigvee}{\tbigvee}
1637 \fdsy@DeclareOperator{\bigwedgedot}{\\dbigwedgedot}{\\tbigwedgedot}
1638 \fdsy@DeclareOperator{\bigveedot}{\dbigveedot}{\tbigveedot}
1639 \fdsy@DeclareOperator{\bigdoublewedge}{\dbigdoublewedge}{\tbigdoublewedge}
1640 \fdsy@DeclareOperator{\conjquant}{\dconjquant}{\tconjquant}
1641 \fdsy@DeclareOperator{\bigdoublevee}{\dbigdoublevee}{\tbigdoublevee}
{\tt 1643 \fdsy@DeclareOperator\{\bigcurlywedge\}\{\dbigcurlywedge\}\{\tbigcurlywedge\}\}} \\
1644 \fdsy@DeclareOperator{\bigcurlyvee}{\dbigcurlyvee}{\tbigcurlyvee}
1645 \fdsy@DeclareOperator{\bigcurlywedgedot}{\dbigcurlywedgedot}{\tbigcurlywedgedot}
1646 \fdsy@DeclareOperator{\bigcurlyveedot}{\dbigcurlyveedot}{\tbigcurlyveedot}
1647 \fdsy@DeclareOperator{\bigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlywedge}{\dbigdoublecurlyw
1648 \fdsy@DeclareOperator{\bigdoublecurlyvee}{\dbigdoublecurlyvee}{\tbigdoublecurlyvee}
1649 \fdsy@DeclareOperator{\bigcap}{\dbigcap}{\tbigcap}
1650 \fdsy@DeclareOperator{\bigcup}{\dbigcup}{\tbigcup}
1651 \fdsy@DeclareOperator{\bigcapdot}{\dbigcapdot}{\tbigcapdot}
1652 \fdsy@DeclareOperator{\bigcupdot}{\dbigcupdot}{\tbigcupdot}
1653 \fdsy@DeclareOperator{\bigcapplus}{\dbigcapplus}{\tbigcapplus}
1654 \fdsy@DeclareOperator{\bigcupplus}{\dbigcupplus}{\tbigcupplus}
1655 \fdsy@DeclareOperator{\biguplus}{\dbiguplus}{\tbiguplus}
1656 \fdsy@DeclareOperator{\bigsqcap}{\dbigsqcap}{\tbigsqcap}
1657 \fdsy@DeclareOperator{\bigsqcup}{\dbigsqcup}{\tbigsqcup}
1658 \fdsy@DeclareOperator{\bigsqcapdot}{\dbigsqcapdot}{\tbigsqcapdot}
1659\fdsy@DeclareOperator{\bigsqcupdot}{\dbigsqcupdot}{\tbigsqcupdot}
1660 \fdsy@DeclareOperator{\bigsqcapplus}{\dbigsqcapplus}{\tbigsqcapplus}
1661 \fdsy@DeclareOperator{\bigsqcupplus}{\\dbigsqcupplus}{\\tbigsqcupplus}
1662 \fdsy@DeclareOperator{\bigoplus}{\dbigoplus}{\tbigoplus}
1663 \fdsy@DeclareOperator{\bigotimes}{\\dbigotimes}{\\tbigotimes}
1664 \fdsy@DeclareOperator{\bigodot}{\dbigodot}{\tbigodot}
1665 \fdsy@DeclareOperator{\bigoast}{\dbigoast}{\tbigoast}
1666 \fdsy@DeclareOperator{\sum}{\dsum}{\tsum}
1667 \fdsy@DeclareOperator{\osum}{\dosum}{\tosum}
{\tt 1668 \fdsy@DeclareOperator\{\modtwosum\}\{\modtwosum\}\{\modtwosum\}\{\modtwosum\}\{\modtwosum\}\}} \\
1669 \fdsy@DeclareOperator{\prod}{\dprod}{\tprod}
1670 \fdsy@DeclareOperator{\coprod}{\dcoprod}{\tcoprod}
1671 \fdsy@DeclareIntegral{\iint}{\diint}{\tiint}
```

```
1672 \fdsy@DeclareIntegral{\iiint}{\diiint}{\tiiint}
1673 \fdsy@DeclareIntegral{\iiiint}{\diiiint}{\tiiiint}
1674 \fdsy@DeclareIntegral{\idotsint}{\didotsint}{\tidotsint}
1675 \fdsy@DeclareIntegral{\dotsint}{\ddotsint}{\tdotsint}
1677 \fdsy@DeclareIntegral{\intclockwise}{\dintclockwise}{\tintclockwise}
1678 \fdsy@DeclareIntegral{\landdownint}{\dlanddownint}{
1679 \fdsy@DeclareIntegral{\awint}{\dawint}{\tawint}
1680 \fdsy@DeclareIntegral{\intctrclockwise}{\dintctrclockwise}{\tintctrclockwise}
1681 \fdsy@DeclareIntegral{\landdownint}{\\dlanddownint}
1682 \fdsy@DeclareIntegral{\intbar}{\dintbar}{\tintbar}
1683 \fdsy@DeclareIntegral{\intBar}{\dintBar}{\tintBar}
1684 \fdsy@DeclareIntegral{\fint}{\dfint}{\tfint}
1685 \fdsy@DeclareIntegral{\oiint}{\doiint}{\toiint}
1686 \fdsy@DeclareIntegral{\oiiint}{\doiiint}{\toiiint}
1688 \footnote{\coloredgeneral} {\coloredgeneral} {\coloredgener
1689 \fdsy@DeclareIntegral{\lcirclerightint}{\\dlcirclerightint}{\\dlcirclerightint}{\\dlcirclerightint}
\label{lockwise} I for a control ockwise of the control ockwise octavity. \\
1691 \fdsy@DeclareIntegral{\rcircleleftint}{\drcircleleftint}{\trcircleleftint}
\label{locality} I 692 \ fdsy @ Declare Integral {\varoint ctrclockwise} {\dvaroint ctrclockwise} {\dvaroint ctrclockwise} \ fdsy @ Declare Integral {\varoint ctrclockwise} \ fdsy \ fdsy
1693 \fdsy@DeclareIntegral{\lcircleleftint}{\\dlcircleleftint}{\\tlcircleleftint}
1694 \fdsy@DeclareIntegral{\ointclockwise}{\dointclockwise}{\tointclockwise}
1695 \fdsy@DeclareIntegral{\sumint}{\dsumint}{\tsumint}
1698 \def\intdots@{\mkern-6mu%
                    \mathchoice{\@cdots}%
1699
                     {{\cdotp}\mkern0.5mu{\cdotp}\mkern0.5mu{\cdotp}}%
                     {{\cdotp}{\cdotp}}%
                    {{\cdotp}{\cdotp}{\cdotp}}%
                    \mkern-6mu}
1703
    Math accents.
\label{largesymbols} \end{\textsubstitute} $$1704 \end{\textsubstitute} \end{\textsubstitute} $$1704 \end{
1705 \DeclareMathAccent{\widetilde}{\mathord}{largesymbols}{"78}
1706 \DeclareMathAccent{\wideparen}{\mathord}{largesymbols}{"7E}
1707 \DeclareMathAccent{\vec}{\mathord}{largesymbols}{"84}
1708 \DeclareMathAccent{\middlebar}{\mathord}{largesymbols}{"85}
{\tt 1709 \setminus DeclareMathAccent\{\setminus Middleslash\}\{\setminus Mathord\}\{largesymbols\}\{''86\}\}}
1710 \DeclareMathAccent{\strokethrough}{\mathord}{largesymbols}{"87}
    FdSymbolF: delimiters
1711 \let\lfloor\undefined
1712 \let\rfloor\undefined
1713 \let\lceil\undefined
1714 \let\rceil\undefined
```

```
1715 \let\langle\undefined
1716 \let\rangle\undefined
1717 \iffdsy@largedelims
     \fdsy@DeclareOpen{(){delimiters}{"01}
     \fdsy@DeclareClose{)}{delimiters}{"07}
1719
     \fdsy@DeclareOpen{\lparen}{delimiters}{"01}
1720
     \fdsy@DeclareClose{\rparen}{delimiters}{"07}
1721
1722
     \fdsy@DeclareOpen{[}{delimiters}{"13}
1723
     \fdsy@DeclareClose{]}{delimiters}{"19}
     \fdsy@DeclareOpen{\lbrack}{delimiters}{"13}
1724
     \fdsy@DeclareClose{\rbrack}{delimiters}{"19}
1725
     \fdsy@DeclareOpen{\lfloor}{delimiters}{"1F}
1726
     \fdsy@DeclareClose{\rfloor}{delimiters}{"25}
1727
     \fdsy@DeclareOpen{\lceil}{delimiters}{"2B}
1728
1729
     \fdsy@DeclareClose{\rceil}{delimiters}{"31}
     \fdsy@DeclareOpen{\ulcorner}{delimiters}{"37}
1730
1731
     \fdsy@DeclareClose{\urcorner}{delimiters}{"3D}
     \fdsy@DeclareOpen{\llcorner}{delimiters}{"43}
1732
     \fdsy@DeclareClose{\lrcorner}{delimiters}{"49}
1733
1734
     \fdsy@DeclareOpen{\ullcorner}{delimiters}{"4F}
     \fdsy@DeclareClose{\ulrcorner}{delimiters}{"55}
1735
1736
     \fdsy@DeclareOpen{\lsem}{delimiters}{"61}
     \fdsy@DeclareClose{\rsem}{delimiters}{"67}
1737
     \fdsy@DeclareOpen{\lBrack}{delimiters}{"61}
1738
1739
     \fdsy@DeclareClose{\rBrack}{delimiters}{"67}
1740
     \fdsy@DeclareOpen{\lbrace}{delimiters}{"73}
1741
     \fdsy@DeclareClose{\rbrace}{delimiters}{"79}
     \fdsy@DeclareOpen{<}{delimiters}{"86}
1742
     \fdsy@DeclareClose{>}{delimiters}{"8C}
1743
     \fdsy@DeclareOpen{\langle}{delimiters}{"86}
1744
     \fdsy@DeclareClose{\rangle}{delimiters}{"8C}
1745
     \fdsy@DeclareOpen{\lAngle}{delimiters}{"92}
1746
     \fdsy@DeclareClose{\rAngle}{delimiters}{"98}
1747
     \fdsy@DeclareOpen{\langledot}{delimiters}{"9E}
1748
     \fdsy@DeclareClose{\rangledot}{delimiters}{"A4}
1749
1750
     \fdsy@DeclareDelimiter{/}{\mathord}{delimiters}{"AA}
     \fdsy@DeclareDelimiter{\mathslash}{\mathord}{delimiters}{"AA}
1751
     \DeclareMathSymbol{\divslash}{\mathbin}{delimiters}{"AA}
1752
     \fdsy@DeclareDelimiter{\backslash}{\mathord}{delimiters}{"B0}
1753
     \expandafter\DeclareMathDelimiter\@backslashchar%
1754
1755
        {\mathord}{delimiters}{"B0}{delimiters}{"B0}
     \DeclareMathSymbol{\setminus}{\mathbin}{delimiters}{"B0}
1756
     \fdsy@DeclareDelimiter{|}{\mathord}{delimiters}{"B7}
1757
     \fdsy@DeclareDelimiter{\vert}{\mathord}{delimiters}{"B7}
1758
1759
     \fdsy@DeclareOpen{\lvert}{delimiters}{"B7}
```

```
\fdsy@DeclareClose{\rvert}{delimiters}{"B7}
1760
     \DeclareMathSymbol{\mid}{\mathrel}{delimiters}{"B7}
1761
     \DeclareMathSymbol{\nmid}{\mathrel}{delimiters}{"BA}
1762
1763
     \fdsy@DeclareDelimiter{\Vert}{\mathord}{delimiters}{"BE}
     \fdsy@DeclareOpen{\lVert}{delimiters}{"BE}
1764
     \fdsy@DeclareClose{\rVert}{delimiters}{"BE}
1765
     \DeclareMathSymbol{\parallel}{\mathrel}{delimiters}{"BE}
1766
1767
     \DeclareMathSymbol{\nparallel}{\mathrel}{delimiters}{"C1}
     \fdsy@DeclareDelimiter{\Vvert}{\mathord}{delimiters}{"C4}
1768
     \fdsy@DeclareOpen{\lVvert}{delimiters}{"C4}
1769
     \fdsy@DeclareClose{\rVvert}{delimiters}{"C4}
1770
1771 \else
     \fdsy@DeclareOpen{(){delimiters}{"00}
1772
     \fdsy@DeclareClose{)}{delimiters}{"06}
1773
1774
     \fdsy@DeclareOpen{\lparen}{delimiters}{"00}
     \fdsy@DeclareClose{\rparen}{delimiters}{"06}
1775
1776
     \fdsy@DeclareOpen{[]{delimiters}{"12}
     \fdsy@DeclareClose{]}{delimiters}{"18}
1777
     \fdsy@DeclareOpen{\lbrack}{delimiters}{"12}
1778
1779
     \fdsy@DeclareClose{\rbrack}{delimiters}{"18}
     \fdsy@DeclareOpen{\lfloor}{delimiters}{"1E}
1780
1781
     \fdsy@DeclareClose{\rfloor}{delimiters}{"24}
     \fdsy@DeclareOpen{\lceil}{delimiters}{"2A}
1782
     \fdsy@DeclareClose{\rceil}{delimiters}{"30}
1783
1784
     \fdsy@DeclareOpen{\ulcorner}{delimiters}{"36}
     \fdsy@DeclareClose{\urcorner}{delimiters}{"3C}
1785
1786
     \fdsy@DeclareOpen{\llcorner}{delimiters}{"42}
     \fdsy@DeclareClose{\lrcorner}{delimiters}{"48}
1787
     \fdsy@DeclareOpen{\ullcorner}{delimiters}{"4E}
1788
     \fdsy@DeclareClose{\ulrcorner}{delimiters}{"54}
1789
     \fdsy@DeclareOpen{\lsem}{delimiters}{"60}
1790
     \fdsy@DeclareClose{\rsem}{delimiters}{"66}
1791
     \fdsy@DeclareOpen{\lBrack}{delimiters}{"60}
1792
     \fdsy@DeclareClose{\rBrack}{delimiters}{"66}
1793
     \fdsy@DeclareOpen{\lbrace}{delimiters}{"72}
1794
1795
     \fdsy@DeclareClose{\rbrace}{delimiters}{"78}
     \fdsy@DeclareOpen{<}{delimiters}{"85}
1796
     \fdsy@DeclareClose{>}{delimiters}{"8B}
1797
     \fdsy@DeclareOpen{\langle}{delimiters}{"85}
1798
1799
     \fdsy@DeclareClose{\rangle}{delimiters}{"8B}
1800
     \fdsy@DeclareOpen{\lAngle}{delimiters}{"91}
     \fdsy@DeclareClose{\rAngle}{delimiters}{"97}
1801
     \fdsy@DeclareOpen{\langledot}{delimiters}{"9D}
1802
     \fdsy@DeclareClose{\rangledot}{delimiters}{"A3}
1803
1804
     \fdsy@DeclareDelimiter{/}{\mathord}{delimiters}{"A9}
```

```
\fdsy@DeclareDelimiter{\mathslash}{\mathord}{delimiters}{"A9}
1805
          \DeclareMathSymbol{\divslash}{\mathbin}{delimiters}{"A9}
1806
          \fdsy@DeclareDelimiter{\backslash}{\mathord}{delimiters}{"AF}
1807
1808
          \expandafter\DeclareMathDelimiter\@backslashchar%
              {\mathord}{delimiters}{"AF}{delimiters}{"AF}
1809
          \DeclareMathSymbol{\setminus}{\mathbin}{delimiters}{"AF}
1810
          \fdsy@DeclareDelimiter{|}{\mathord}{delimiters}{"B6}
1811
1812
           \fdsy@DeclareDelimiter{\vert}{\mathord}{delimiters}{"B6}
          \fdsy@DeclareOpen{\lvert}{delimiters}{"B6}
1813
          \fdsy@DeclareClose{\rvert}{delimiters}{"B6}
1814
          \DeclareMathSymbol{\mid}{\mathrel}{delimiters}{"B6}
1815
          \DeclareMathSymbol{\nmid}{\mathrel}{delimiters}{"B9}
1816
          \fdsy@DeclareDelimiter{\Vert}{\mathord}{delimiters}{"BD}
1817
          \fdsy@DeclareOpen{\lVert}{delimiters}{"BD}
1818
1819
          \fdsy@DeclareClose{\rVert}{delimiters}{"BD}
          \DeclareMathSymbol{\parallel}{\mathrel}{delimiters}{"BD}
1820
          \DeclareMathSymbol{\nparallel}{\mathrel}{delimiters}{"CO}
1821
          \fdsy@DeclareDelimiter{\Vvert}{\mathord}{delimiters}{"C3}
1822
          \fdsy@DeclareOpen{\lVvert}{delimiters}{"C3}
1823
1824
          \fdsy@DeclareClose{\rVvert}{delimiters}{"C3}
1825\fi
1826 \let\|\Vert
1827 \let\divides\mid
1828 \let\ndivides\nmid
1829 \DeclareMathSymbol{\shortmid}{\mathrel}{delimiters}{"B5}
1830 \DeclareMathSymbol{\nshortmid}{\mathrel}{delimiters}{"B8}
1831 \DeclareMathSymbol{\shortparallel}{\mathrel}{delimiters}{"BC}
1832 \DeclareMathSymbol{\nshortparallel}{\mathrel}{delimiters}{"BF}
1833 \fdsy@DeclareDelimiter{\arrowvert}{\mathord}{delimiters}{"BB}
1834 \fdsy@DeclareDelimiter{\Arrowvert}{\mathord}{delimiters}{"C2}
1835 \fdsy@DeclareClose{\lgroup}{delimiters}{"7E}
1836 \fdsy@DeclareOpen{\rgroup}{delimiters}{"7F}
1837 \fdsy@DeclareClose{\rmoustache}{delimiters}{"80}
1838 \fdsy@DeclareOpen{\lmoustache}{delimiters}{"81}
1839 \fdsy@DeclareDelimiter{\bracevert}{\mathord}{delimiters}{"84}
1840 \let\uparrow\undefined
1841 \ \text{let}\ \text{downarrow}\ \text{undefined}
1842 \let\updownarrow\undefined
1843 \let\Uparrow\undefined
1844 \let\Downarrow\undefined
1845 \let\Updownarrow\undefined
\label{limiter} $$1846 \DeclareMathDelimiter{\uparrow}{\mathrel}{arrows}{"01}{delimiters}{"C6}$
1847 \DeclareMathDelimiter{\downarrow}{\mathrel}{arrows}{"03}{delimiters}{"C7}
1848 \DeclareMathDelimiter{\updownarrow}{\mathrel}{arrows}{"11}{delimiters}{"C8}
\label{limiters} $$1849 \end{constraints} $$ \arrow_{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}{\arrow}
```

```
1850 \DeclareMathDelimiter{\Downarrow}{\mathrel}{arrows}{"OB}{delimiters}{"CA}
1851 \DeclareMathDelimiter{\Updownarrow}{\mathrel}{arrows}{"15}{delimiters}{"CB}
 Horizontal braces.
1852 \DeclareMathSymbol{\braceld}{\mathord}{delimiters}{"CC}
1853 \DeclareMathSymbol{\bracelu}{\mathord}{delimiters}{"CD}
1854 \DeclareMathSymbol{\bracerd}{\mathord}{delimiters}{"CE}
1855 \DeclareMathSymbol{\braceru}{\mathord}{delimiters}{"CF}
1856 \DeclareMathSymbol{\bracemd}{\mathord}{delimiters}{"D0}
1857 \DeclareMathSymbol{\bracemu}{\mathord}{delimiters}{"D1}
1858 \DeclareMathSymbol{\bracemid}{\mathord}{delimiters}{"D2}
1859
1860 \def\bracefill@#1#2#3#4#5{%
     \med th #5#1\leq \hbox{$#4$}\hfill#2\leq \hbox{$#4$}\hfill#3$%
1863 \def\downbracefill@\bracefill@\braceld\bracemd\bracerd\bracemid}
1864 \def\upbracefill@{\bracefill@\bracelu\bracemu\braceru\bracemid}
1865 \def\downgroupfill@{\bracefill@\braceld{}\bracerd\bracemid}
1866 \def\upgroupfill@{\bracefill@\bracelu{}\braceru\bracemid}
1867 \def\linesegmentfill@{\arrowfill@\leftfootline\relbar\rightfootline}
1868 \def\leftharpoonfill@{\arrowfill@\leftharpoondown\relbar}
1869 \def\rightharpoonfill@{\arrowfill@\relbar\relbar\rightharpoonup}
1870
1871 \DeclareRobustCommand{\overbrace}[1]{%
     \mathop{\mathpalette{\overarrow@\downbracefill@}{#1}}\limits%
1873 }
{\tt 1874 \backslash DeclareRobustCommand\{\backslash underbrace\}[1]\{\%}
     \mathop{\mathpalette{\underarrow@\upbracefill@}{#1}}\limits%
1877 \DeclareRobustCommand{\overgroup}{\mathpalette{\overarrow@\downgroupfill@}}
1878 \DeclareRobustCommand{\undergroup}{\mathpalette{\underarrow@\upgroupfill@}}
1879 \DeclareRobustCommand{\overlinesegment}{\mathpalette{\overarrow@\linesegmentfill@}}
1880 \DeclareRobustCommand{\overleftharpoon}{\mathpalette{\overarrow@\leftharpoonfill@}}
Radical symbols.
1883 \iffdsy@largedelims
     \DeclareMathRadical{\sqrtsign}{delimiters}{"D4}{delimiters}{"D4}
     \DeclareMathSymbol{\surd}{\mathop}{delimiters}{"D4}
1885
1886 \else
     \DeclareMathRadical{\sqrtsign}{delimiters}{"D3}{delimiters}{"D3}
     \DeclareMathSymbol{\surd}{\mathop}{delimiters}{"D3}
1889\fi
 In the n-th root, we don't want the n to come too close to the radical (adopted from
```

package lucimatx).

```
1890 \def\r@@t#1#2{\setbox\z@\hbox{$\m@th#1\sqrt{#2}$}%
      \dime^{ht}z@ \advance\dime^-dp\z@
1892
      \mkern5mu\raise.6\dimen@\copy\rootbox \mkern-8mu\box\z@}
 Mathchars.
1893 \DeclareMathSymbol{+}{\mathbin}{symbols}{"11}
1894 \DeclareMathSymbol{-}{\mathbin}{symbols}{"0E}
1895 \DeclareMathSymbol{*}{\mathbin}{symbols}{"98}
1896 \DeclareMathSymbol{:}{\mathrel}{symbols}{"02}
1897 \DeclareMathSymbol{=}{\mathrel}{relations}{"00}
1898 \DeclareMathSymbol{<}{\mathrel}{relations}{"24}</pre>
1899 \DeclareMathSymbol{>}{\mathrel}{relations}{"25}
1900 \iffdsy@largedelims
      \DeclareMathSymbol{|}{\mathord}{delimiters}{"B6}
1901
      \DeclareMathSymbol{(){\mathopen}{delimiters}{"01}
1902
      \DeclareMathSymbol{)}{\mathclose}{delimiters}{"07}
1903
      \DeclareMathSymbol{[]{\mathopen}{delimiters}{"13}
1904
1905
      \DeclareMathSymbol{]}{\mathclose}{delimiters}{"19}
      \DeclareMathSymbol{/}{\mathord}{delimiters}{"AA}
1906
1907 \else
      \DeclareMathSymbol{|}{\mathord}{delimiters}{"B5}
1908
1909
      \DeclareMathSymbol{(){\mathopen}{delimiters}{"00}
      \DeclareMathSymbol{)){\mathclose}{delimiters}{"06}
1910
      \DeclareMathSymbol{[]{\mathopen}{delimiters}{"12}
1911
      \DeclareMathSymbol{]}{\mathclose}{delimiters}{"18}
1912
1913
      \DeclareMathSymbol{/}{\mathord}{delimiters}{"A9}
1914\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.
1915 \end{array} $$1915 \end{array} $$1915 \end{array} $$1915 \end{array}
1916 \def\not#1{\mathrel{\m@th\mathpalette\c@ncel{#1}}}
1917 (/style)
```