

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 L^AT_EX document, add the command

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

¹<http://www.typotheque.com/fonts>

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.

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.

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

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.

| Key | Values |
|---------------------------|--------------------------|
| <code>normalweight</code> | Book*, Regular, auto |
| <code>boldweight</code> | Medium*, Bold, auto |
| <code>scale</code> | $\langle factor \rangle$ |
| <code>largedelims</code> | true, false* |

4 Symbols

The `fdsymbol` package provides the following symbols.

4.1 Ordinary symbols

| | | | |
|------------------|--|---------------------|--|
| \cdots | <code>\hdots</code> | \blacklozenge | <code>\smallblacklozenge,</code> <code>\smbklozenge</code> |
| \vdots | <code>\vdots</code> | \lozenge | <code>\medlozenge, \lozenge,</code> <code>\mdlgwhtlozenge,</code> <code>\mdwhtlozenge</code> |
| \cdotp | <code>\udots, \adots</code> | \blacklozenge | <code>\medblacklozenge,</code> <code>\blacklozenge,</code> <code>\mdlgblklozenge,</code> <code>\mdblklozenge</code> |
| \ddots | <code>\ddots</code> | \lozenge | <code>\lozengeminus</code> |
| \therefore | <code>\righttherefore</code> | \bigstar | <code>\largeblackstar, \bigstar</code> |
| \because | <code>\uptherefore, \therefore</code> | ∞ | <code>\infty</code> |
| \therefore | <code>\lefttherefore</code> | \top | <code>\top</code> |
| \because | <code>\downtherefore, \because</code> | \bot | <code>\bot</code> |
| \ddots | <code>\squaredots</code> | \angle | <code>\angle</code> |
| \neg | <code>\neg, \lnot</code> | \sphericalangle | <code>\sphericalangle</code> |
| \backneg | <code>\backneg, \invnot, \invneg</code> | \measuredangle | <code>\measuredangle</code> |
| \turnedneg | <code>\turnedneg, \turnednot</code> | \revmeasuredangle | <code>\revmeasuredangle,</code> <code>\measuredangleleft</code> |
| \turnedbackneg | <code>\turnedbackneg</code> | \sphericalangle | <code>\sphericalangle</code> |
| \triangleup | <code>\largetriangleup</code> | \sphericalangle | <code>\sphericalangle</code> |
| \triangledown | <code>\largetriangleup</code> | \sphericalangle | <code>\sphericalangle</code> |
| \emptyset | <code>\emptyset, \diameter,</code> <code>\varnothing</code> | \sphericalangle | <code>\sphericalangle</code> |
| \emptyset | <code>\revemptyset</code> | \sphericalangle | <code>\sphericalangle</code> |
| \bigcirc | <code>\largecircle, \lgwhtcircle</code> | \sphericalangle | <code>\sphericalangle</code> |
| \bullet | <code>\largeblackcircle</code> | \sphericalangle | <code>\sphericalangle</code> |
| \square | <code>\largesquare, \lgwhtsquare</code> | \sphericalangle | <code>\sphericalangle</code> |
| \blacksquare | <code>\largeblacksquare,</code> <code>\lgblklsquare</code> | \sphericalangle | <code>\sphericalangle</code> |
| \lozenge | <code>\smalllozenge, \smwhtlozenge</code> | \sphericalangle | <code>\sphericalangle</code> |

| | | | |
|--------------------------|-------------------------------------|---------------|----------------------------|
| \sphericalangledown | <code>\sphericalangledown</code> | \forall | <code>\forall</code> |
| \rightangle | <code>\rightangle</code> | \exists | <code>\exists</code> |
| \measuredrightangle | <code>\measuredrightangle</code> | \nexists | <code>\nexists</code> |
| \rightanglesquare | <code>\rightanglesquare</code> | \Finv | <code>\Finv</code> |
| \measuredrightangledot | <code>\measuredrightangledot</code> | \Game | <code>\Game</code> |
| \rightanglemdot | <code>\rightanglemdot</code> | \complement | <code>\complement</code> |
| \prime | <code>\prime</code> | \flat | <code>\flat</code> |
| \backprime | <code>\backprime</code> | \natural | <code>\natural</code> |
| \checkmark | <code>\checkmark</code> | \sharp | <code>\sharp</code> |
| \lightning | <code>\lightning</code> | \aleph | <code>\aleph</code> |
| \downzigzagarrow | <code>\downzigzagarrow</code> | \beth | <code>\beth</code> |
| \diamondsuit | <code>\diamondsuit</code> | \gimel | <code>\gimel</code> |
| \vardiamondsuit | <code>\vardiamondsuit</code> | \daleth | <code>\daleth</code> |
| \heartsuit | <code>\heartsuit</code> | \wp | <code>\wp</code> |
| \varheartsuit | <code>\varheartsuit</code> | $/$ | <code>/, \mathslash</code> |
| \spadesuit | <code>\spadesuit</code> | \backslash | <code>\backslash</code> |
| \clubsuit | <code>\clubsuit</code> | $ $ | <code> , \vert</code> |
| \maltese | <code>\maltese</code> | $\ $ | <code>\ </code> |
| \starofdavid | <code>\starofdavid</code> | $\ $ | <code>\ </code> |
| \sector | <code>\sector</code> | $\ $ | <code>\ </code> |

4.2 Binary operators

| | | | |
|--------------|--|-------------------|--------------------------------------|
| \cdot | <code>\cdot</code> | $\dot{+}$ | <code>\dotplus</code> |
| \centerdot | <code>\centerdot</code> | \div | <code>\div</code> |
| \hdotdot | <code>\hdotdot</code> | \ast | <code>\divideontimes</code> |
| \vdotdot | <code>\vdotdot</code> | \rightarrowtail | <code>\minushookdown</code> |
| \udotdot | <code>\udotdot</code> | \dashrightarrow | <code>\hookdownminus</code> |
| \ddotdot | <code>\ddotdot</code> | \dashrightarrow | <code>\intprod, \minushookup</code> |
| $-$ | <code>-, \minus</code> | \dashrightarrow | <code>\intprodr, \hookupminus</code> |
| \medslash | <code>\medslash, \smalldivslash</code> | \times | <code>\leftthreetimes</code> |
| \backslash | <code>\medbackslash, \smallsetminus</code> | \times | <code>\rightthreetimes</code> |
| $+$ | <code>+, \plus</code> | \times | <code>\dimes, \btimes</code> |
| \times | <code>\times</code> | \times | <code>\rtimes</code> |
| \pm | <code>\pm</code> | \times | <code>\utimes, \ttimes</code> |
| \mp | <code>\mp</code> | \times | <code>\ltimes</code> |
| $\dot{-}$ | <code>\dotminus</code> | \times | <code>\lrtimes</code> |
| $\dot{-}$ | <code>\minusdot</code> | \times | <code>\upbowtie, \hourglass</code> |
| $\dot{-}$ | <code>\minusfdots</code> | \times | <code>\rightY</code> |
| $\dot{-}$ | <code>\minusrdots</code> | \times | <code>\upY</code> |
| $\dot{-}$ | <code>\dotsminusdots</code> | \times | <code>\leftY</code> |

| | | | |
|-----------------------|--|-----------------------|--|
| \Uparrow | <code>\downY</code> | \blacktriangleleft | <code>\smallblacktriangleleft</code> |
| \wedge | <code>\wedge, \land</code> | \blacktriangledown | <code>\smallblacktriangledown</code> |
| \vee | <code>\vee, \lor</code> | \triangleright | <code>\medtriangleright, \triangleright</code> |
| \wedge | <code>\wedgedot</code> | \triangle | <code>\medtriangleup, \triangle, \vartriangle</code> |
| \vee | <code>\veedot</code> | \triangleleft | <code>\medtriangleleft, \triangleleft</code> |
| $\underline{\vee}$ | <code>\veebar</code> | ∇ | <code>\medtriangledown, \triangledown</code> |
| $\overline{\wedge}$ | <code>\barwedge</code> | \blacktriangleright | <code>\medblacktriangleright, \blacktriangleright</code> |
| \vee | <code>\veedoublebar</code> | \blacktriangleup | <code>\medblacktriangleup, \blacktriangleup</code> |
| \equiv | <code>\doublebarwedge</code> | \blacktriangleleft | <code>\medblacktriangleleft, \blacktriangleleft</code> |
| \wedge | <code>\doublewedge, \wedgeonwedge</code> | \blacktriangledown | <code>\medblacktriangledown, \blacktriangledown</code> |
| \wedge | <code>\doublevee, \veeonwee</code> | \bigtriangleup | <code>\bigtriangleup</code> |
| \curlywedge | <code>\curlywedge</code> | \bigtriangledown | <code>\bigtriangledown</code> |
| \curlyvee | <code>\curlyvee</code> | \circ | <code>\smallcircle, \circ, \smwhtcircle</code> |
| \curlywedgedot | <code>\curlywedgedot</code> | \bullet | <code>\smallblackcircle, \bullet, \smblkcicle</code> |
| \curlyveedot | <code>\curlyveedot</code> | \bigcirc | <code>\medcircle, \mdlgwhtcircle, \mdwhtcircle</code> |
| \doublecurlywedge | <code>\doublecurlywedge</code> | \bigodot | <code>\medblackcircle, \mdlgbkcircle, \mdblkcicle</code> |
| \doublecurlyvee | <code>\doublecurlyvee</code> | \ominus | <code>\ominus</code> |
| \cup | <code>\cup</code> | \oslash | <code>\oslash, \circledvert</code> |
| \cap | <code>\cap</code> | \oslash | <code>\oslash</code> |
| \cup | <code>\doublecup, \Cup</code> | \oplus | <code>\oplus</code> |
| \cap | <code>\doublecap, \Cap</code> | \otimes | <code>\otimes</code> |
| \cup | <code>\cupdot</code> | \odot | <code>\odot</code> |
| \cap | <code>\capdot</code> | \odot | <code>\ocirc, \circledcirc</code> |
| \cup | <code>\cupplus, \uplus</code> | \odot | <code>\oast, \circledast</code> |
| \cap | <code>\capplus</code> | \odot | <code>\odash, \circleddash</code> |
| \sqcup | <code>\sqcup</code> | \odot | <code>\oequal, \circledequal</code> |
| \sqcap | <code>\sqcap</code> | \bigcirc | <code>\bigcirc</code> |
| \sqcup | <code>\doublesqcup, \Sqcup</code> | \square | <code>\smallsquare, \smwhtsquare</code> |
| \sqcap | <code>\doublesqcap, \Sqcap</code> | | |
| \sqcup | <code>\sqcupdot</code> | | |
| \sqcap | <code>\sqcapdot</code> | | |
| \sqcup | <code>\sqcupplus</code> | | |
| \sqcap | <code>\sqcapplus</code> | | |
| \lrcorner | <code>\pullback</code> | | |
| \rceil | <code>\pushout</code> | | |
| \triangleright | <code>\smalltriangleright</code> | | |
| \triangleup | <code>\smalltriangleup</code> | | |
| \triangleleft | <code>\smalltriangleleft</code> | | |
| \triangledown | <code>\smalltriangledown</code> | | |
| \blacktriangleright | <code>\smallblacktriangleright</code> | | |
| \blacktriangleup | <code>\smallblacktriangleup</code> | | |

| | |
|--|--|
| ■ <code>\smallblacksquare</code> , | ◇ <code>\diamondminus</code> |
| <code>\smbllksquare</code> | ◇ <code>\diamondvert</code> |
| □ <code>\medsquare</code> , <code>\square</code> , <code>\Box</code> , | ◇ <code>\diamondslash</code> |
| <code>\mdlgwhtsquare</code> , <code>\mdwhtsquare</code> | ◇ <code>\diamondbackslash</code> , |
| ■ <code>\medblacksquare</code> , | <code>\diamondbslash</code> |
| <code>\mdlgblksquare</code> , <code>\mdbllksquare</code> | ◇ <code>\diamondplus</code> |
| ▢ <code>\boxminus</code> | ◇ <code>\diamondtimes</code> |
| ▣ <code>\boxvert</code> , <code>\boxbar</code> | ◇ <code>\diamondddot</code> , <code>\diamondcdot</code> |
| ▤ <code>\boxslash</code> , <code>\boxdiag</code> | ◇ <code>\diamondddiamond</code> |
| ▥ <code>\boxbackslash</code> , <code>\boxbslash</code> | ☆ <code>\smallwhitestar</code> , <code>\smwhitestar</code> |
| ▦ <code>\boxplus</code> | ★ <code>\smallblackstar</code> , <code>\star</code> |
| ▧ <code>\boxtimes</code> | ☆ <code>\medwhitestar</code> |
| ▨ <code>\boxdot</code> | ★ <code>\medblackstar</code> , <code>\medstar</code> |
| ▩ <code>\boxbox</code> | * <code>\ast</code> , <code>\ast</code> |
| ◇ <code>\smallldiamond</code> , <code>\diamond</code> , | T <code>\intercal</code> |
| <code>\smwhtdiamond</code> | ˆ <code>\wreath</code> , <code>\wr</code> |
| ◆ <code>\smallblackdiamond</code> , | ⋈ <code>\amalg</code> |
| <code>\blackdiamond</code> , <code>\smbllkdiamond</code> | ◁ <code>\lhd</code> |
| ◇ <code>\meddiamond</code> , <code>\Diamond</code> , | ▷ <code>\rhd</code> |
| <code>\mdlgwhtdiamond</code> , | ≠ <code>\unlhd</code> |
| <code>\mdwhtdiamond</code> | ≠ <code>\unrhd</code> |
| ◆ <code>\medblackdiamond</code> , | / <code>\divslash</code> |
| <code>\mdlgblkdiamond</code> , | \ <code>\setminus</code> |
| <code>\mdblkdiamond</code> | |

4.3 Relations

| | |
|---|--|
| = <code>\equal</code> , <code>\Relbar</code> | ≅ <code>\bumpeq</code> |
| := <code>\coloneq</code> , <code>\coloneqq</code> | ≐ <code>\bumpeq</code> |
| ≡ <code>\equiv</code> | ⋈ <code>\Bumpeq</code> |
| ~ <code>\sim</code> | ≐ <code>\doteq</code> |
| ↖ <code>\backsim</code> | ≐ <code>\eqdot</code> |
| ≈ <code>\approx</code> | ≐ <code>\Doteq</code> |
| ≈ <code>\triplesim</code> , <code>\approxident</code> | ≐ <code>\fallingdotseq</code> |
| ≈ <code>\simeq</code> | ≐ <code>\risingdotseq</code> |
| ≈ <code>\backsimeq</code> | ☺ <code>\smile</code> , <code>\smallsmile</code> |
| ≈ <code>\eqsim</code> | ☹ <code>\frown</code> , <code>\smallfrown</code> |
| ≡ <code>\cong</code> | ☹ <code>\smilefrown</code> , <code>\asymp</code> |
| ≡ <code>\backcong</code> | ◌ <code>\frownsmile</code> , <code>\closure</code> |
| ≡ <code>\dotcong</code> | ≡ <code>\smileeq</code> |
| ≈ <code>\approxeq</code> | ≡ <code>\frowneq</code> , <code>\arceq</code> |

| | | | |
|----|-------------------------------|---|-----------------------|
| # | \eqcirc | ⊊ | \sqsupset |
| ∘ | \circeq | ⊋ | \sqsubseteq |
| ⋈ | \wedgeq, \hateq | ⊌ | \sqsupseteq |
| ≡ | \veeeq | ⊍ | \sqsubseteqeq |
| ⋈ | \stareq | ⊎ | \sqsupseteqeq |
| ⋈ | \triangleleeq, \triangleleq | ⊏ | \Ssubset |
| ∈ | \in | ⊐ | \Ssupset |
| ⊃ | \owns, \ni | ⊂ | \subset |
| < | <, \less | ⊃ | \supset |
| > | >, \gtr | ⊆ | \subseteq |
| ≤ | \leq, \le | ⊇ | \supseteq |
| ≥ | \geq, \ge | ⊈ | \subseteqeq |
| ≲ | \leqslant | ⊉ | \supseteqeq |
| ≳ | \geqslant | ⊐ | \Subset |
| ≪ | \leqq | ⊑ | \Supset |
| ≽ | \geqq | < | \prec |
| ≈ | \lesssim | > | \succ |
| ≈ | \gtrsim | ⊆ | \preceq |
| ≈ | \lessapprox | ⊇ | \succeq |
| ≈ | \gtrapprox | ≈ | \preccurlyeq |
| ≲ | \lessgtr | ≈ | \succcurlyeq |
| ≈ | \gtrless | ≪ | \preceqq |
| ≲ | \lesseqgtr | ≽ | \succeqq |
| ≲ | \gtreqless | ≈ | \precsim |
| ≲ | \lesseqqgtr | ≈ | \succsim |
| ≲ | \gtreqqless | ≈ | \precapprox |
| ≲ | \lesseqslantgtr, \lesq | ≈ | \succapprox |
| ≲ | \gtreqslantless, \gesl | < | \lessdot |
| ≪ | \ll | > | \gtrdot |
| ≫ | \gg | ⊆ | \leqdot |
| ≪≪ | \lll, \llless | ⊇ | \geqdot |
| ≫≫ | \ggg, \gggtr | ⊆ | \leqslantdot, \lesdot |
| ◁ | \lessclosed, \vartriangleleft | ⊇ | \geqslantdot, \gesdot |
| ▷ | \gtrclosed, \vartriangleright | < | \eqslantless |
| ⊲ | \leqclosed, \trianglelefteq | > | \eqslantgtr |
| ⊳ | \geqclosed, \trianglerighteq | < | \curlyeqprec |
| ◁ | \lesscc, \ltcc | > | \curlyeqsucc |
| ▷ | \gtrcc, \gtcc | ~ | \thicksim |
| ⊲ | \leqslcc, \lescc | ≈ | \thickapprox |
| ⊳ | \geqslcc, \gescc | → | \rightarrow, \to |
| ⊂ | \sqsubset | ↑ | \uparrow |



















































































| | | | |
|----------------------|-----------------------------------|---------------------------|--|
| \leftarrow | <code>\leftarrow, \gets</code> | \Downarrow | <code>\downmapsto, \mapsdown</code> |
| \downarrow | <code>\downarrow</code> | \nearrow | <code>\nemapsto</code> |
| \nearrow | <code>\nearrow</code> | \nwarrow | <code>\nwmapsto</code> |
| \nwarrow | <code>\nwarrow</code> | \swarrow | <code>\swmapsto</code> |
| \swarrow | <code>\swarrow</code> | \searrow | <code>\semapsto</code> |
| \searrow | <code>\searrow</code> | \hookrightarrow | <code>\hookrightarrow</code> |
| \Rightarrow | <code>\Rightarrow</code> | \hookuparrow | <code>\hookuparrow</code> |
| \Uparrow | <code>\Uparrow</code> | \leftarrow | <code>\varhookleftarrow</code> |
| \Leftarrow | <code>\Leftarrow</code> | \downarrow | <code>\varhookdownarrow</code> |
| \Downarrow | <code>\Downarrow</code> | \nearrow | <code>\varhooknearrow</code> |
| \nearrow | <code>\Nearrow</code> | \nwarrow | <code>\hooknwarrow, \hknwarrow</code> |
| \nwarrow | <code>\Nwarrow</code> | \swarrow | <code>\varhookswarrow</code> |
| \swarrow | <code>\Swarrow</code> | \searrow | <code>\hooksearrow, \hksearrow</code> |
| \searrow | <code>\Searrow</code> | \rightarrow | <code>\varhookrightarrow</code> |
| \leftrightarrow | <code>\leftrightharpoonup</code> | \uparrow | <code>\varhookuparrow</code> |
| \updownarrow | <code>\updownarrow</code> | \leftarrow | <code>\hookleftarrow</code> |
| \nearrow | <code>\neswarrow</code> | \downarrow | <code>\hookdownarrow</code> |
| \nwarrow | <code>\nwsearrow</code> | \nearrow | <code>\hooknearrow, \hknearrow</code> |
| \Leftrightarrow | <code>\Leftrightarrow</code> | \nwarrow | <code>\varhooknwarrow</code> |
| \Updownarrow | <code>\Updownarrow</code> | \swarrow | <code>\hookswarrow, \hkswarrow</code> |
| \Neswarrow | <code>\Neswarrow</code> | \searrow | <code>\varhooksearrow</code> |
| \Nwsearrow | <code>\Nwsearrow</code> | \rightarrow | <code>\rightharpoonup</code> |
| \twoheadrightarrow | <code>\twoheadrightarrow</code> | \upharpoonleft | <code>\upharpoonleft</code> |
| \twoheaduparrow | <code>\twoheaduparrow</code> | \leftarrow | <code>\leftharpoondown</code> |
| \twoheadleftarrow | <code>\twoheadleftarrow</code> | \downharpoonright | <code>\downharpoonright</code> |
| \twoheaddownarrow | <code>\twoheaddownarrow</code> | \nearrow | <code>\neharpoonnw</code> |
| \twoheadnearrow | <code>\twoheadnearrow</code> | \nwarrow | <code>\nwharpoonsw</code> |
| \twoheadnwarrow | <code>\twoheadnwarrow</code> | \swarrow | <code>\swharpoonse</code> |
| \twoheadswarrow | <code>\twoheadswarrow</code> | \searrow | <code>\seharpoonne</code> |
| \twoheadsearrow | <code>\twoheadsearrow</code> | \rightarrow | <code>\rightharpoondown</code> |
| \rightarrowtail | <code>\rightarrowtail</code> | \upharpoonright | <code>\upharpoonright, \restriction</code> |
| \uparrowtail | <code>\uparrowtail</code> | \leftarrow | <code>\leftharpoonup</code> |
| \leftarrowtail | <code>\leftarrowtail</code> | \downharpoonleft | <code>\downharpoonleft</code> |
| \downarrowtail | <code>\downarrowtail</code> | \nearrow | <code>\neharpoonse</code> |
| \nearrowtail | <code>\nearrowtail</code> | \nwarrow | <code>\nwharpoonne</code> |
| \nwarrowtail | <code>\nwarrowtail</code> | \swarrow | <code>\swharpoonnw</code> |
| \swarrowtail | <code>\swarrowtail</code> | \searrow | <code>\seharpoonsw</code> |
| \searrowtail | <code>\searrowtail</code> | \leftrightarrow | <code>\leftrightharpoonupdown</code> |
| \mapsto | <code>\mapsto, \mapsto</code> | \updownharpoonleftright | <code>\updownharpoonleftright</code> |
| \upmapsto | <code>\upmapsto, \mapsto</code> | \nearrow | <code>\neswharpoonnwse</code> |
| \leftmapsto | <code>\leftmapsto, \mapsto</code> | \nwarrow | <code>\nwseharpoonnesw</code> |

| | | | |
|---|---|---|--|
|  | <code>\acwsearcarrow,</code> <code>\uprightcurvearrow</code> |  | <code>\looparrowleft</code> |
|  | <code>\acwnearcarrow,</code> <code>\leftupcurvedarrow</code> |  | <code>\longrightarrow</code> |
|  | <code>\acwnwarcarrow,</code> <code>\downleftcurvedarrow</code> |  | <code>\longleftarrow</code> |
|  | <code>\acswarcarrow,</code> <code>\rightdowncurvedarrow</code> |  | <code>\longlefttrightarrow</code> |
|  | <code>\bdoverarcarrow</code> |  | <code>\Longrightarrow</code> |
|  | <code>\bdleftarcarrow</code> |  | <code>\Longleftarrow</code> |
|  | <code>\bdunderarcarrow</code> |  | <code>\Longlefttrightarrow</code> |
|  | <code>\bdrigharcarrow</code> |  | <code>\longmapsto</code> |
|  | <code>\bdnwarcarrow</code> |  | <code>\emptyblackspoon,\origof</code> |
|  | <code>\bdswarcarrow</code> |  | <code>\filledemptyspoon,\imageof</code> |
|  | <code>\bdsearcarrow</code> |  | <code>\leftrightspoon,\dualmap</code> |
|  | <code>\bdnearcarrow</code> |  | <code>\leftrightblackspoon</code> |
|  | <code>\leftfootline,\vlongdash</code> |  | <code>\rightvdash,\vdash</code> |
|  | <code>\rightfootline,\vlongdashv</code> |  | <code>\upvdash,\perp</code> |
|  | <code>\acwcirculararrowup</code> |  | <code>\leftvdash,\dashv</code> |
|  | <code>\acwcirculararrowleft,</code> <code>\circlearrowleft,</code> <code>\acwopencirculararrow</code> |  | <code>\downvdash</code> |
|  | <code>\acwcirculararrowdown,</code> <code>\acwgapcirculararrow</code> |  | <code>\rightassert,\assert,</code> <code>\shortrighttack</code> |
|  | <code>\acwcirculararrowright</code> |  | <code>\upassert,\shortuptack</code> |
|  | <code>\cwcirculararrowdown,</code> <code>\cwgapcirculararrow</code> |  | <code>\leftassert,\shortlefttack</code> |
|  | <code>\cwcirculararrowright,</code> <code>\circlearrowright,</code> <code>\cwopencirculararrow</code> |  | <code>\downassert,\shortdowntack</code> |
|  | <code>\cwcirculararrowup</code> |  | <code>\rightvDash,\vDash</code> |
|  | <code>\cwcirculararrowleft</code> |  | <code>\upvDash,\Vbar</code> |
|  | <code>\Rightarrow \Rrightarrow</code> |  | <code>\leftvDash,\VDash</code> |
|  | <code>\Uparrow</code> |  | <code>\downvDash,\barV</code> |
|  | <code>\Lleftarrow</code> |  | <code>\rightmodels,\models</code> |
|  | <code>\Ddownarrow</code> |  | <code>\upmodels</code> |
|  | <code>\Lsh</code> |  | <code>\leftmodels</code> |
|  | <code>\Rsh</code> |  | <code>\downmodels</code> |
|  | <code>\Ldsh</code> |  | <code>\rightVdash,\Vdash</code> |
|  | <code>\Rdsh</code> |  | <code>\upVdash</code> |
|  | <code>\looparrowright</code> |  | <code>\leftVdash,\dashV</code> |
| | |  | <code>\downVdash</code> |
| | |  | <code>\rightVDash,\VDash</code> |
| | |  | <code>\upVDash</code> |
| | |  | <code>\leftVDash,\DashV</code> |
| | |  | <code>\downVDash</code> |
| | |  | <code>\rightVdash,\Vdash</code> |
| | |  | <code>\dashVv</code> |
| | |  | <code>\vDdash</code> |
| | |  | <code>\Ddashv</code> |

| | | | |
|------------------------------|---|----------------------------------|---|
| \neq | <code>\nequal, \neq, \ne</code> | \ngeqq | <code>\ngeqq</code> |
| \nequiv | <code>\nequiv</code> | \nlessssim | <code>\nlessssim</code> |
| \nsim | <code>\nsim</code> | \ngtrsim | <code>\ngtrsim</code> |
| \nbacksim | <code>\nbacksim</code> | \nlessapprox | <code>\nlessapprox</code> |
| \napprox | <code>\napprox</code> | \ngtrapprox | <code>\ngtrapprox</code> |
| $\ntriplesim, \napproxident$ | <code>\ntriplesim, \napproxident</code> | \nlessgtr | <code>\nlessgtr</code> |
| \nsimeq, \nsime | <code>\nsimeq, \nsime</code> | \ngtrless | <code>\ngtrless</code> |
| \nbacksimeq | <code>\nbacksimeq</code> | \nlesseqgtr | <code>\nlesseqgtr</code> |
| \neqsim | <code>\neqsim</code> | \ngtreqlless | <code>\ngtreqlless</code> |
| \ncong | <code>\ncong</code> | \nlesseqqgtr | <code>\nlesseqqgtr</code> |
| \nbackcong | <code>\nbackcong</code> | \ngtreqqless | <code>\ngtreqqless</code> |
| \napproxeq | <code>\napproxeq</code> | \nlesseqslantgtr, \nlesg | <code>\nlesseqslantgtr, \nlesg</code> |
| \nbumpeq | <code>\nbumpeq</code> | \ngtreqslantless, \ngesl | <code>\ngtreqslantless, \ngesl</code> |
| \nbumpeqeq | <code>\nbumpeqeq</code> | \nll | <code>\nll</code> |
| \nBumpeq | <code>\nBumpeq</code> | \ngg | <code>\ngg</code> |
| \ndoteq | <code>\ndoteq</code> | \nlll | <code>\nlll</code> |
| \neqdot | <code>\neqdot</code> | \nggg | <code>\nggg</code> |
| \nDoteq | <code>\nDoteq</code> | $\nlessclosed, \ntriangleleft$ | <code>\nlessclosed, \ntriangleleft</code> |
| \nfallingdotseq | <code>\nfallingdotseq</code> | $\ngtrclosed, \ntriangleright$ | <code>\ngtrclosed, \ntriangleright</code> |
| \nrisingdotseq | <code>\nrisingdotseq</code> | $\nleqclosed, \ntrianglelefteq$ | <code>\nleqclosed, \ntrianglelefteq</code> |
| \nsmile | <code>\nsmile</code> | $\ngeqclosed, \ntrianglerighteq$ | <code>\ngeqclosed, \ntrianglerighteq</code> |
| \nfrown | <code>\nfrown</code> | \nlesscc, \nltcc | <code>\nlesscc, \nltcc</code> |
| \nsmilefrown, \nasympt | <code>\nsmilefrown, \nasympt</code> | \ngtrcc, \ngtcc | <code>\ngtrcc, \ngtcc</code> |
| \nfrownsmile, \nclosure | <code>\nfrownsmile, \nclosure</code> | \nleqslcc, \nlescc | <code>\nleqslcc, \nlescc</code> |
| \nsmileeq | <code>\nsmileeq</code> | \ngeqslcc, \ngescc | <code>\ngeqslcc, \ngescc</code> |
| \nfrowneq, \narceq | <code>\nfrowneq, \narceq</code> | \nsubset | <code>\nsubset</code> |
| \neqcirc | <code>\neqcirc</code> | \nsupset | <code>\nsupset</code> |
| \ncirceq | <code>\ncirceq</code> | \nsubseteq | <code>\nsubseteq</code> |
| \nwedgeq, \nhateq | <code>\nwedgeq, \nhateq</code> | \nsubseteqeq | <code>\nsubseteqeq</code> |
| \nveeeq | <code>\nveeeq</code> | \nsubseteqeqq | <code>\nsubseteqeqq</code> |
| \nstareq | <code>\nstareq</code> | \nsubseteqeqq | <code>\nsubseteqeqq</code> |
| \ntriangleleeq | <code>\ntriangleleeq</code> | \nSsubset | <code>\nSsubset</code> |
| \nin, \notin | <code>\nin, \notin</code> | \nSupset | <code>\nSupset</code> |
| \nowns, \nni | <code>\nowns, \nni</code> | | |
| \nless | <code>\nless</code> | | |
| \ngtr | <code>\ngtr</code> | | |
| \nleq | <code>\nleq</code> | | |
| \ngeq | <code>\ngeq</code> | | |
| \nleqslant | <code>\nleqslant</code> | | |
| \ngeqslant | <code>\ngeqslant</code> | | |
| \nleqq | <code>\nleqq</code> | | |

| | |
|-------------------------------|--------------------|
| \nprec | \succneq |
| \nsucc | \precneqq |
| \npreceq | \succneqq |
| \nsucceq | \precnsim |
| \npreccurlyeq | \succnsim |
| \nsucccurlyeq | \precnapprox |
| \npreceqq | \succnapprox |
| \nsucceqq | \rightarrowtail |
| \nprecsim | \nrightarrowtail |
| \nsucsim | \nrightarrowtail |
| \nprecapprox | \nrightarrowtail |
| \nsuccapprox | \nrightarrowtail |
| \nlessdot | \nrightarrowtail |
| \ngtrdot | \nrightarrowtail |
| \nleqdot | \nrightarrowtail |
| \ngeqdot | \nrightarrowtail |
| \nleqslantdot, \nlesdot | \nrightarrowtail |
| \ngeqslantdot, \ngesdot | \nrightarrowtail |
| \nleqslantless | \nrightarrowtail |
| \nleqslantgtr | \nrightarrowtail |
| \ncurlyeqprec | \nrightarrowtail |
| \ncurlyeqsucc | \nrightarrowtail |
| \simneqq | \nrightarrowtail |
| \backsimneqq | \nrightarrowtail |
| \lneq | \nrightarrowtail |
| \gneq | \nrightarrowtail |
| \lneqq, \lvertneqq | \nrightarrowtail |
| \gneqq, \gvertneqq | \nrightarrowtail |
| \lnsim | \nrightarrowtail |
| \gnsim | \nrightarrowtail |
| \lnapprox | \nrightarrowtail |
| \gnapprox | \nrightarrowtail |
| \sqsubsetneq | \nrightarrowtail |
| \sqsupsetneq | \nrightarrowtail |
| \sqsubsetneqq | \nrightarrowtail |
| \sqsupsetneqq | \nrightarrowtail |
| $\subsetneq, \varsubsetneq$ | \nrightarrowtail |
| $\supsetneq, \varsupsetneq$ | \nrightarrowtail |
| $\subsetneqq, \varsubsetneqq$ | \nrightarrowtail |
| $\supsetneqq, \varsupsetneqq$ | \nrightarrowtail |
| \precneq | \nrightarrowtail |









































| | | | |
|-----------------------------|--|---------------------------------|--|
| \leftarrowtail | <code>\leftarrowtail</code> | \leftharpoonup | <code>\leftharpoonup</code> |
| \downdownarrows | <code>\downdownarrows</code> | \downharpoonleft | <code>\downharpoonleft</code> |
| \nearrowtail | <code>\nearrowtail</code> | \nharpoonse | <code>\nharpoonse</code> |
| \nwarrowtail | <code>\nwarrowtail</code> | \nnwharpoonne | <code>\nnwharpoonne</code> |
| \swarrowtail | <code>\swarrowtail</code> | \nswharpoonnw | <code>\nswharpoonnw</code> |
| \searrowtail | <code>\searrowtail</code> | \nseharpoonsw | <code>\nseharpoonsw</code> |
| \rmapsto | <code>\rmapsto, \nmapsto</code> | \leftrightharpoonupdown | <code>\leftrightharpoonupdown</code> |
| \nupmapsto | <code>\nupmapsto, \nmapsup</code> | \nupdownharpoonleftright | <code>\nupdownharpoonleftright</code> |
| \lmapsto | <code>\lmapsto, \nmapsfrom</code> | \nneswharpoonnwse | <code>\nneswharpoonnwse</code> |
| \dmapsto | <code>\dmapsto, \nmapsdown</code> | \nnwseharpoonnesw | <code>\nnwseharpoonnesw</code> |
| \nmapsto | <code>\nmapsto</code> | \leftrightharpoondownup | <code>\leftrightharpoondownup</code> |
| \nnwmapsto | <code>\nnwmapsto</code> | \nupdownharpoonrightleft | <code>\nupdownharpoonrightleft</code> |
| \nswmapsto | <code>\nswmapsto</code> | \nneswharpoonsenw | <code>\nneswharpoonsenw</code> |
| \nsemapsto | <code>\nsemapsto</code> | \nnwseharpoonswne | <code>\nnwseharpoonswne</code> |
| \hookrightarrow | <code>\hookrightarrow</code> | \rightleftharpoons | <code>\rightleftharpoons</code> |
| \hookuparrow | <code>\hookuparrow</code> | $\nupdownharpoons,$ | <code>\nupdownharpoons,</code> |
| \varhookleftarrow | <code>\varhookleftarrow</code> | $\nupdownharpoonsleftright$ | <code>\nupdownharpoonsleftright</code> |
| \varhookdownarrow | <code>\varhookdownarrow</code> | \nneswharpoons | <code>\nneswharpoons</code> |
| \varhooknearrow | <code>\varhooknearrow</code> | \nsenwharpoons | <code>\nsenwharpoons</code> |
| \hooknearrow, \nhknarrow | <code>\hooknearrow, \nhknarrow</code> | \leftrightharpoons | <code>\leftrightharpoons</code> |
| \varhookswarrow | <code>\varhookswarrow</code> | $\ndownupharpoons,$ | <code>\ndownupharpoons,</code> |
| $\hooksearrow, \nhksearrow$ | <code>\hooksearrow, \nhksearrow</code> | $\ndownupharpoonsleftright$ | <code>\ndownupharpoonsleftright</code> |
| \varhookrightarrow | <code>\varhookrightarrow</code> | \nswneharpoons | <code>\nswneharpoons</code> |
| \varhookuparrow | <code>\varhookuparrow</code> | \nnwseharpoons | <code>\nnwseharpoons</code> |
| \hookleftarrow | <code>\hookleftarrow</code> | $\rightarrow, \ndasharrow,$ | <code>\rightarrow, \ndasharrow,</code> |
| \hookdownarrow | <code>\hookdownarrow</code> | \ndashrightarrow | <code>\ndashrightarrow</code> |
| $\hooknearrow, \nhknearrow$ | <code>\hooknearrow, \nhknearrow</code> | \nupbkarrow | <code>\nupbkarrow</code> |
| \varhooknwarrow | <code>\varhooknwarrow</code> | $\leftbkarrow, \ndashleftarrow$ | <code>\leftbkarrow, \ndashleftarrow</code> |
| $\hookswarrow, \nhkswarrow$ | <code>\hookswarrow, \nhkswarrow</code> | \ndownbkarrow | <code>\ndownbkarrow</code> |
| \varhooksearrow | <code>\varhooksearrow</code> | \nnebkarrow | <code>\nnebkarrow</code> |
| \rightharpoonup | <code>\rightharpoonup</code> | \nnwbkarrow | <code>\nnwbkarrow</code> |
| \nupharpoonleft | <code>\nupharpoonleft</code> | \nswbkarrow | <code>\nswbkarrow</code> |
| \leftharpoondown | <code>\leftharpoondown</code> | \nsebkarrow | <code>\nsebkarrow</code> |
| \downharpoonright | <code>\downharpoonright</code> | \rightspoon, \multimap | <code>\rightspoon, \multimap</code> |
| \nharpoonnw | <code>\nharpoonnw</code> | \nupspoon, \ncirmid | <code>\nupspoon, \ncirmid</code> |
| \nnwharpoonsw | <code>\nnwharpoonsw</code> | \leftspoon, \multimapinv | <code>\leftspoon, \multimapinv</code> |
| \nswharpoonse | <code>\nswharpoonse</code> | \downspoon, \nmidcir | <code>\downspoon, \nmidcir</code> |
| \nseharpoonne | <code>\nseharpoonne</code> | \rightarrowblackspoon | <code>\rightarrowblackspoon</code> |
| \rightharpoondown | <code>\rightharpoondown</code> | \nupblackspoon | <code>\nupblackspoon</code> |
| $\nupharpoonright,$ | <code>\nupharpoonright,</code> | \leftblackspoon | <code>\leftblackspoon</code> |
| \nrestriction | <code>\nrestriction</code> | \downblackspoon | <code>\downblackspoon</code> |

| | | | |
|---|---|---|---|
|  | <code>\nrightpitchfork</code> |  | <code>\ncwseararrow,</code> |
|  | <code>\nuppitchfork, \npitchfork</code> |  | <code>\nleftdowncurvedarrow</code> |
|  | <code>\nleftpitchfork</code> |  | <code>\ncwneararrow,</code> |
|  | <code>\ndownpitchfork</code> |  | <code>\ndownrightcurvedarrow</code> |
|  | <code>\nrightrightarrows</code> |  | <code>\nacwunderararrow</code> |
|  | <code>\nupuparrows</code> |  | <code>\nacwrightararrow</code> |
|  | <code>\nleftleftarrows</code> |  | <code>\nacwoverararrow,</code> |
|  | <code>\ndowndownarrows</code> |  | <code>\ncurvearrowleft</code> |
|  | <code>\nnenearrows</code> |  | <code>\nacwleftararrow</code> |
|  | <code>\nnwnwarrows</code> |  | <code>\nacwseararrow,</code> |
|  | <code>\nswswarrows</code> |  | <code>\nuprightcurvearrow</code> |
|  | <code>\nsesearrows</code> |  | <code>\nacwneararrow,</code> |
|  | <code>\nrightrightarrows</code> |  | <code>\nleftupcurvedarrow</code> |
|  | <code>\nupdownarrows</code> |  | <code>\nacwnwararrow,</code> |
|  | <code>\nneswarrows</code> |  | <code>\ndownleftcurvedarrow</code> |
|  | <code>\nnwsearrows</code> |  | <code>\nacswararrow,</code> |
|  | <code>\nleftrightharrows</code> |  | <code>\nrightdowncurvedarrow</code> |
|  | <code>\ndownuparrows</code> |  | <code>\nbdoverararrow</code> |
|  | <code>\nswnearrows</code> |  | <code>\nbdleftararrow</code> |
|  | <code>\nsenwarrows</code> |  | <code>\nbdunderararrow</code> |
|  | <code>\nrightrightwavearrow, \nleadsto</code> |  | <code>\nbdrightararrow</code> |
|  | <code>\nvarupwavearrow</code> |  | <code>\nbdnwararrow</code> |
|  | <code>\nvarleftwavearrow</code> |  | <code>\nbdswararrow</code> |
|  | <code>\ndownwavearrow</code> |  | <code>\nbdseararrow</code> |
|  | <code>\nvarrightwavearrow</code> |  | <code>\nbdneararrow</code> |
|  | <code>\nupwavearrow</code> |  | <code>\nleftfootline, \nlongdash</code> |
|  | <code>\nleftwavearrow</code> |  | <code>\nrightfootline, \nlongdashv</code> |
|  | <code>\nvardownwavearrow</code> |  | <code>\nacwcirclearrowup</code> |
|  | <code>\nleftrightwavearrow</code> |  | <code>\nacwcirclearrowleft,</code> |
|  | <code>\nupdownwavearrow</code> |  | <code>\ncirclearrowleft,</code> |
|  | <code>\nvarleftrightwavearrow</code> |  | <code>\nacwopencirclearrow</code> |
|  | <code>\nvarupdownwavearrow</code> |  | <code>\nacwcirclearrowdown,</code> |
|  | <code>\ncwoverararrow,</code> |  | <code>\nacwgapcirclearrow</code> |
|  | <code>\ncurvearrowright</code> |  | <code>\nacwcirclearrowright</code> |
|  | <code>\ncwleftararrow</code> |  | <code>\ncwcirclearrowdown,</code> |
|  | <code>\ncwunderararrow</code> |  | <code>\ncwgapcirclearrow</code> |
|  | <code>\ncwrightararrow</code> |  | <code>\ncwcirclearrowright,</code> |
|  | <code>\ncwnwararrow,</code> |  | <code>\ncirclearrowright,</code> |
|  | <code>\nrightupcurvedarrow</code> |  | <code>\ncwopencirclearrow</code> |
|  | <code>\ncwswararrow,</code> |  | <code>\ncwcirclearrowup</code> |
|  | <code>\nupleftcurvedarrow</code> |  | <code>\ncwcirclearrowleft</code> |

| | | | | | |
|--------------------|--------------------|-------------------------------------|-------------------|-------------------|--|
| \mathbb{W} | \mathbb{W} | <code>\bigdoublecurlyvee</code> | $\int \dots \int$ | $\int \dots \int$ | <code>\idotsint, \dotsint</code> |
| \bigcap | \bigcap | <code>\bigcap</code> | \oint | \oint | <code>\landupint, \intclockwise</code> |
| \bigcup | \bigcup | <code>\bigcup</code> | \oint | \oint | <code>\landdownint, \awint,</code> |
| $\bigcap\!\cdot$ | $\bigcap\!\cdot$ | <code>\bigcapdot</code> | | | <code>\intctrackwise</code> |
| $\bigcup\!\cdot$ | $\bigcup\!\cdot$ | <code>\bigcupdot</code> | \int | \int | <code>\intbar</code> |
| $\bigcap+$ | $\bigcap+$ | <code>\bigcapplus</code> | \int | \int | <code>\intBar</code> |
| $\bigcup+$ | $\bigcup+$ | <code>\bigcupplus, \biguplus</code> | \int | \int | <code>\fint</code> |
| \bigsqcap | \bigsqcap | <code>\bigsqcap</code> | \oint | \oint | <code>\oint</code> |
| \bigsqcup | \bigsqcup | <code>\bigsqcup</code> | \oint | \oint | <code>\oiint</code> |
| $\bigsqcap\!\cdot$ | $\bigsqcap\!\cdot$ | <code>\bigsqcapdot</code> | \oint | \oint | <code>\oiint</code> |
| $\bigsqcup\!\cdot$ | $\bigsqcup\!\cdot$ | <code>\bigsqcupdot</code> | \oint | \oint | <code>\oiint</code> |
| $\bigsqcap+$ | $\bigsqcap+$ | <code>\bigsqcapplus</code> | \oint | \oint | <code>\rcircrightint,</code> |
| $\bigsqcup+$ | $\bigsqcup+$ | <code>\bigsqcupplus</code> | | | <code>\ointctrackwise</code> |
| \bigoplus | \bigoplus | <code>\bigoplus</code> | \oint | \oint | <code>\lcircrightint,</code> |
| \bigotimes | \bigotimes | <code>\bigotimes</code> | | | <code>\varointclockwise</code> |
| \bigodot | \bigodot | <code>\bigodot</code> | \oint | \oint | <code>\rcircleleftint,</code> |
| \bigcircast | \bigcircast | <code>\bigcircast</code> | | | <code>\varointctrackwise</code> |
| \prod | \prod | <code>\prod</code> | \oint | \oint | <code>\lcircleleftint,</code> |
| \coprod | \coprod | <code>\coprod</code> | | | <code>\ointclockwise</code> |
| \sum | \sum | <code>\sum</code> | \oint | \oint | <code>\sumint</code> |
| \osum | \osum | <code>\osum</code> | \prod | \prod | <code>\smallprod</code> |
| \int | \int | <code>\int</code> | \prod | \prod | <code>\smallcoprod</code> |
| \iint | \iint | <code>\iint</code> | \int | \int | <code>\smallint</code> |
| \iiint | \iiint | <code>\iiint</code> | $\sqrt{\quad}$ | $\sqrt{\quad}$ | <code>\surd</code> |
| \iiiint | \iiiint | <code>\iiiint</code> | | | |

4.6 Delimiters and accents

| | | | |
|---------|-------------------------|-----------------------------------|----------------------|
| $((((($ | <code>(, \lparen</code> | $\lfloor \lfloor \lfloor \lfloor$ | <code>\lfloor</code> |
| $))))$ | <code>), \rparen</code> | $\rfloor \rfloor \rfloor \rfloor$ | <code>\rfloor</code> |
| $[[[[[$ | <code>[, \lbrack</code> | $\lceil \lceil \lceil \lceil$ | <code>\lceil</code> |
| $]]]]]$ | <code>], \rbrack</code> | $\rceil \rceil \rceil \rceil$ | <code>\rceil</code> |

| | | | |
|---|-----------------------------|---|----------------------------|
|  | <code>\ulcorner</code> |  | <code>\rvert</code> |
|  | <code>\urcorner</code> |  | <code>\Vert, \lVert</code> |
|  | <code>\llcorner</code> |  | <code>\lVert</code> |
|  | <code>\lrcorner</code> |  | <code>\rVert</code> |
|  | <code>\ullcorner</code> |  | <code>\Vvert</code> |
|  | <code>\ulrcorner</code> |  | <code>\lVvert</code> |
|  | <code>\lsem, \lBrack</code> |  | <code>\rVvert</code> |
|  | <code>\rsem, \rBrack</code> |  | <code>\arrowvert</code> |
|  | <code>\lbrace, \{</code> |  | <code>\Arrowvert</code> |
|  | <code>\rbrace, \}</code> |  | <code>\lgroup</code> |
|  | <code>\langle</code> |  | <code>\rgroup</code> |
|  | <code>\rangle</code> |  | <code>\lmoustache</code> |
|  | <code>\lAngle</code> |  | <code>\rmoustache</code> |
|  | <code>\rAngle</code> |  | <code>\bracevert</code> |
|  | <code>\langedot</code> |  | <code>\uparrow</code> |
|  | <code>\rangedot</code> |  | <code>\downarrow</code> |
|  | <code>/, \mathslash</code> |  | <code>\updownarrow</code> |
|  | <code>\backslash</code> |  | <code>\Uparrow</code> |
|  | <code> , \vert</code> |  | <code>\Downarrow</code> |
|  | <code>\lvert</code> |  | <code>\Updownarrow</code> |

| | | | | | |
|--------------------|------------------------------|-----------------------|----------------------------------|-----------------------------|-----------------------------------|
| \overbrace{xxx} | <code>\overbrace</code> | \overline{xxx} | <code>\overline{xxx}</code> | <code>\overline{xxx}</code> | <code>\overline{xxx}</code> |
| \underbrace{xxx} | <code>\underbrace</code> | \overleftarrow{xxx} | <code>\overleftarrow{xxx}</code> | \overrightarrow{xxx} | <code>\overrightarrow{xxx}</code> |
| \overgroup{xxx} | <code>\overgroup</code> | \underline{xxx} | <code>\underline{xxx}</code> | | |
| \undergroup{xxx} | <code>\undergroup</code> | | | | |
| \sqrt{b} | <code>\sqrt{b}</code> | \vec{b} | <code>\vec{b}</code> | | |
| \widehat{xxx} | <code>\widehat{xxx}</code> | \bar{b} | <code>\bar{b}</code> | | |
| \widetilde{xxx} | <code>\widetilde{xxx}</code> | \backslash | <code>\backslash</code> | | |
| \wideparen{xxx} | <code>\wideparen{xxx}</code> | \cancel{b} | <code>\cancel{b}</code> | | |

4.7 Faked symbols

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

| | | | |
|------------|-----------------------------|-------------------|------------------------------|
| \dagger | <code>\dagger</code> | \Re | <code>\Re</code> |
| \ddagger | <code>\ddagger</code> | \Im | <code>\Im</code> |
| \P | <code>\mathparagraph</code> | \hbar | <code>\hbar</code> |
| \S | <code>\mathsection</code> | \hslash | <code>\hslash</code> |
| $\$$ | <code>\mathdollar</code> | \textcircled{R} | <code>\textcircled{R}</code> |
| \pounds | <code>\mathsterling</code> | \textcircled{S} | <code>\textcircled{S}</code> |
| \yen | <code>\yen</code> | | |

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.

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

5 Implementation

```
1 \langle *style \rangle
2 \RequirePackage{xkeyval}
```

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

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

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

```

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

```

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

```

6 \newcommand{\fdsy@mweight}{Book}
7 \newcommand{\fdsy@msweight}{Book}
8 \newcommand{\fdsy@bweight}{Medium}
9 \newcommand{\fdsy@bsweight}{Medium}
10 \define@choicekey*{fdsymbol.sty}{normalweight}[\@tempa\@tempb]{book,regular,auto}{%
11   \ifcase\@tempb\relax
12     \renewcommand{\fdsy@mweight}{Book}
13     \renewcommand{\fdsy@msweight}{Book}
14   \or
15     \renewcommand{\fdsy@mweight}{Regular}
16     \renewcommand{\fdsy@msweight}{Regular}
17   \or
18     \renewcommand{\fdsy@mweight}{Book}
19     \renewcommand{\fdsy@msweight}{Regular}
20   \fi
21 }
22 \define@choicekey*{fdsymbol.sty}{boldweight}[\@tempa\@tempb]{medium,bold,auto}{%
23   \ifcase\@tempb\relax
24     \renewcommand{\fdsy@bweight}{Medium}
25     \renewcommand{\fdsy@bsweight}{Medium}
26   \or
27     \renewcommand{\fdsy@bweight}{Bold}
28     \renewcommand{\fdsy@bsweight}{Bold}
29   \or
30     \renewcommand{\fdsy@bweight}{Medium}
31     \renewcommand{\fdsy@bsweight}{Bold}
32   \fi
33 }
34
35 \ExecuteOptionsX{largedelims=false}
36 \ProcessOptionsX

```

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

```

37 \ifpackageloaded{amsmath}{}{\RequirePackage{amsmath}}
38 \ifpackageloaded{textcomp}{}{\RequirePackage{textcomp}}
39 \ifundefined{mathfrak}{}{\RequirePackage{eufrak}}{}

```

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

```

40 \iffdsy@largedelims
41   \renewcommand{\Big}{\bBigg@{1.25}}

```

```

42 \renewcommand{\bigg}{\bBigg@{1.66}}
43 \renewcommand{\Bigg}{\bBigg@{2.08}}
44 \fi

```

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

```

45 \DeclareRobustCommand{\dagger}{\fdsy@text{\textdagger}}
46 \DeclareRobustCommand{\ddagger}{\fdsy@text{\textdaggerdbl}}
47 \DeclareRobustCommand{\mathparagraph}{\fdsy@text{\textparagraph}}
48 \DeclareRobustCommand{\mathsection}{\fdsy@text{\textsection}}
49 \DeclareRobustCommand{\mathdollar}{\fdsy@text{\textdollar}}
50 \DeclareRobustCommand{\mathsterling}{\fdsy@text{\textsterling}}
51 \DeclareRobustCommand{\yen}{\fdsy@text{\textyen}}
52 \DeclareRobustCommand{\circledR}{\fdsy@text{\textcircled{%
53   \check@mathfonts\fontsize\sf@size\z@math@fontsfalse\selectfont R}}}
54 \DeclareRobustCommand{\circledS}{\fdsy@text{\textcircled{%
55   \check@mathfonts\fontsize\sf@size\z@math@fontsfalse\selectfont S}}}
56 \DeclareRobustCommand{\Re}{\mathfrak{R}}
57 \DeclareRobustCommand{\Im}{\mathfrak{I}}
58 \DeclareRobustCommand{\dotplus}{\mathbin{\dot{+}}}
59 \DeclareRobustCommand{\dotcong}{\mathrel{\dot{\cong}}}
60 \DeclareRobustCommand{\thicksim}{\mathrel{\text{\boldmath$\math@sim$}}}
61 \DeclareRobustCommand{\thickapprox}{\mathrel{\text{\boldmath$\math@approx$}}}
62 \let\hbar\undefined
63 \let\hslash\undefined
64 \DeclareRobustCommand{\hbar}{\middlebar h}
65 \DeclareRobustCommand{\hslash}{\middleslash h}
66 \DeclareRobustCommand{\veebar}{\mathbin{\underline{\vee}}}
67 \DeclareRobustCommand{\barwedge}{\mathbin{\overline{\wedge}}}
68 \DeclareRobustCommand{\veedoublebar}{\mathbin{\underline{\underline{\vee}}}}
69 \DeclareRobustCommand{\doublebarwedge}{\mathbin{\overline{\overline{\wedge}}}}
70 \DeclareRobustCommand{\centerdot}{\mathbin{\rule{0.15em}{0.15em}}}
71 \DeclareRobustCommand{\divideontimes}{\mathbin{\ooalign{$\div$\cr$\times$}}}

```

Unneeded partial symbols.

```

72 \let\mapstochar\undefined
73 \let\lhook\undefined
74 \let\rhook\undefined

```

Shorthands to simplify the definitions below.

```

75 \newcommand\fdsy@setslot[1]{\@tempcnta #1\relax}
76 \newcommand\fdsy@nextslot{\advance\@tempcnta 1\relax}
77 \newcommand\fdsy@prevslot{\advance\@tempcnta -1\relax}
78
79 \newcommand\fdsy@DeclareSymbol[4]{\DeclareMathSymbol{#2}{#3}{#4}{#1}}
80 \newcommand\fdsy@DeclareSymbol[3]{%
81   \if\relax\noexpand#1\let#1\undefined\fi

```

```

82 \expandafter\fdsy@DeclareSymbol\expandafter{\the\tempcnta}{#1}{#3}{#2}%
83 \fdsy@nextslot
84 }
85 \newcommand\fdsy@DeclareAlias[3]{\fdsy@prevslot\fdsy@DeclareSymbol{#1}{#2}{#3}}
86 \newcommand\fdsy@DeclareOperator[3]{\def#1{\DOTSB#3\slimits@}}
87 \newcommand\fdsy@DeclareIntegral[3]{\def#1{\DOTSI#3\ilimits@}}
88 \newcommand\fdsy@DeclareDelimiter[4]{%
89 \if\relax\noexpand#1\let#1\undefined\fi
90 \DeclareMathDelimiter{#1}{#2}{#3}{#4}{#3}{#4}%
91 }
92 \newcommand\fdsy@DeclareOpen[3]{\fdsy@DeclareDelimiter{#1}{\mathopen}{#2}{#3}}
93 \newcommand\fdsy@DeclareClose[3]{\fdsy@DeclareDelimiter{#1}{\mathclose}{#2}{#3}}

```

Font definitions.

```

94 \DeclareFontFamily{U}{FdSymbolA}{}
95 \DeclareFontFamily{U}{FdSymbolB}{}
96 \DeclareFontFamily{U}{FdSymbolC}{}
97 \DeclareFontFamily{U}{FdSymbolD}{}
98 \DeclareFontFamily{U}{FdSymbolE}{}
99 \DeclareFontFamily{U}{FdSymbolF}{}
100
101 \DeclareFontShape{U}{FdSymbolA}{m}{n}{
102 <-7.1> s * [\fdsy@scale] FdSymbolA-\fdsy@msweight
103 <7.1-> s * [\fdsy@scale] FdSymbolA-\fdsy@mweight
104 }{}
105 \DeclareFontShape{U}{FdSymbolA}{b}{n}{
106 <-7.1> s * [\fdsy@scale] FdSymbolA-\fdsy@bsweight
107 <7.1-> s * [\fdsy@scale] FdSymbolA-\fdsy@bweight
108 }{}
109 \DeclareFontShape{U}{FdSymbolB}{m}{n}{
110 <-7.1> s * [\fdsy@scale] FdSymbolB-\fdsy@msweight
111 <7.1-> s * [\fdsy@scale] FdSymbolB-\fdsy@mweight
112 }{}
113 \DeclareFontShape{U}{FdSymbolB}{b}{n}{
114 <-7.1> s * [\fdsy@scale] FdSymbolB-\fdsy@bsweight
115 <7.1-> s * [\fdsy@scale] FdSymbolB-\fdsy@bweight
116 }{}
117 \DeclareFontShape{U}{FdSymbolC}{m}{n}{
118 <-7.1> s * [\fdsy@scale] FdSymbolC-\fdsy@msweight
119 <7.1-> s * [\fdsy@scale] FdSymbolC-\fdsy@mweight
120 }{}
121 \DeclareFontShape{U}{FdSymbolC}{b}{n}{
122 <-7.1> s * [\fdsy@scale] FdSymbolC-\fdsy@bsweight
123 <7.1-> s * [\fdsy@scale] FdSymbolC-\fdsy@bweight
124 }{}
125 \DeclareFontShape{U}{FdSymbolD}{m}{n}{

```

```

126 <-7.1> s * [\fdsy@scale] FdSymbolD-\fdsy@msweight
127 <7.1-> s * [\fdsy@scale] FdSymbolD-\fdsy@mweight
128 {}{}
129 \DeclareFontShape{U}{FdSymbolD}{b}{n}{
130 <-7.1> s * [\fdsy@scale] FdSymbolD-\fdsy@bsweight
131 <7.1-> s * [\fdsy@scale] FdSymbolD-\fdsy@bweight
132 }{}
133 \DeclareFontShape{U}{FdSymbolE}{m}{n}{
134 <-7.1> s * [\fdsy@scale] FdSymbolE-\fdsy@msweight
135 <7.1-> s * [\fdsy@scale] FdSymbolE-\fdsy@mweight
136 }{}
137 \DeclareFontShape{U}{FdSymbolE}{b}{n}{
138 <-7.1> s * [\fdsy@scale] FdSymbolE-\fdsy@bsweight
139 <7.1-> s * [\fdsy@scale] FdSymbolE-\fdsy@bweight
140 }{}
141 \DeclareFontShape{U}{FdSymbolF}{m}{n}{
142 <-7.1> s * [\fdsy@scale] FdSymbolF-\fdsy@msweight
143 <7.1-> s * [\fdsy@scale] FdSymbolF-\fdsy@mweight
144 }{}
145 \DeclareFontShape{U}{FdSymbolF}{b}{n}{
146 <-7.1> s * [\fdsy@scale] FdSymbolF-\fdsy@bsweight
147 <7.1-> s * [\fdsy@scale] FdSymbolF-\fdsy@bweight
148 }{}
149
150 \DeclareSymbolFont{symbols}{U}{FdSymbolA}{m}{n}
151 \DeclareSymbolFont{relations}{U}{FdSymbolB}{m}{n}
152 \DeclareSymbolFont{arrows}{U}{FdSymbolC}{m}{n}
153 \DeclareSymbolFont{narrows}{U}{FdSymbolD}{m}{n}
154 \DeclareSymbolFont{largesymbols}{U}{FdSymbolE}{m}{n}
155 \DeclareSymbolFont{delimiters}{U}{FdSymbolF}{m}{n}
156 \SetSymbolFont{symbols}{bold}{U}{FdSymbolA}{b}{n}
157 \SetSymbolFont{relations}{bold}{U}{FdSymbolB}{b}{n}
158 \SetSymbolFont{arrows}{bold}{U}{FdSymbolC}{b}{n}
159 \SetSymbolFont{narrows}{bold}{U}{FdSymbolD}{b}{n}
160 \SetSymbolFont{largesymbols}{bold}{U}{FdSymbolE}{b}{n}
161 \SetSymbolFont{delimiters}{bold}{U}{FdSymbolF}{b}{n}

```

At the moment, we still use cmsy for the calligraphic alphabet.

```

162 \DeclareMathAlphabet{\mathcal}{OMS}{cmsy}{m}{n}
163 \SetMathAlphabet{\mathcal}{bold}{OMS}{cmsy}{b}{n}

```

A command to take math symbols from text fonts.

```

164 \newcommand\fdsy@bold{bold}
165 \newcommand\fdsy@text[1]{%
166   \ifx\fdsy@bold\math@version
167     \text{\bfseries#1}%
168   \else

```

```

169 \text{\mdseries#1}%
170 \fi
171 }

FdSymbolA: binary operators and ordinary symbols
172 \fdsy@setslot{0}
173 \fdsy@DeclareSymbol{\cdot}{symbols}{\mathbin}
174 \fdsy@DeclareAlias{\cdotp}{symbols}{\mathpunct}
175 \fdsy@DeclareSymbol{\hdotdot}{symbols}{\mathbin}
176 \fdsy@DeclareSymbol{\vdotdot}{symbols}{\mathbin}
177 \fdsy@DeclareAlias{\colon}{symbols}{\mathpunct}
178 \fdsy@DeclareAlias{\mathcolon}{symbols}{\mathpunct}
179 \fdsy@DeclareAlias{\mathratio}{symbols}{\mathrel}
180 \fdsy@DeclareSymbol{\udotdot}{symbols}{\mathbin}
181 \fdsy@DeclareSymbol{\ddotdot}{symbols}{\mathbin}
182 \fdsy@DeclareSymbol{\hdots}{symbols}{\mathord}
183 \fdsy@DeclareAlias{\@cdots}{symbols}{\mathinner}
184 \let\cdots\@cdots
185 \fdsy@DeclareSymbol{\@vdots}{symbols}{\mathord}
186 \DeclareRobustCommand{\vdots}{\ifmmode\@vdots\else\hbox{$\@vdots$}\fi}
187 \fdsy@DeclareSymbol{\udots}{symbols}{\mathord}
188 \fdsy@DeclareAlias{\adots}{symbols}{\mathord}
189 \fdsy@DeclareSymbol{\ddots}{symbols}{\mathord}
190 \fdsy@DeclareSymbol{\righttherefore}{symbols}{\mathord}
191 \fdsy@DeclareSymbol{\uptherefore}{symbols}{\mathord}
192 \fdsy@DeclareAlias{\therefore}{symbols}{\mathord}
193 \fdsy@DeclareSymbol{\lefttherefore}{symbols}{\mathord}
194 \fdsy@DeclareSymbol{\downtherefore}{symbols}{\mathord}
195 \fdsy@DeclareAlias{\because}{symbols}{\mathord}
196 \fdsy@DeclareSymbol{\squaredots}{symbols}{\mathord}
197 \fdsy@DeclareAlias{\Colon}{symbols}{\mathrel}
198 \fdsy@DeclareSymbol{\minus}{symbols}{\mathbin}
199 \fdsy@DeclareSymbol{\medslash}{symbols}{\mathbin}
200 \fdsy@DeclareAlias{\smalldivslash}{symbols}{\mathbin}
201 \fdsy@DeclareSymbol{\medbackslash}{symbols}{\mathbin}
202 \fdsy@DeclareAlias{\smallsetminus}{symbols}{\mathbin}
203 \fdsy@DeclareSymbol{\plus}{symbols}{\mathbin}
204 \fdsy@DeclareSymbol{\times}{symbols}{\mathbin}
205 \fdsy@DeclareSymbol{\pm}{symbols}{\mathbin}
206 \fdsy@DeclareSymbol{\mp}{symbols}{\mathbin}
207 \fdsy@DeclareSymbol{\dotminus}{symbols}{\mathbin}
208 \fdsy@DeclareSymbol{\minusdot}{symbols}{\mathbin}
209 \fdsy@DeclareSymbol{\minusfdots}{symbols}{\mathbin}
210 \fdsy@DeclareSymbol{\minusrdots}{symbols}{\mathbin}
211 \fdsy@DeclareSymbol{\dotsminusdots}{symbols}{\mathbin}
212 \fdsy@DeclareSymbol{\div}{symbols}{\mathbin}

```

```

213 \fdsy@DeclareSymbol{\neg}{symbols}{\mathord}
214 \fdsy@DeclareAlias{\lnot}{symbols}{\mathord}
215 \fdsy@DeclareAlias{\minushookdown}{symbols}{\mathbin}
216 \fdsy@DeclareSymbol{\backneg}{symbols}{\mathord}
217 \fdsy@DeclareAlias{\hookdownminus}{symbols}{\mathbin}
218 \fdsy@DeclareAlias{\invneg}{symbols}{\mathord}
219 \fdsy@DeclareAlias{\invnot}{symbols}{\mathord}
220 \fdsy@DeclareSymbol{\intprod}{symbols}{\mathbin}
221 \fdsy@DeclareAlias{\minushookup}{symbols}{\mathbin}
222 \fdsy@DeclareAlias{\turnedneg}{symbols}{\mathord}
223 \fdsy@DeclareAlias{\turnednot}{symbols}{\mathord}
224 \fdsy@DeclareSymbol{\intprodr}{symbols}{\mathbin}
225 \fdsy@DeclareAlias{\hookupminus}{symbols}{\mathbin}
226 \fdsy@DeclareAlias{\turnedbackneg}{symbols}{\mathord}
227 \fdsy@DeclareSymbol{\leftthreetimes}{symbols}{\mathbin}
228 \fdsy@DeclareSymbol{\rightthreetimes}{symbols}{\mathbin}
229 \fdsy@DeclareSymbol{\dtimes}{symbols}{\mathbin}
230 \fdsy@DeclareAlias{\btimes}{symbols}{\mathbin}
231 \fdsy@DeclareSymbol{\rtimes}{symbols}{\mathbin}
232 \fdsy@DeclareAlias{\rJoin}{symbols}{\mathrel}
233 \fdsy@DeclareSymbol{\utimes}{symbols}{\mathbin}
234 \fdsy@DeclareAlias{\ttimes}{symbols}{\mathbin}
235 \fdsy@DeclareSymbol{\ltimes}{symbols}{\mathbin}
236 \fdsy@DeclareAlias{\lJoin}{symbols}{\mathrel}
237 \fdsy@DeclareSymbol{\bowtie}{symbols}{\mathrel}
238 \fdsy@DeclareAlias{\Join}{symbols}{\mathrel}
239 \fdsy@DeclareAlias{\lrtimes}{symbols}{\mathbin}
240 \fdsy@DeclareSymbol{\upbowtie}{symbols}{\mathbin}
241 \fdsy@DeclareAlias{\hourglass}{symbols}{\mathbin}
242 \fdsy@DeclareSymbol{\rightY}{symbols}{\mathbin}
243 \fdsy@DeclareSymbol{\upY}{symbols}{\mathbin}
244 \fdsy@DeclareSymbol{\leftY}{symbols}{\mathbin}
245 \fdsy@DeclareSymbol{\downY}{symbols}{\mathbin}
246 \fdsy@DeclareSymbol{\wedge}{symbols}{\mathbin}
247 \fdsy@DeclareAlias{\land}{symbols}{\mathbin}
248 \fdsy@DeclareSymbol{\vee}{symbols}{\mathbin}
249 \fdsy@DeclareAlias{\lor}{symbols}{\mathbin}
250 \fdsy@DeclareSymbol{\wedgedot}{symbols}{\mathbin}
251 \fdsy@DeclareSymbol{\veedot}{symbols}{\mathbin}
252 \fdsy@DeclareSymbol{\doublewedge}{symbols}{\mathbin}
253 \fdsy@DeclareAlias{\wedgeonwedge}{symbols}{\mathbin}
254 \fdsy@DeclareSymbol{\doublevee}{symbols}{\mathbin}
255 \fdsy@DeclareAlias{\veeonvee}{symbols}{\mathbin}
256 \fdsy@DeclareSymbol{\curlywedge}{symbols}{\mathbin}
257 \fdsy@DeclareSymbol{\curlyvee}{symbols}{\mathbin}

```



```

258 \fdsy@DeclareSymbol{\curlywedgedot}{symbols}{\mathbin}
259 \fdsy@DeclareSymbol{\curlyveedot}{symbols}{\mathbin}
260 \fdsy@DeclareSymbol{\doublecurlywedge}{symbols}{\mathbin}
261 \fdsy@DeclareSymbol{\doublecurlyvee}{symbols}{\mathbin}
262 \fdsy@DeclareSymbol{\cup}{symbols}{\mathbin}
263 \fdsy@DeclareSymbol{\cap}{symbols}{\mathbin}
264 \fdsy@DeclareSymbol{\doublecup}{symbols}{\mathbin}
265 \fdsy@DeclareAlias{\Cup}{symbols}{\mathbin}
266 \fdsy@DeclareSymbol{\doublecap}{symbols}{\mathbin}
267 \fdsy@DeclareAlias{\Cap}{symbols}{\mathbin}
268 \fdsy@DeclareSymbol{\cupdot}{symbols}{\mathbin}
269 \fdsy@DeclareSymbol{\capdot}{symbols}{\mathbin}
270 \fdsy@DeclareSymbol{\cupplus}{symbols}{\mathbin}
271 \fdsy@DeclareAlias{\uplus}{symbols}{\mathbin}
272 \fdsy@DeclareSymbol{\capplus}{symbols}{\mathbin}
273 \fdsy@DeclareSymbol{\sqcup}{symbols}{\mathbin}
274 \fdsy@DeclareSymbol{\sqcap}{symbols}{\mathbin}
275 \fdsy@DeclareSymbol{\doublesqcup}{symbols}{\mathbin}
276 \fdsy@DeclareAlias{\Sqcup}{symbols}{\mathbin}
277 \fdsy@DeclareSymbol{\doublesqcap}{symbols}{\mathbin}
278 \fdsy@DeclareAlias{\Sqcap}{symbols}{\mathbin}
279 \fdsy@DeclareSymbol{\sqcupdot}{symbols}{\mathbin}
280 \fdsy@DeclareSymbol{\sqcapdot}{symbols}{\mathbin}
281 \fdsy@DeclareSymbol{\sqcupplus}{symbols}{\mathbin}
282 \fdsy@DeclareSymbol{\sqcapplus}{symbols}{\mathbin}
283 \fdsy@DeclareSymbol{\pullback}{symbols}{\mathbin}
284 \fdsy@DeclareSymbol{\pushout}{symbols}{\mathbin}
285 \fdsy@DeclareSymbol{\smalltriangleright}{symbols}{\mathbin}
286 \fdsy@DeclareSymbol{\smalltriangleup}{symbols}{\mathbin}
287 \fdsy@DeclareSymbol{\smalltriangleleft}{symbols}{\mathbin}
288 \fdsy@DeclareSymbol{\smalltriangledown}{symbols}{\mathbin}
289 \fdsy@DeclareSymbol{\smallblacktriangleright}{symbols}{\mathbin}
290 \fdsy@DeclareSymbol{\smallblacktriangleup}{symbols}{\mathbin}
291 \fdsy@DeclareSymbol{\smallblacktriangleleft}{symbols}{\mathbin}
292 \fdsy@DeclareSymbol{\smallblacktriangledown}{symbols}{\mathbin}
293 \fdsy@DeclareSymbol{\medtriangleright}{symbols}{\mathbin}
294 \fdsy@DeclareAlias{\triangleright}{symbols}{\mathbin}
295 \fdsy@DeclareSymbol{\medtriangleup}{symbols}{\mathbin}
296 \fdsy@DeclareAlias{\triangle}{symbols}{\mathbin}
297 \fdsy@DeclareAlias{\vartriangle}{symbols}{\mathbin}
298 \fdsy@DeclareSymbol{\medtriangleleft}{symbols}{\mathbin}
299 \fdsy@DeclareAlias{\triangleleft}{symbols}{\mathbin}
300 \fdsy@DeclareSymbol{\medtriangledown}{symbols}{\mathbin}
301 \fdsy@DeclareAlias{\triangledown}{symbols}{\mathbin}
302 \fdsy@DeclareSymbol{\medblacktriangleright}{symbols}{\mathbin}

```

```

303 \fdsy@DeclareAlias{\blacktriangleright}{symbols}{\mathbin}
304 \fdsy@DeclareSymbol{\medblacktriangleup}{symbols}{\mathbin}
305 \fdsy@DeclareAlias{\blacktriangle}{symbols}{\mathbin}
306 \fdsy@DeclareSymbol{\medblacktriangleleft}{symbols}{\mathbin}
307 \fdsy@DeclareAlias{\blacktriangleleft}{symbols}{\mathbin}
308 \fdsy@DeclareSymbol{\medblacktriangledown}{symbols}{\mathbin}
309 \fdsy@DeclareAlias{\blacktriangledown}{symbols}{\mathbin}
310 \fdsy@DeclareSymbol{\largetriangleup}{symbols}{\mathord}
311 \fdsy@DeclareAlias{\bigtriangleup}{symbols}{\mathbin}
312 \fdsy@DeclareSymbol{\largetriangledown}{symbols}{\mathord}
313 \fdsy@DeclareAlias{\bigtriangledown}{symbols}{\mathbin}
314 \fdsy@DeclareSymbol{\smallcircle}{symbols}{\mathbin}
315 \fdsy@DeclareAlias{\circ}{symbols}{\mathbin}
316 \fdsy@DeclareAlias{\smwhtcircle}{symbols}{\mathbin}
317 \fdsy@DeclareSymbol{\smallblackcircle}{symbols}{\mathbin}
318 \fdsy@DeclareAlias{\bullet}{symbols}{\mathbin}
319 \fdsy@DeclareAlias{\smbkcircle}{symbols}{\mathbin}
320 \fdsy@DeclareSymbol{\medcircle}{symbols}{\mathbin}
321 \fdsy@DeclareAlias{\mdlgwhtcircle}{symbols}{\mathbin}
322 \fdsy@DeclareSymbol{\medblackcircle}{symbols}{\mathbin}
323 \fdsy@DeclareAlias{\mdlgblkcircle}{symbols}{\mathbin}
324 \fdsy@DeclareSymbol{\ominus}{symbols}{\mathbin}
325 \fdsy@DeclareSymbol{\overt}{symbols}{\mathbin}
326 \fdsy@DeclareAlias{\circledvert}{symbols}{\mathbin}
327 \fdsy@DeclareSymbol{\oslash}{symbols}{\mathbin}
328 \fdsy@DeclareSymbol{\obackslash}{symbols}{\mathbin}
329 \fdsy@DeclareAlias{\obslash}{symbols}{\mathbin}
330 \fdsy@DeclareSymbol{\oplus}{symbols}{\mathbin}
331 \fdsy@DeclareSymbol{\otimes}{symbols}{\mathbin}
332 \fdsy@DeclareSymbol{\odot}{symbols}{\mathbin}
333 \fdsy@DeclareSymbol{\ocirc}{symbols}{\mathbin}
334 \fdsy@DeclareAlias{\circledcirc}{symbols}{\mathbin}
335 \fdsy@DeclareSymbol{\oast}{symbols}{\mathbin}
336 \fdsy@DeclareAlias{\circledast}{symbols}{\mathbin}
337 \fdsy@DeclareSymbol{\odash}{symbols}{\mathbin}
338 \fdsy@DeclareAlias{\circleddash}{symbols}{\mathbin}
339 \fdsy@DeclareSymbol{\oequal}{symbols}{\mathbin}
340 \fdsy@DeclareAlias{\circledequal}{symbols}{\mathbin}
341 \fdsy@DeclareSymbol{\emptyset}{symbols}{\mathord}
342 \fdsy@DeclareAlias{\diameter}{symbols}{\mathord}
343 \fdsy@DeclareAlias{\varnothing}{symbols}{\mathord}
344 \fdsy@DeclareSymbol{\revemptyset}{symbols}{\mathord}
345 \fdsy@DeclareSymbol{\largecircle}{symbols}{\mathord}
346 \fdsy@DeclareAlias{\bigcirc}{symbols}{\mathord}
347 \fdsy@DeclareAlias{\lgwhtcircle}{symbols}{\mathord}

```

```

348 \fdsy@DeclareSymbol{\largeblackcircle}{symbols}{\mathord}
349 \fdsy@DeclareAlias{\lgblkcrcle}{symbols}{\mathord}
350 \fdsy@DeclareSymbol{\smallsquare}{symbols}{\mathbin}
351 \fdsy@DeclareAlias{\smwhtsquare}{symbols}{\mathbin}
352 \fdsy@DeclareSymbol{\smallblacksquare}{symbols}{\mathbin}
353 \fdsy@DeclareAlias{\smbblksquare}{symbols}{\mathbin}
354 \fdsy@DeclareSymbol{\medsquare}{symbols}{\mathbin}
355 \fdsy@DeclareAlias{\square}{symbols}{\mathbin}
356 \fdsy@DeclareAlias{\Box}{symbols}{\mathbin}
357 \fdsy@DeclareAlias{\mdlgwhtsquare}{symbols}{\mathbin}
358 \fdsy@DeclareAlias{\mdwhtsquare}{symbols}{\mathbin}
359 \fdsy@DeclareSymbol{\medblacksquare}{symbols}{\mathbin}
360 \fdsy@DeclareAlias{\mdlgblksquare}{symbols}{\mathbin}
361 \fdsy@DeclareAlias{\mdblksquare}{symbols}{\mathbin}
362 \fdsy@DeclareSymbol{\boxminus}{symbols}{\mathbin}
363 \fdsy@DeclareSymbol{\boxvert}{symbols}{\mathbin}
364 \fdsy@DeclareAlias{\boxbar}{symbols}{\mathbin}
365 \fdsy@DeclareSymbol{\boxslash}{symbols}{\mathbin}
366 \fdsy@DeclareAlias{\boxdiag}{symbols}{\mathbin}
367 \fdsy@DeclareSymbol{\boxbackslash}{symbols}{\mathbin}
368 \fdsy@DeclareAlias{\boxbslash}{symbols}{\mathbin}
369 \fdsy@DeclareSymbol{\boxplus}{symbols}{\mathbin}
370 \fdsy@DeclareSymbol{\boxtimes}{symbols}{\mathbin}
371 \fdsy@DeclareSymbol{\boxdot}{symbols}{\mathbin}
372 \fdsy@DeclareSymbol{\boxbox}{symbols}{\mathbin}
373 \fdsy@DeclareSymbol{\largesquare}{symbols}{\mathord}
374 \fdsy@DeclareAlias{\lgwhtsquare}{symbols}{\mathord}
375 \fdsy@DeclareSymbol{\largeblacksquare}{symbols}{\mathord}
376 \fdsy@DeclareAlias{\lgblksquare}{symbols}{\mathord}
377 \fdsy@DeclareSymbol{\smallldiamond}{symbols}{\mathbin}
378 \fdsy@DeclareAlias{\diamond}{symbols}{\mathbin}
379 \fdsy@DeclareAlias{\smwhtdiamond}{symbols}{\mathbin}
380 \fdsy@DeclareSymbol{\smallblackdiamond}{symbols}{\mathbin}
381 \fdsy@DeclareAlias{\blackdiamond}{symbols}{\mathbin}
382 \fdsy@DeclareAlias{\smbldiamond}{symbols}{\mathbin}
383 \fdsy@DeclareSymbol{\meddiamond}{symbols}{\mathbin}
384 \fdsy@DeclareAlias{\Diamond}{symbols}{\mathbin}
385 \fdsy@DeclareAlias{\mdlgwhtdiamond}{symbols}{\mathbin}
386 \fdsy@DeclareAlias{\mdwhtdiamond}{symbols}{\mathbin}
387 \fdsy@DeclareSymbol{\medblackdiamond}{symbols}{\mathbin}
388 \fdsy@DeclareAlias{\mdlgblkdiamond}{symbols}{\mathbin}
389 \fdsy@DeclareAlias{\mdbldiamond}{symbols}{\mathbin}
390 \fdsy@DeclareSymbol{\diamondminus}{symbols}{\mathbin}
391 \fdsy@DeclareSymbol{\diamondvert}{symbols}{\mathbin}
392 \fdsy@DeclareSymbol{\diamondslash}{symbols}{\mathbin}

```

```

393 \fdsy@DeclareSymbol{\diamondbackslash}{symbols}{\mathbin}
394 \fdsy@DeclareAlias{\diamondbslash}{symbols}{\mathbin}
395 \fdsy@DeclareSymbol{\diamondplus}{symbols}{\mathbin}
396 \fdsy@DeclareSymbol{\diamondtimes}{symbols}{\mathbin}
397 \fdsy@DeclareSymbol{\diamonddot}{symbols}{\mathbin}
398 \fdsy@DeclareAlias{\diamondcdot}{symbols}{\mathbin}
399 \fdsy@DeclareSymbol{\diamonddiamond}{symbols}{\mathbin}
400 \fdsy@DeclareSymbol{\smalllozenge}{symbols}{\mathord}
401 \fdsy@DeclareAlias{\smwhtlozenge}{symbols}{\mathord}
402 \fdsy@DeclareSymbol{\smallblacklozenge}{symbols}{\mathord}
403 \fdsy@DeclareAlias{\smbklozenge}{symbols}{\mathord}
404 \fdsy@DeclareSymbol{\medlozenge}{symbols}{\mathord}
405 \fdsy@DeclareAlias{\lozenge}{symbols}{\mathord}
406 \fdsy@DeclareAlias{\mdlgwhtlozenge}{symbols}{\mathord}
407 \fdsy@DeclareAlias{\mdwhtlozenge}{symbols}{\mathord}
408 \fdsy@DeclareSymbol{\medblacklozenge}{symbols}{\mathord}
409 \fdsy@DeclareAlias{\blacklozenge}{symbols}{\mathord}
410 \fdsy@DeclareAlias{\mdlgblklozenge}{symbols}{\mathord}
411 \fdsy@DeclareAlias{\mdblkllozenge}{symbols}{\mathord}
412 \fdsy@DeclareSymbol{\lozengeminus}{symbols}{\mathord}
413 \fdsy@DeclareSymbol{\smallwhitestar}{symbols}{\mathbin}
414 \fdsy@DeclareAlias{\smwhitestar}{symbols}{\mathbin}
415 \fdsy@DeclareSymbol{\smallblackstar}{symbols}{\mathbin}
416 \fdsy@DeclareAlias{\star}{symbols}{\mathbin}
417 \fdsy@DeclareSymbol{\medwhitestar}{symbols}{\mathbin}
418 \fdsy@DeclareSymbol{\medblackstar}{symbols}{\mathbin}
419 \fdsy@DeclareAlias{\medstar}{symbols}{\mathbin}
420 \fdsy@DeclareSymbol{\largewhitestar}{symbols}{\mathord}
421 \fdsy@DeclareSymbol{\largeblackstar}{symbols}{\mathord}
422 \fdsy@DeclareAlias{\bigstar}{symbols}{\mathord}
423 \fdsy@DeclareSymbol{\ast}{symbols}{\mathbin}
424 \fdsy@DeclareSymbol{\infty}{symbols}{\mathord}
425 \fdsy@DeclareSymbol{\propto}{symbols}{\mathrel}
426 \fdsy@DeclareAlias{\varpropto}{symbols}{\mathrel}
427 \fdsy@DeclareSymbol{\backpropto}{symbols}{\mathrel}
428 \fdsy@DeclareAlias{\propfrom}{symbols}{\mathrel}
429 \fdsy@DeclareSymbol{\crossing}{symbols}{\mathrel}
430 \fdsy@DeclareSymbol{\between}{symbols}{\mathrel}
431 \fdsy@DeclareSymbol{\separated}{symbols}{\mathrel}
432 \fdsy@DeclareSymbol{\top}{symbols}{\mathord}
433 \fdsy@DeclareAlias{\intercal}{symbols}{\mathbin}
434 \fdsy@DeclareSymbol{\bot}{symbols}{\mathord}
435 \fdsy@DeclareSymbol{\wreath}{symbols}{\mathbin}
436 \fdsy@DeclareAlias{\wr}{symbols}{\mathbin}
437 \fdsy@DeclareSymbol{\angle}{symbols}{\mathord}

```

```

438 \fdsy@DeclareSymbol{\revangle}{symbols}{\mathord}
439 \fdsy@DeclareSymbol{\measuredangle}{symbols}{\mathord}
440 \fdsy@DeclareSymbol{\revmeasuredangle}{symbols}{\mathord}
441 \fdsy@DeclareAlias{\measuredangleleft}{symbols}{\mathord}
442 \fdsy@DeclareSymbol{\sphericalangle}{symbols}{\mathord}
443 \fdsy@DeclareSymbol{\sphericalangleup}{symbols}{\mathord}
444 \fdsy@DeclareSymbol{\sphericalangleleft}{symbols}{\mathord}
445 \fdsy@DeclareAlias{\revsphericalangle}{symbols}{\mathord}
446 \fdsy@DeclareAlias{\gtlpar}{symbols}{\mathord}
447 \fdsy@DeclareSymbol{\sphericalangledown}{symbols}{\mathord}
448 \fdsy@DeclareSymbol{\rightangle}{symbols}{\mathord}
449 \fdsy@DeclareSymbol{\measuredrightangle}{symbols}{\mathord}
450 \fdsy@DeclareSymbol{\rightanglesquare}{symbols}{\mathord}
451 \fdsy@DeclareAlias{\rightanglesqr}{symbols}{\mathord}
452 \fdsy@DeclareSymbol{\measuredrightangledot}{symbols}{\mathord}
453 \fdsy@DeclareAlias{\rightanglemdot}{symbols}{\mathord}
454 \fdsy@DeclareSymbol{\prime}{symbols}{\mathord}
455 \fdsy@DeclareSymbol{\backprime}{symbols}{\mathord}
456 \fdsy@DeclareSymbol{\smallprod}{symbols}{\mathop}
457 \fdsy@DeclareSymbol{\smallcoprod}{symbols}{\mathop}
458 \fdsy@DeclareAlias{\amalg}{symbols}{\mathbin}
459 \fdsy@DeclareSymbol{\smallint}{symbols}{\mathop}
460 \fdsy@DeclareSymbol{\checkmark}{symbols}{\mathord}
461 \fdsy@DeclareSymbol{\lightning}{symbols}{\mathord}
462 \fdsy@DeclareAlias{\downzigzagarrow}{symbols}{\mathord}
463 \fdsy@DeclareSymbol{\diamondsuit}{symbols}{\mathord}
464 \fdsy@DeclareSymbol{\vardiamondsuit}{symbols}{\mathord}
465 \fdsy@DeclareSymbol{\heartsuit}{symbols}{\mathord}
466 \fdsy@DeclareSymbol{\varheartsuit}{symbols}{\mathord}
467 \fdsy@DeclareSymbol{\spadesuit}{symbols}{\mathord}
468 \fdsy@DeclareSymbol{\clubsuit}{symbols}{\mathord}
469 \fdsy@DeclareSymbol{\maltese}{symbols}{\mathord}
470 \fdsy@DeclareSymbol{\starofdavid}{symbols}{\mathord}
471 \fdsy@DeclareSymbol{\sector}{symbols}{\mathord}
472 \fdsy@DeclareSymbol{\forall}{symbols}{\mathord}
473 \fdsy@DeclareSymbol{\exists}{symbols}{\mathord}
474 \fdsy@DeclareSymbol{\nexists}{symbols}{\mathord}
475 \fdsy@DeclareSymbol{\Finv}{symbols}{\mathord}
476 \fdsy@DeclareSymbol{\Game}{symbols}{\mathord}
477 \fdsy@DeclareSymbol{\complement}{symbols}{\mathord}
478 \fdsy@DeclareSymbol{\flat}{symbols}{\mathord}
479 \fdsy@DeclareSymbol{\natural}{symbols}{\mathord}
480 \fdsy@DeclareSymbol{\sharp}{symbols}{\mathord}
481 \fdsy@DeclareSymbol{\aleph}{symbols}{\mathord}
482 \fdsy@DeclareSymbol{\beth}{symbols}{\mathord}

```

```

483 \fdsy@DeclareSymbol{\gimel}{symbols}{\mathord}
484 \fdsy@DeclareSymbol{\daleth}{symbols}{\mathord}
485 \fdsy@DeclareSymbol{\wp}{symbols}{\mathord}

FdSymbolB: relations
486 \fdsy@setslot{0}
487 \fdsy@DeclareSymbol{\equal}{relations}{\mathrel}
488 \fdsy@DeclareSymbol{\equiv}{relations}{\mathrel}
489 \fdsy@DeclareSymbol{\sim}{relations}{\mathrel}
490 \fdsy@DeclareSymbol{\backsimeq}{relations}{\mathrel}
491 \fdsy@DeclareSymbol{\approx}{relations}{\mathrel}
492 \fdsy@DeclareSymbol{\triplesim}{relations}{\mathrel}
493 \fdsy@DeclareAlias{\approxident}{relations}{\mathrel}
494 \fdsy@DeclareSymbol{\simeq}{relations}{\mathrel}
495 \fdsy@DeclareSymbol{\backsimeq}{relations}{\mathrel}
496 \fdsy@DeclareSymbol{\eqsim}{relations}{\mathrel}
497 \fdsy@DeclareSymbol{\cong}{relations}{\mathrel}
498 \fdsy@DeclareSymbol{\backcong}{relations}{\mathrel}
499 \fdsy@DeclareSymbol{\approxeq}{relations}{\mathrel}
500 \fdsy@DeclareSymbol{\bumpeq}{relations}{\mathrel}
501 \fdsy@DeclareSymbol{\bumpeq}{relations}{\mathrel}
502 \fdsy@DeclareSymbol{\Bumpeq}{relations}{\mathrel}
503 \fdsy@DeclareSymbol{\doteq}{relations}{\mathrel}
504 \fdsy@DeclareSymbol{\eqdot}{relations}{\mathrel}
505 \fdsy@DeclareSymbol{\Doteq}{relations}{\mathrel}
506 \fdsy@DeclareAlias{\doteqdot}{relations}{\mathrel}
507 \fdsy@DeclareSymbol{\fallingdotseq}{relations}{\mathrel}
508 \fdsy@DeclareSymbol{\risingdotseq}{relations}{\mathrel}
509 \fdsy@DeclareSymbol{\smile}{relations}{\mathrel}
510 \fdsy@DeclareAlias{\smallsmile}{relations}{\mathrel}
511 \fdsy@DeclareSymbol{\frown}{relations}{\mathrel}
512 \fdsy@DeclareAlias{\smallfrown}{relations}{\mathrel}
513 \fdsy@DeclareSymbol{\smilefrown}{relations}{\mathrel}
514 \fdsy@DeclareAlias{\asymp}{relations}{\mathrel}
515 \fdsy@DeclareSymbol{\frownsmile}{relations}{\mathrel}
516 \fdsy@DeclareAlias{\closure}{relations}{\mathrel}
517 \fdsy@DeclareSymbol{\smileeq}{relations}{\mathrel}
518 \fdsy@DeclareSymbol{\frowneq}{relations}{\mathrel}
519 \fdsy@DeclareAlias{\arceq}{relations}{\mathrel}
520 \fdsy@DeclareSymbol{\eqcirc}{relations}{\mathrel}
521 \fdsy@DeclareSymbol{\circeq}{relations}{\mathrel}
522 \fdsy@DeclareSymbol{\wedg eq}{relations}{\mathrel}
523 \fdsy@DeclareAlias{\hateq}{relations}{\mathrel}
524 \fdsy@DeclareSymbol{\veeeq}{relations}{\mathrel}
525 \fdsy@DeclareSymbol{\stareq}{relations}{\mathrel}
526 \fdsy@DeclareSymbol{\triangle eq}{relations}{\mathrel}

```

```

527 \fdsy@DeclareAlias{\triangleq}{relations}{\mathrel}
528 \fdsy@DeclareSymbol{\in}{relations}{\mathrel}
529 \fdsy@DeclareSymbol{\owns}{relations}{\mathrel}
530 \fdsy@DeclareAlias{\ni}{relations}{\mathrel}
531 \fdsy@DeclareSymbol{\less}{relations}{\mathrel}
532 \fdsy@DeclareSymbol{\gtr}{relations}{\mathrel}
533 \fdsy@DeclareSymbol{\leq}{relations}{\mathrel}
534 \fdsy@DeclareAlias{\le}{relations}{\mathrel}
535 \fdsy@DeclareSymbol{\geq}{relations}{\mathrel}
536 \fdsy@DeclareAlias{\ge}{relations}{\mathrel}
537 \fdsy@DeclareSymbol{\leqslant}{relations}{\mathrel}
538 \fdsy@DeclareSymbol{\geqslant}{relations}{\mathrel}
539 \fdsy@DeclareSymbol{\leqq}{relations}{\mathrel}
540 \fdsy@DeclareSymbol{\geqq}{relations}{\mathrel}
541 \fdsy@DeclareSymbol{\lesssim}{relations}{\mathrel}
542 \fdsy@DeclareSymbol{\gtrsim}{relations}{\mathrel}
543 \fdsy@DeclareSymbol{\lessapprox}{relations}{\mathrel}
544 \fdsy@DeclareSymbol{\gtrapprox}{relations}{\mathrel}
545 \fdsy@DeclareSymbol{\lessgtr}{relations}{\mathrel}
546 \fdsy@DeclareSymbol{\gtrless}{relations}{\mathrel}
547 \fdsy@DeclareSymbol{\lesseqgtr}{relations}{\mathrel}
548 \fdsy@DeclareSymbol{\gtreqless}{relations}{\mathrel}
549 \fdsy@DeclareSymbol{\lesseqqgtr}{relations}{\mathrel}
550 \fdsy@DeclareSymbol{\gtreqqless}{relations}{\mathrel}
551 \fdsy@DeclareSymbol{\lesseqslantgtr}{relations}{\mathrel}
552 \fdsy@DeclareAlias{\lesg}{relations}{\mathrel}
553 \fdsy@DeclareAlias{\lesseqgtrslant}{relations}{\mathrel}
554 \fdsy@DeclareSymbol{\gtreqslantless}{relations}{\mathrel}
555 \fdsy@DeclareAlias{\gesl}{relations}{\mathrel}
556 \fdsy@DeclareAlias{\gtreqlessslant}{relations}{\mathrel}
557 \fdsy@DeclareSymbol{\ll}{relations}{\mathrel}
558 \fdsy@DeclareSymbol{\gg}{relations}{\mathrel}
559 \fdsy@DeclareSymbol{\lll}{relations}{\mathrel}
560 \fdsy@DeclareAlias{\lllless}{relations}{\mathrel}
561 \fdsy@DeclareSymbol{\ggg}{relations}{\mathrel}
562 \fdsy@DeclareAlias{\gggtr}{relations}{\mathrel}
563 \fdsy@DeclareSymbol{\lessclosed}{relations}{\mathrel}
564 \fdsy@DeclareAlias{\lhd}{relations}{\mathbin}
565 \fdsy@DeclareAlias{\vartriangleleft}{relations}{\mathrel}
566 \fdsy@DeclareSymbol{\gtrclosed}{relations}{\mathrel}
567 \fdsy@DeclareAlias{\rhd}{relations}{\mathbin}
568 \fdsy@DeclareAlias{\vartriangleright}{relations}{\mathrel}
569 \fdsy@DeclareSymbol{\leqclosed}{relations}{\mathrel}
570 \fdsy@DeclareAlias{\unlhd}{relations}{\mathbin}
571 \fdsy@DeclareAlias{\trianglelefteq}{relations}{\mathrel}

```

```

572 \fdsy@DeclareSymbol{\geqclosed}{relations}{\mathrel}
573 \fdsy@DeclareAlias{\unrhd}{relations}{\mathbin}
574 \fdsy@DeclareAlias{\trianglerighteq}{relations}{\mathrel}
575 \fdsy@DeclareSymbol{\lesscc}{relations}{\mathrel}
576 \fdsy@DeclareAlias{\ltcc}{relations}{\mathrel}
577 \fdsy@DeclareSymbol{\gtrcc}{relations}{\mathrel}
578 \fdsy@DeclareAlias{\gtcc}{relations}{\mathrel}
579 \fdsy@DeclareSymbol{\leqslcc}{relations}{\mathrel}
580 \fdsy@DeclareAlias{\lescc}{relations}{\mathrel}
581 \fdsy@DeclareSymbol{\geqslcc}{relations}{\mathrel}
582 \fdsy@DeclareAlias{\gescc}{relations}{\mathrel}
583 \fdsy@DeclareSymbol{\sqsubset}{relations}{\mathrel}
584 \fdsy@DeclareSymbol{\sqsupset}{relations}{\mathrel}
585 \fdsy@DeclareSymbol{\sqsubseteq}{relations}{\mathrel}
586 \fdsy@DeclareSymbol{\sqsupseteq}{relations}{\mathrel}
587 \fdsy@DeclareSymbol{\sqsubseteq}{relations}{\mathrel}
588 \fdsy@DeclareSymbol{\sqsupseteqeq}{relations}{\mathrel}
589 \fdsy@DeclareSymbol{\Sqsubset}{relations}{\mathrel}
590 \fdsy@DeclareSymbol{\Sqsupset}{relations}{\mathrel}
591 \fdsy@DeclareSymbol{\subset}{relations}{\mathrel}
592 \fdsy@DeclareSymbol{\supset}{relations}{\mathrel}
593 \fdsy@DeclareSymbol{\subsubseteq}{relations}{\mathrel}
594 \fdsy@DeclareSymbol{\supseteqeq}{relations}{\mathrel}
595 \fdsy@DeclareSymbol{\subsubseteqeq}{relations}{\mathrel}
596 \fdsy@DeclareSymbol{\supseteqeqeq}{relations}{\mathrel}
597 \fdsy@DeclareSymbol{\Subset}{relations}{\mathrel}
598 \fdsy@DeclareSymbol{\Supset}{relations}{\mathrel}
599 \fdsy@DeclareSymbol{\prec}{relations}{\mathrel}
600 \fdsy@DeclareSymbol{\succ}{relations}{\mathrel}
601 \fdsy@DeclareSymbol{\preceq}{relations}{\mathrel}
602 \fdsy@DeclareSymbol{\succeq}{relations}{\mathrel}
603 \fdsy@DeclareSymbol{\preccurlyeq}{relations}{\mathrel}
604 \fdsy@DeclareSymbol{\succcurlyeq}{relations}{\mathrel}
605 \fdsy@DeclareSymbol{\preceqq}{relations}{\mathrel}
606 \fdsy@DeclareSymbol{\succeqq}{relations}{\mathrel}
607 \fdsy@DeclareSymbol{\precsim}{relations}{\mathrel}
608 \fdsy@DeclareSymbol{\succsim}{relations}{\mathrel}
609 \fdsy@DeclareSymbol{\precapprox}{relations}{\mathrel}
610 \fdsy@DeclareSymbol{\succapprox}{relations}{\mathrel}
611 \fdsy@DeclareSymbol{\lessdot}{relations}{\mathrel}
612 \fdsy@DeclareSymbol{\gtrdot}{relations}{\mathrel}
613 \fdsy@DeclareSymbol{\leqdot}{relations}{\mathrel}
614 \fdsy@DeclareSymbol{\geqdot}{relations}{\mathrel}
615 \fdsy@DeclareSymbol{\leqslantdot}{relations}{\mathrel}
616 \fdsy@DeclareAlias{\lesdot}{relations}{\mathrel}

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617 \fdsy@DeclareSymbol{\geqslantdot}{relations}{\mathrel}
618 \fdsy@DeclareAlias{\gesdot}{relations}{\mathrel}
619 \fdsy@DeclareSymbol{\eqslantless}{relations}{\mathrel}
620 \fdsy@DeclareSymbol{\eqslantgtr}{relations}{\mathrel}
621 \fdsy@DeclareSymbol{\curlyeqprec}{relations}{\mathrel}
622 \fdsy@DeclareSymbol{\curlyeqsucc}{relations}{\mathrel}
623 \fdsy@DeclareSymbol{\nequal}{relations}{\mathrel}
624 \fdsy@DeclareAlias{\neq}{relations}{\mathrel}
625 \fdsy@DeclareAlias{\ne}{relations}{\mathrel}
626 \fdsy@DeclareSymbol{\nequiv}{relations}{\mathrel}
627 \fdsy@DeclareSymbol{\nsim}{relations}{\mathrel}
628 \fdsy@DeclareSymbol{\nbacksim}{relations}{\mathrel}
629 \fdsy@DeclareSymbol{\napprox}{relations}{\mathrel}
630 \fdsy@DeclareSymbol{\ntriplesim}{relations}{\mathrel}
631 \fdsy@DeclareAlias{\napproxident}{relations}{\mathrel}
632 \fdsy@DeclareSymbol{\nsimeq}{relations}{\mathrel}
633 \fdsy@DeclareAlias{\nsime}{relations}{\mathrel}
634 \fdsy@DeclareSymbol{\nbacksimeq}{relations}{\mathrel}
635 \fdsy@DeclareSymbol{\neqsim}{relations}{\mathrel}
636 \fdsy@DeclareSymbol{\ncong}{relations}{\mathrel}
637 \fdsy@DeclareSymbol{\nbackcong}{relations}{\mathrel}
638 \fdsy@DeclareSymbol{\napproxeq}{relations}{\mathrel}
639 \fdsy@DeclareSymbol{\nbumpeq}{relations}{\mathrel}
640 \fdsy@DeclareSymbol{\nbumpeqeq}{relations}{\mathrel}
641 \fdsy@DeclareSymbol{\nBumpeq}{relations}{\mathrel}
642 \fdsy@DeclareSymbol{\ndoteq}{relations}{\mathrel}
643 \fdsy@DeclareSymbol{\neqdot}{relations}{\mathrel}
644 \fdsy@DeclareSymbol{\nDoteq}{relations}{\mathrel}
645 \fdsy@DeclareSymbol{\nfallingdotseq}{relations}{\mathrel}
646 \fdsy@DeclareSymbol{\nrisingdotseq}{relations}{\mathrel}
647 \fdsy@DeclareSymbol{\nsmile}{relations}{\mathrel}
648 \fdsy@DeclareSymbol{\nfrown}{relations}{\mathrel}
649 \fdsy@DeclareSymbol{\nsmilefrown}{relations}{\mathrel}
650 \fdsy@DeclareAlias{\nasymp}{relations}{\mathrel}
651 \fdsy@DeclareSymbol{\nfrownsmile}{relations}{\mathrel}
652 \fdsy@DeclareAlias{\nclosure}{relations}{\mathrel}
653 \fdsy@DeclareSymbol{\nsmileeq}{relations}{\mathrel}
654 \fdsy@DeclareSymbol{\nfrowneq}{relations}{\mathrel}
655 \fdsy@DeclareAlias{\narceq}{relations}{\mathrel}
656 \fdsy@DeclareSymbol{\neqcirc}{relations}{\mathrel}
657 \fdsy@DeclareSymbol{\ncirceq}{relations}{\mathrel}
658 \fdsy@DeclareSymbol{\nwedgeq}{relations}{\mathrel}
659 \fdsy@DeclareAlias{\nhateq}{relations}{\mathrel}
660 \fdsy@DeclareSymbol{\nveeeq}{relations}{\mathrel}
661 \fdsy@DeclareSymbol{\nstareq}{relations}{\mathrel}

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662 \fdsy@DeclareSymbol{\ntrianglelefteq}{relations}{\mathrel}
663 \fdsy@DeclareSymbol{\nin}{relations}{\mathrel}
664 \fdsy@DeclareAlias{\notin}{relations}{\mathrel}
665 \fdsy@DeclareSymbol{\nowns}{relations}{\mathrel}
666 \fdsy@DeclareAlias{\nni}{relations}{\mathrel}
667 \fdsy@DeclareSymbol{\nless}{relations}{\mathrel}
668 \fdsy@DeclareSymbol{\ngtr}{relations}{\mathrel}
669 \fdsy@DeclareSymbol{\nleq}{relations}{\mathrel}
670 \fdsy@DeclareSymbol{\ngeq}{relations}{\mathrel}
671 \fdsy@DeclareSymbol{\nleqslant}{relations}{\mathrel}
672 \fdsy@DeclareSymbol{\ngeqslant}{relations}{\mathrel}
673 \fdsy@DeclareSymbol{\nleqq}{relations}{\mathrel}
674 \fdsy@DeclareSymbol{\ngeqq}{relations}{\mathrel}
675 \fdsy@DeclareSymbol{\nlesssim}{relations}{\mathrel}
676 \fdsy@DeclareSymbol{\ngtrsim}{relations}{\mathrel}
677 \fdsy@DeclareSymbol{\nlessapprox}{relations}{\mathrel}
678 \fdsy@DeclareSymbol{\ngtrapprox}{relations}{\mathrel}
679 \fdsy@DeclareSymbol{\nlessgtr}{relations}{\mathrel}
680 \fdsy@DeclareSymbol{\ngtrless}{relations}{\mathrel}
681 \fdsy@DeclareSymbol{\nlesseqgtr}{relations}{\mathrel}
682 \fdsy@DeclareSymbol{\ngtreqlless}{relations}{\mathrel}
683 \fdsy@DeclareSymbol{\nlesseqqgtr}{relations}{\mathrel}
684 \fdsy@DeclareSymbol{\ngtreqqless}{relations}{\mathrel}
685 \fdsy@DeclareSymbol{\nlesseqslantgtr}{relations}{\mathrel}
686 \fdsy@DeclareAlias{\nlesg}{relations}{\mathrel}
687 \fdsy@DeclareAlias{\nlesseqgtrslant}{relations}{\mathrel}
688 \fdsy@DeclareSymbol{\ngtreqlslantless}{relations}{\mathrel}
689 \fdsy@DeclareAlias{\ngesl}{relations}{\mathrel}
690 \fdsy@DeclareAlias{\ngtreqllessslant}{relations}{\mathrel}
691 \fdsy@DeclareSymbol{\nll}{relations}{\mathrel}
692 \fdsy@DeclareSymbol{\ngg}{relations}{\mathrel}
693 \fdsy@DeclareSymbol{\nlll}{relations}{\mathrel}
694 \fdsy@DeclareSymbol{\nggg}{relations}{\mathrel}
695 \fdsy@DeclareSymbol{\nlessclosed}{relations}{\mathrel}
696 \fdsy@DeclareAlias{\ntriangleleftleft}{relations}{\mathrel}
697 \fdsy@DeclareSymbol{\ngtrclosed}{relations}{\mathrel}
698 \fdsy@DeclareAlias{\ntrianglerightright}{relations}{\mathrel}
699 \fdsy@DeclareSymbol{\nleqclosed}{relations}{\mathrel}
700 \fdsy@DeclareAlias{\ntriangleleftleftteq}{relations}{\mathrel}
701 \fdsy@DeclareSymbol{\ngeqclosed}{relations}{\mathrel}
702 \fdsy@DeclareAlias{\ntrianglerightrighteq}{relations}{\mathrel}
703 \fdsy@DeclareSymbol{\nlesscc}{relations}{\mathrel}
704 \fdsy@DeclareAlias{\nltcc}{relations}{\mathrel}
705 \fdsy@DeclareSymbol{\ngtrcc}{relations}{\mathrel}
706 \fdsy@DeclareAlias{\ngtcc}{relations}{\mathrel}

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707 \fdsy@DeclareSymbol{\nleqslcc}{relations}{\mathrel}
708 \fdsy@DeclareAlias{\nlescc}{relations}{\mathrel}
709 \fdsy@DeclareSymbol{\ngeqslcc}{relations}{\mathrel}
710 \fdsy@DeclareAlias{\ngescc}{relations}{\mathrel}
711 \fdsy@DeclareSymbol{\nqsubset}{relations}{\mathrel}
712 \fdsy@DeclareSymbol{\nqsupset}{relations}{\mathrel}
713 \fdsy@DeclareSymbol{\nqsubseteq}{relations}{\mathrel}
714 \fdsy@DeclareSymbol{\nqsupseteq}{relations}{\mathrel}
715 \fdsy@DeclareSymbol{\nqsubseteqq}{relations}{\mathrel}
716 \fdsy@DeclareSymbol{\nqsupseteqq}{relations}{\mathrel}
717 \fdsy@DeclareSymbol{\nSqsubset}{relations}{\mathrel}
718 \fdsy@DeclareSymbol{\nSqsupset}{relations}{\mathrel}
719 \fdsy@DeclareSymbol{\nsubset}{relations}{\mathrel}
720 \fdsy@DeclareSymbol{\nsupset}{relations}{\mathrel}
721 \fdsy@DeclareSymbol{\nsubseteq}{relations}{\mathrel}
722 \fdsy@DeclareSymbol{\nsupseteq}{relations}{\mathrel}
723 \fdsy@DeclareSymbol{\nsubseteqq}{relations}{\mathrel}
724 \fdsy@DeclareSymbol{\nsupseteqq}{relations}{\mathrel}
725 \fdsy@DeclareSymbol{\nSubset}{relations}{\mathrel}
726 \fdsy@DeclareSymbol{\nSupset}{relations}{\mathrel}
727 \fdsy@DeclareSymbol{\nprec}{relations}{\mathrel}
728 \fdsy@DeclareSymbol{\nsucc}{relations}{\mathrel}
729 \fdsy@DeclareSymbol{\npreceq}{relations}{\mathrel}
730 \fdsy@DeclareSymbol{\nsucceq}{relations}{\mathrel}
731 \fdsy@DeclareSymbol{\npreccurlyeq}{relations}{\mathrel}
732 \fdsy@DeclareSymbol{\nsucccurlyeq}{relations}{\mathrel}
733 \fdsy@DeclareSymbol{\npreceqq}{relations}{\mathrel}
734 \fdsy@DeclareSymbol{\nsucceqq}{relations}{\mathrel}
735 \fdsy@DeclareSymbol{\nprecsim}{relations}{\mathrel}
736 \fdsy@DeclareSymbol{\nsuccsim}{relations}{\mathrel}
737 \fdsy@DeclareSymbol{\nprecapprox}{relations}{\mathrel}
738 \fdsy@DeclareSymbol{\nsuccapprox}{relations}{\mathrel}
739 \fdsy@DeclareSymbol{\nlessdot}{relations}{\mathrel}
740 \fdsy@DeclareSymbol{\ngtrdot}{relations}{\mathrel}
741 \fdsy@DeclareSymbol{\nleqdot}{relations}{\mathrel}
742 \fdsy@DeclareSymbol{\ngeqdot}{relations}{\mathrel}
743 \fdsy@DeclareSymbol{\nleqslantdot}{relations}{\mathrel}
744 \fdsy@DeclareAlias{\nlesdot}{relations}{\mathrel}
745 \fdsy@DeclareSymbol{\ngeqslantdot}{relations}{\mathrel}
746 \fdsy@DeclareAlias{\ngesdot}{relations}{\mathrel}
747 \fdsy@DeclareSymbol{\neqslantless}{relations}{\mathrel}
748 \fdsy@DeclareSymbol{\neqslantgtr}{relations}{\mathrel}
749 \fdsy@DeclareSymbol{\ncurlyeqprec}{relations}{\mathrel}
750 \fdsy@DeclareSymbol{\ncurlyeqsucc}{relations}{\mathrel}
751 \fdsy@DeclareSymbol{\simneqq}{relations}{\mathrel}

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752 \fdsy@DeclareSymbol{\backsimneqq}{relations}{\mathrel}
753 \fdsy@DeclareSymbol{\lneq}{relations}{\mathrel}
754 \fdsy@DeclareSymbol{\gneq}{relations}{\mathrel}
755 \fdsy@DeclareSymbol{\lneqq}{relations}{\mathrel}
756 \fdsy@DeclareAlias{\lvertneqq}{relations}{\mathrel}
757 \fdsy@DeclareSymbol{\gneqq}{relations}{\mathrel}
758 \fdsy@DeclareAlias{\gvertneqq}{relations}{\mathrel}
759 \fdsy@DeclareSymbol{\lnsim}{relations}{\mathrel}
760 \fdsy@DeclareSymbol{\gnsim}{relations}{\mathrel}
761 \fdsy@DeclareSymbol{\lnapprox}{relations}{\mathrel}
762 \fdsy@DeclareSymbol{\gnapprox}{relations}{\mathrel}
763 \fdsy@DeclareSymbol{\sqsubsetneq}{relations}{\mathrel}
764 \fdsy@DeclareSymbol{\sqsupsetneq}{relations}{\mathrel}
765 \fdsy@DeclareSymbol{\sqsubsetneqq}{relations}{\mathrel}
766 \fdsy@DeclareSymbol{\sqsupsetneqq}{relations}{\mathrel}
767 \fdsy@DeclareSymbol{\subsetneq}{relations}{\mathrel}
768 \fdsy@DeclareAlias{\varsubsetneq}{relations}{\mathrel}
769 \fdsy@DeclareSymbol{\supsetneq}{relations}{\mathrel}
770 \fdsy@DeclareAlias{\varsupsetneq}{relations}{\mathrel}
771 \fdsy@DeclareSymbol{\subsetneqq}{relations}{\mathrel}
772 \fdsy@DeclareAlias{\varsubsetneqq}{relations}{\mathrel}
773 \fdsy@DeclareSymbol{\supsetneqq}{relations}{\mathrel}
774 \fdsy@DeclareAlias{\varsupsetneqq}{relations}{\mathrel}
775 \fdsy@DeclareSymbol{\precneq}{relations}{\mathrel}
776 \fdsy@DeclareSymbol{\succneq}{relations}{\mathrel}
777 \fdsy@DeclareSymbol{\precneqq}{relations}{\mathrel}
778 \fdsy@DeclareSymbol{\succneqq}{relations}{\mathrel}
779 \fdsy@DeclareSymbol{\precnsim}{relations}{\mathrel}
780 \fdsy@DeclareSymbol{\succnsim}{relations}{\mathrel}
781 \fdsy@DeclareSymbol{\precnapprox}{relations}{\mathrel}
782 \fdsy@DeclareSymbol{\succnapprox}{relations}{\mathrel}
783
784 \DeclareRobustCommand{\coloneq}{\mathrel{\{\vdotdot\}\equal}}}
785 \let\coloneqq\coloneq

FdSymbolC: arrows
786 \fdsy@setslot{0}
787 \fdsy@DeclareSymbol{\rightarrow}{arrows}{\mathrel}
788 \fdsy@DeclareAlias{\to}{arrows}{\mathrel}
789 \fdsy@DeclareSymbol{\uparrow}{arrows}{\mathrel}
790 \fdsy@DeclareSymbol{\leftarrow}{arrows}{\mathrel}
791 \fdsy@DeclareAlias{\gets}{arrows}{\mathrel}
792 \fdsy@DeclareSymbol{\downarrow}{arrows}{\mathrel}
793 \fdsy@DeclareSymbol{\nearrow}{arrows}{\mathrel}
794 \fdsy@DeclareSymbol{\nwarrow}{arrows}{\mathrel}
795 \fdsy@DeclareSymbol{\swarrow}{arrows}{\mathrel}

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```

796 \fdsy@DeclareSymbol{\searrow}{arrows}{\mathrel}
797 \fdsy@DeclareSymbol{\Rightarrow}{arrows}{\mathrel}
798 \fdsy@DeclareSymbol{\Uparrow}{arrows}{\mathrel}
799 \fdsy@DeclareSymbol{\Leftarrow}{arrows}{\mathrel}
800 \fdsy@DeclareSymbol{\Downarrow}{arrows}{\mathrel}
801 \fdsy@DeclareSymbol{\Nearrow}{arrows}{\mathrel}
802 \fdsy@DeclareSymbol{\Nwarrow}{arrows}{\mathrel}
803 \fdsy@DeclareSymbol{\Swarrow}{arrows}{\mathrel}
804 \fdsy@DeclareSymbol{\Searrow}{arrows}{\mathrel}
805 \fdsy@DeclareSymbol{\leftrightharpoonup}{arrows}{\mathrel}
806 \fdsy@DeclareSymbol{\updownarrow}{arrows}{\mathrel}
807 \fdsy@DeclareSymbol{\neswarrow}{arrows}{\mathrel}
808 \fdsy@DeclareSymbol{\nwsearrow}{arrows}{\mathrel}
809 \fdsy@DeclareSymbol{\Leftrightarrow}{arrows}{\mathrel}
810 \fdsy@DeclareSymbol{\Updownarrow}{arrows}{\mathrel}
811 \fdsy@DeclareSymbol{\Neswarrow}{arrows}{\mathrel}
812 \fdsy@DeclareSymbol{\Nwsearrow}{arrows}{\mathrel}
813 \fdsy@DeclareSymbol{\twoheadrightarrow}{arrows}{\mathrel}
814 \fdsy@DeclareSymbol{\twoheaduparrow}{arrows}{\mathrel}
815 \fdsy@DeclareSymbol{\twoheadleftarrow}{arrows}{\mathrel}
816 \fdsy@DeclareSymbol{\twoheaddownarrow}{arrows}{\mathrel}
817 \fdsy@DeclareSymbol{\twoheadnearrow}{arrows}{\mathrel}
818 \fdsy@DeclareSymbol{\twoheadnwarrow}{arrows}{\mathrel}
819 \fdsy@DeclareSymbol{\twoheadswarrow}{arrows}{\mathrel}
820 \fdsy@DeclareSymbol{\twoheadsearrow}{arrows}{\mathrel}
821 \fdsy@DeclareSymbol{\rightarrowtail}{arrows}{\mathrel}
822 \fdsy@DeclareSymbol{\uparrowtail}{arrows}{\mathrel}
823 \fdsy@DeclareSymbol{\leftarrowtail}{arrows}{\mathrel}
824 \fdsy@DeclareSymbol{\downarrowtail}{arrows}{\mathrel}
825 \fdsy@DeclareSymbol{\nearrowtail}{arrows}{\mathrel}
826 \fdsy@DeclareSymbol{\nwarrowtail}{arrows}{\mathrel}
827 \fdsy@DeclareSymbol{\swarrowtail}{arrows}{\mathrel}
828 \fdsy@DeclareSymbol{\searrowtail}{arrows}{\mathrel}
829 \fdsy@DeclareSymbol{\rightrightarrows}{arrows}{\mathrel}
830 \fdsy@DeclareAlias{\mapsto}{arrows}{\mathrel}
831 \fdsy@DeclareSymbol{\upmapsto}{arrows}{\mathrel}
832 \fdsy@DeclareAlias{\mapsto}{arrows}{\mathrel}
833 \fdsy@DeclareSymbol{\leftmapsto}{arrows}{\mathrel}
834 \fdsy@DeclareAlias{\mapsto}{arrows}{\mathrel}
835 \fdsy@DeclareSymbol{\downmapsto}{arrows}{\mathrel}
836 \fdsy@DeclareAlias{\mapsto}{arrows}{\mathrel}
837 \fdsy@DeclareSymbol{\nemapsto}{arrows}{\mathrel}
838 \fdsy@DeclareSymbol{\nwmapsto}{arrows}{\mathrel}
839 \fdsy@DeclareSymbol{\swmapsto}{arrows}{\mathrel}
840 \fdsy@DeclareSymbol{\semapsto}{arrows}{\mathrel}

```

```

841 \fdsy@DeclareSymbol{\hookrightarrow}{arrows}{\mathrel}
842 \fdsy@DeclareAlias{\lhookrightarrow}{arrows}{\mathrel}
843 \fdsy@DeclareSymbol{\hookuparrow}{arrows}{\mathrel}
844 \fdsy@DeclareAlias{\lhookuparrow}{arrows}{\mathrel}
845 \fdsy@DeclareSymbol{\varhookleftarrow}{arrows}{\mathrel}
846 \fdsy@DeclareAlias{\lhookleftarrow}{arrows}{\mathrel}
847 \fdsy@DeclareSymbol{\varhookdownarrow}{arrows}{\mathrel}
848 \fdsy@DeclareAlias{\lhookdownarrow}{arrows}{\mathrel}
849 \fdsy@DeclareSymbol{\varhooknearrow}{arrows}{\mathrel}
850 \fdsy@DeclareAlias{\lhooknearrow}{arrows}{\mathrel}
851 \fdsy@DeclareSymbol{\hooknwarrow}{arrows}{\mathrel}
852 \fdsy@DeclareAlias{\hknwarrow}{arrows}{\mathrel}
853 \fdsy@DeclareAlias{\lhooknwarrow}{arrows}{\mathrel}
854 \fdsy@DeclareSymbol{\varhookswarrow}{arrows}{\mathrel}
855 \fdsy@DeclareAlias{\lhookswarrow}{arrows}{\mathrel}
856 \fdsy@DeclareSymbol{\hooksearrow}{arrows}{\mathrel}
857 \fdsy@DeclareAlias{\hksearrow}{arrows}{\mathrel}
858 \fdsy@DeclareAlias{\lhooksearrow}{arrows}{\mathrel}
859 \fdsy@DeclareSymbol{\varhookrightarrow}{arrows}{\mathrel}
860 \fdsy@DeclareAlias{\rhookrightarrow}{arrows}{\mathrel}
861 \fdsy@DeclareSymbol{\varhookuparrow}{arrows}{\mathrel}
862 \fdsy@DeclareAlias{\rhookuparrow}{arrows}{\mathrel}
863 \fdsy@DeclareSymbol{\hookleftarrow}{arrows}{\mathrel}
864 \fdsy@DeclareAlias{\rhookleftarrow}{arrows}{\mathrel}
865 \fdsy@DeclareSymbol{\hookdownarrow}{arrows}{\mathrel}
866 \fdsy@DeclareAlias{\rhookdownarrow}{arrows}{\mathrel}
867 \fdsy@DeclareSymbol{\hooknearrow}{arrows}{\mathrel}
868 \fdsy@DeclareAlias{\hknearrow}{arrows}{\mathrel}
869 \fdsy@DeclareAlias{\rhooknearrow}{arrows}{\mathrel}
870 \fdsy@DeclareSymbol{\varhooknwarrow}{arrows}{\mathrel}
871 \fdsy@DeclareAlias{\rhooknwarrow}{arrows}{\mathrel}
872 \fdsy@DeclareSymbol{\hookswarrow}{arrows}{\mathrel}
873 \fdsy@DeclareAlias{\hkswarrow}{arrows}{\mathrel}
874 \fdsy@DeclareAlias{\rhookswarrow}{arrows}{\mathrel}
875 \fdsy@DeclareSymbol{\varhooksearrow}{arrows}{\mathrel}
876 \fdsy@DeclareAlias{\rhooksearrow}{arrows}{\mathrel}
877 \fdsy@DeclareSymbol{\rightharpoonup}{arrows}{\mathrel}
878 \fdsy@DeclareSymbol{\upharpoonleft}{arrows}{\mathrel}
879 \fdsy@DeclareSymbol{\leftharpoondown}{arrows}{\mathrel}
880 \fdsy@DeclareSymbol{\downharpoonright}{arrows}{\mathrel}
881 \fdsy@DeclareSymbol{\neharpoonnw}{arrows}{\mathrel}
882 \fdsy@DeclareSymbol{\nwharpoonsw}{arrows}{\mathrel}
883 \fdsy@DeclareSymbol{\swharpoonse}{arrows}{\mathrel}
884 \fdsy@DeclareSymbol{\seharpoonne}{arrows}{\mathrel}
885 \fdsy@DeclareSymbol{\rightharpoondown}{arrows}{\mathrel}

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886 \fdsy@DeclareSymbol{\upharpoonright}{arrows}{\mathrel}
887 \fdsy@DeclareAlias{\restriction}{arrows}{\mathrel}
888 \fdsy@DeclareSymbol{\leftharpoonup}{arrows}{\mathrel}
889 \fdsy@DeclareSymbol{\downharpoonleft}{arrows}{\mathrel}
890 \fdsy@DeclareSymbol{\neharpoonse}{arrows}{\mathrel}
891 \fdsy@DeclareSymbol{\nwharpoonne}{arrows}{\mathrel}
892 \fdsy@DeclareSymbol{\swharpoonnw}{arrows}{\mathrel}
893 \fdsy@DeclareSymbol{\seharpoonsw}{arrows}{\mathrel}
894 \fdsy@DeclareSymbol{\leftrightharpoonupdown}{arrows}{\mathrel}
895 \fdsy@DeclareSymbol{\updownharpoonleftright}{arrows}{\mathrel}
896 \fdsy@DeclareSymbol{\neswharpoonnwse}{arrows}{\mathrel}
897 \fdsy@DeclareSymbol{\nwseharpoonnesw}{arrows}{\mathrel}
898 \fdsy@DeclareSymbol{\leftrightharpoonpdownup}{arrows}{\mathrel}
899 \fdsy@DeclareSymbol{\updownharpoonrightleft}{arrows}{\mathrel}
900 \fdsy@DeclareSymbol{\neswharpoonsenw}{arrows}{\mathrel}
901 \fdsy@DeclareSymbol{\nwseharpoonswne}{arrows}{\mathrel}
902 \fdsy@DeclareSymbol{\rightleftharpoons}{arrows}{\mathrel}
903 \fdsy@DeclareSymbol{\updownharpoons}{arrows}{\mathrel}
904 \fdsy@DeclareAlias{\updownharpoonsleftright}{arrows}{\mathrel}
905 \fdsy@DeclareSymbol{\neswharpoons}{arrows}{\mathrel}
906 \fdsy@DeclareSymbol{\senwharpoons}{arrows}{\mathrel}
907 \fdsy@DeclareSymbol{\leftrightharpoons}{arrows}{\mathrel}
908 \fdsy@DeclareSymbol{\downupharpoons}{arrows}{\mathrel}
909 \fdsy@DeclareAlias{\downupharpoonsleftright}{arrows}{\mathrel}
910 \fdsy@DeclareSymbol{\swneharpoons}{arrows}{\mathrel}
911 \fdsy@DeclareSymbol{\nwseharpoons}{arrows}{\mathrel}
912 \fdsy@DeclareSymbol{\rightbkarrow}{arrows}{\mathrel}
913 \fdsy@DeclareAlias{\dasharrow}{arrows}{\mathrel}
914 \fdsy@DeclareAlias{\dashrightarrow}{arrows}{\mathrel}
915 \fdsy@DeclareSymbol{\upbkarrow}{arrows}{\mathrel}
916 \fdsy@DeclareSymbol{\leftbkarrow}{arrows}{\mathrel}
917 \fdsy@DeclareAlias{\dashleftarrow}{arrows}{\mathrel}
918 \fdsy@DeclareSymbol{\downbkarrow}{arrows}{\mathrel}
919 \fdsy@DeclareSymbol{\nebkarrow}{arrows}{\mathrel}
920 \fdsy@DeclareSymbol{\nwbkarrow}{arrows}{\mathrel}
921 \fdsy@DeclareSymbol{\swbkarrow}{arrows}{\mathrel}
922 \fdsy@DeclareSymbol{\sebkarrow}{arrows}{\mathrel}
923 \fdsy@DeclareSymbol{\rightspoon}{arrows}{\mathrel}
924 \fdsy@DeclareAlias{\multimap}{arrows}{\mathrel}
925 \fdsy@DeclareSymbol{\upspoon}{arrows}{\mathrel}
926 \fdsy@DeclareAlias{\circmid}{arrows}{\mathrel}
927 \fdsy@DeclareSymbol{\leftspoon}{arrows}{\mathrel}
928 \fdsy@DeclareAlias{\multimapinv}{arrows}{\mathrel}
929 \fdsy@DeclareSymbol{\downspoon}{arrows}{\mathrel}
930 \fdsy@DeclareAlias{\midcir}{arrows}{\mathrel}

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931 \fdsy@DeclareSymbol{\rightblackspoon}{arrows}{\mathrel}
932 \fdsy@DeclareSymbol{\upblackspoon}{arrows}{\mathrel}
933 \fdsy@DeclareSymbol{\leftblackspoon}{arrows}{\mathrel}
934 \fdsy@DeclareSymbol{\downblackspoon}{arrows}{\mathrel}
935 \fdsy@DeclareSymbol{\rightpitchfork}{arrows}{\mathrel}
936 \fdsy@DeclareSymbol{\uppitchfork}{arrows}{\mathrel}
937 \fdsy@DeclareAlias{\pitchfork}{arrows}{\mathrel}
938 \fdsy@DeclareSymbol{\leftpitchfork}{arrows}{\mathrel}
939 \fdsy@DeclareSymbol{\downpitchfork}{arrows}{\mathrel}
940 \fdsy@DeclareSymbol{\rightrightarrows}{arrows}{\mathrel}
941 \fdsy@DeclareSymbol{\upuparrows}{arrows}{\mathrel}
942 \fdsy@DeclareSymbol{\leftleftarrows}{arrows}{\mathrel}
943 \fdsy@DeclareSymbol{\downdownarrows}{arrows}{\mathrel}
944 \fdsy@DeclareSymbol{\nenearrows}{arrows}{\mathrel}
945 \fdsy@DeclareSymbol{\nwnwarrows}{arrows}{\mathrel}
946 \fdsy@DeclareSymbol{\swswarrows}{arrows}{\mathrel}
947 \fdsy@DeclareSymbol{\sesearrows}{arrows}{\mathrel}
948 \fdsy@DeclareSymbol{\rightleftarrows}{arrows}{\mathrel}
949 \fdsy@DeclareSymbol{\updownarrows}{arrows}{\mathrel}
950 \fdsy@DeclareSymbol{\neswarrows}{arrows}{\mathrel}
951 \fdsy@DeclareSymbol{\nwsearrows}{arrows}{\mathrel}
952 \fdsy@DeclareSymbol{\leftrightharrows}{arrows}{\mathrel}
953 \fdsy@DeclareSymbol{\downuparrows}{arrows}{\mathrel}
954 \fdsy@DeclareSymbol{\swnearrows}{arrows}{\mathrel}
955 \fdsy@DeclareSymbol{\senwarrows}{arrows}{\mathrel}
956 \fdsy@DeclareSymbol{\rightwavedarrow}{arrows}{\mathrel}
957 \fdsy@DeclareAlias{\leadsto}{arrows}{\mathrel}
958 \fdsy@DeclareAlias{\rightsquigarrow}{arrows}{\mathrel}
959 \fdsy@DeclareAlias{\rightlsquigarrow}{arrows}{\mathrel}
960 \fdsy@DeclareSymbol{\varupwavedarrow}{arrows}{\mathrel}
961 \fdsy@DeclareAlias{\uplsquigarrow}{arrows}{\mathrel}
962 \fdsy@DeclareSymbol{\varleftwavedarrow}{arrows}{\mathrel}
963 \fdsy@DeclareAlias{\leftlsquigarrow}{arrows}{\mathrel}
964 \fdsy@DeclareSymbol{\downwavedarrow}{arrows}{\mathrel}
965 \fdsy@DeclareAlias{\downlsquigarrow}{arrows}{\mathrel}
966 \fdsy@DeclareSymbol{\varrightwavedarrow}{arrows}{\mathrel}
967 \fdsy@DeclareAlias{\rightrsquigarrow}{arrows}{\mathrel}
968 \fdsy@DeclareSymbol{\upwavedarrow}{arrows}{\mathrel}
969 \fdsy@DeclareAlias{\uprsquigarrow}{arrows}{\mathrel}
970 \fdsy@DeclareSymbol{\leftwavedarrow}{arrows}{\mathrel}
971 \fdsy@DeclareAlias{\leftsquigarrow}{arrows}{\mathrel}
972 \fdsy@DeclareAlias{\lefttrsquigarrow}{arrows}{\mathrel}
973 \fdsy@DeclareSymbol{\vardownwavedarrow}{arrows}{\mathrel}
974 \fdsy@DeclareAlias{\downrsquigarrow}{arrows}{\mathrel}
975 \fdsy@DeclareSymbol{\leftrightwavedarrow}{arrows}{\mathrel}

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976 \fdsy@DeclareAlias{\leftrightsquigarrow}{arrows}{\mathrel}
977 \fdsy@DeclareSymbol{\updownwavedarrow}{arrows}{\mathrel}
978 \fdsy@DeclareAlias{\updownsquigarrow}{arrows}{\mathrel}
979 \fdsy@DeclareSymbol{\varleftrightrightwavedarrow}{arrows}{\mathrel}
980 \fdsy@DeclareAlias{\rightleftsquigarrow}{arrows}{\mathrel}
981 \fdsy@DeclareSymbol{\varupdownwavedarrow}{arrows}{\mathrel}
982 \fdsy@DeclareAlias{\downupsquigarrow}{arrows}{\mathrel}
983 \fdsy@DeclareSymbol{\cwoverarccarrow}{arrows}{\mathrel}
984 \fdsy@DeclareAlias{\curvearrowright}{arrows}{\mathrel}
985 \fdsy@DeclareAlias{\rightlcurvedarrow}{arrows}{\mathrel}
986 \fdsy@DeclareSymbol{\cwleftarccarrow}{arrows}{\mathrel}
987 \fdsy@DeclareAlias{\uplcurvedarrow}{arrows}{\mathrel}
988 \fdsy@DeclareSymbol{\cwunderarccarrow}{arrows}{\mathrel}
989 \fdsy@DeclareAlias{\leftlcurvedarrow}{arrows}{\mathrel}
990 \fdsy@DeclareSymbol{\cwrightarccarrow}{arrows}{\mathrel}
991 \fdsy@DeclareAlias{\downlcurvedarrow}{arrows}{\mathrel}
992 \fdsy@DeclareSymbol{\cwnwarccarrow}{arrows}{\mathrel}
993 \fdsy@DeclareAlias{\rightupcurvedarrow}{arrows}{\mathrel}
994 \fdsy@DeclareAlias{\nelcurvedarrow}{arrows}{\mathrel}
995 \fdsy@DeclareSymbol{\cwswarccarrow}{arrows}{\mathrel}
996 \fdsy@DeclareAlias{\upleftcurvedarrow}{arrows}{\mathrel}
997 \fdsy@DeclareAlias{\nwlcurearrow}{arrows}{\mathrel}
998 \fdsy@DeclareSymbol{\cwsearccarrow}{arrows}{\mathrel}
999 \fdsy@DeclareAlias{\leftdowncurvedarrow}{arrows}{\mathrel}
1000 \fdsy@DeclareAlias{\swlcurearrow}{arrows}{\mathrel}
1001 \fdsy@DeclareSymbol{\cwnearccarrow}{arrows}{\mathrel}
1002 \fdsy@DeclareAlias{\downrightcurvedarrow}{arrows}{\mathrel}
1003 \fdsy@DeclareAlias{\selcurvedarrow}{arrows}{\mathrel}
1004 \fdsy@DeclareSymbol{\acwunderarccarrow}{arrows}{\mathrel}
1005 \fdsy@DeclareAlias{\rightrcurearrow}{arrows}{\mathrel}
1006 \fdsy@DeclareSymbol{\acwrightarccarrow}{arrows}{\mathrel}
1007 \fdsy@DeclareAlias{\uprcurearrow}{arrows}{\mathrel}
1008 \fdsy@DeclareSymbol{\acwoverarccarrow}{arrows}{\mathrel}
1009 \fdsy@DeclareAlias{\curvearrowleft}{arrows}{\mathrel}
1010 \fdsy@DeclareAlias{\leftrcurearrow}{arrows}{\mathrel}
1011 \fdsy@DeclareSymbol{\acwleftarccarrow}{arrows}{\mathrel}
1012 \fdsy@DeclareAlias{\downrcurearrow}{arrows}{\mathrel}
1013 \fdsy@DeclareSymbol{\acwsearccarrow}{arrows}{\mathrel}
1014 \fdsy@DeclareAlias{\uprightcurvedarrow}{arrows}{\mathrel}
1015 \fdsy@DeclareAlias{\nercurvedarrow}{arrows}{\mathrel}
1016 \fdsy@DeclareSymbol{\acwnearccarrow}{arrows}{\mathrel}
1017 \fdsy@DeclareAlias{\leftupcurvedarrow}{arrows}{\mathrel}
1018 \fdsy@DeclareAlias{\nwrcurearrow}{arrows}{\mathrel}
1019 \fdsy@DeclareSymbol{\acwnwarccarrow}{arrows}{\mathrel}
1020 \fdsy@DeclareAlias{\downleftcurvedarrow}{arrows}{\mathrel}

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1021 \fdsy@DeclareAlias{\swrcurvearrow}{arrows}{\mathrel}
1022 \fdsy@DeclareSymbol{\acswarcarrow}{arrows}{\mathrel}
1023 \fdsy@DeclareAlias{\rightdowncurvedarrow}{arrows}{\mathrel}
1024 \fdsy@DeclareAlias{\sercurvearrow}{arrows}{\mathrel}
1025 \fdsy@DeclareSymbol{\bdoverarcarrow}{arrows}{\mathrel}
1026 \fdsy@DeclareAlias{\leftrightcurvearrow}{arrows}{\mathrel}
1027 \fdsy@DeclareSymbol{\bdleftarccarrow}{arrows}{\mathrel}
1028 \fdsy@DeclareAlias{\updowncurvearrow}{arrows}{\mathrel}
1029 \fdsy@DeclareSymbol{\bdunderarcarrow}{arrows}{\mathrel}
1030 \fdsy@DeclareAlias{\rightleftcurvearrow}{arrows}{\mathrel}
1031 \fdsy@DeclareSymbol{\bdrigharccarrow}{arrows}{\mathrel}
1032 \fdsy@DeclareAlias{\downupcurvearrow}{arrows}{\mathrel}
1033 \fdsy@DeclareSymbol{\bdnwarccarrow}{arrows}{\mathrel}
1034 \fdsy@DeclareAlias{\neswcurvearrow}{arrows}{\mathrel}
1035 \fdsy@DeclareSymbol{\bdswarcarrow}{arrows}{\mathrel}
1036 \fdsy@DeclareAlias{\nwsecurvearrow}{arrows}{\mathrel}
1037 \fdsy@DeclareSymbol{\bdsearcarrow}{arrows}{\mathrel}
1038 \fdsy@DeclareAlias{\swnecurvearrow}{arrows}{\mathrel}
1039 \fdsy@DeclareSymbol{\bdnearccarrow}{arrows}{\mathrel}
1040 \fdsy@DeclareAlias{\senwcurvearrow}{arrows}{\mathrel}
1041 \fdsy@DeclareSymbol{\leftfootline}{arrows}{\mathrel}
1042 \fdsy@DeclareAlias{\vlongdash}{arrows}{\mathrel}
1043 \fdsy@DeclareSymbol{\rightfootline}{arrows}{\mathrel}
1044 \fdsy@DeclareAlias{\longdashv}{arrows}{\mathrel}
1045 \fdsy@DeclareSymbol{\acwcirclearrowup}{arrows}{\mathrel}
1046 \fdsy@DeclareSymbol{\acwcirclearrowleft}{arrows}{\mathrel}
1047 \fdsy@DeclareAlias{\circlearrowleft}{arrows}{\mathrel}
1048 \fdsy@DeclareAlias{\acwopencirclearrow}{arrows}{\mathrel}
1049 \fdsy@DeclareSymbol{\acwcirclearrowdown}{arrows}{\mathrel}
1050 \fdsy@DeclareAlias{\acwgapcirclearrow}{arrows}{\mathrel}
1051 \fdsy@DeclareSymbol{\acwcirclearrowright}{arrows}{\mathrel}
1052 \fdsy@DeclareSymbol{\cwcirclearrowdown}{arrows}{\mathrel}
1053 \fdsy@DeclareAlias{\cwgapcirclearrow}{arrows}{\mathrel}
1054 \fdsy@DeclareSymbol{\cwcirclearrowright}{arrows}{\mathrel}
1055 \fdsy@DeclareAlias{\circlearrowright}{arrows}{\mathrel}
1056 \fdsy@DeclareAlias{\cwopencirclearrow}{arrows}{\mathrel}
1057 \fdsy@DeclareSymbol{\cwcirclearrowup}{arrows}{\mathrel}
1058 \fdsy@DeclareSymbol{\cwcirclearrowleft}{arrows}{\mathrel}
1059 \fdsy@DeclareSymbol{\Rrightarrow}{arrows}{\mathrel}
1060 \fdsy@DeclareSymbol{\Uparrow}{arrows}{\mathrel}
1061 \fdsy@DeclareSymbol{\Lleftarrow}{arrows}{\mathrel}
1062 \fdsy@DeclareSymbol{\Ddownarrow}{arrows}{\mathrel}
1063 \fdsy@DeclareSymbol{\Lsh}{arrows}{\mathrel}
1064 \fdsy@DeclareSymbol{\Rsh}{arrows}{\mathrel}
1065 \fdsy@DeclareSymbol{\Ldsh}{arrows}{\mathrel}

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1066 \fdsy@DeclareSymbol{\Rdsh}{arrows}{\mathrel}
1067 \fdsy@DeclareSymbol{\looparrowright}{arrows}{\mathrel}
1068 \fdsy@DeclareSymbol{\looparrowleft}{arrows}{\mathrel}
1069 \fdsy@setslot{224}
1070 \fdsy@DeclareSymbol{\rightvdash}{arrows}{\mathrel}
1071 \fdsy@DeclareAlias{\vdash}{arrows}{\mathrel}
1072 \fdsy@DeclareSymbol{\upvdash}{arrows}{\mathrel}
1073 \fdsy@DeclareAlias{\perp}{arrows}{\mathrel}
1074 \fdsy@DeclareSymbol{\leftvdash}{arrows}{\mathrel}
1075 \fdsy@DeclareAlias{\dashv}{arrows}{\mathrel}
1076 \fdsy@DeclareSymbol{\downvdash}{arrows}{\mathrel}
1077 \fdsy@DeclareSymbol{\rightassert}{arrows}{\mathrel}
1078 \fdsy@DeclareAlias{\assert}{arrows}{\mathrel}
1079 \fdsy@DeclareAlias{\shorttrighttack}{arrows}{\mathrel}
1080 \fdsy@DeclareSymbol{\upassert}{arrows}{\mathrel}
1081 \fdsy@DeclareAlias{\shortuptack}{arrows}{\mathrel}
1082 \fdsy@DeclareSymbol{\leftassert}{arrows}{\mathrel}
1083 \fdsy@DeclareAlias{\shortlefttack}{arrows}{\mathrel}
1084 \fdsy@DeclareSymbol{\downassert}{arrows}{\mathrel}
1085 \fdsy@DeclareAlias{\shortdowntack}{arrows}{\mathrel}
1086 \fdsy@DeclareSymbol{\rightvDash}{arrows}{\mathrel}
1087 \fdsy@DeclareAlias{\vDash}{arrows}{\mathrel}
1088 \fdsy@DeclareSymbol{\upvDash}{arrows}{\mathrel}
1089 \fdsy@DeclareAlias{\Vbar}{arrows}{\mathrel}
1090 \fdsy@DeclareSymbol{\leftvDash}{arrows}{\mathrel}
1091 \fdsy@DeclareAlias{\Dashv}{arrows}{\mathrel}
1092 \fdsy@DeclareSymbol{\downvDash}{arrows}{\mathrel}
1093 \fdsy@DeclareAlias{\barV}{arrows}{\mathrel}
1094 \fdsy@DeclareSymbol{\rightmodels}{arrows}{\mathrel}
1095 \fdsy@DeclareAlias{\models}{arrows}{\mathrel}
1096 \fdsy@DeclareSymbol{\upmodels}{arrows}{\mathrel}
1097 \fdsy@DeclareSymbol{\leftmodels}{arrows}{\mathrel}
1098 \fdsy@DeclareSymbol{\downmodels}{arrows}{\mathrel}
1099 \fdsy@DeclareSymbol{\rightVdash}{arrows}{\mathrel}
1100 \fdsy@DeclareAlias{\Vdash}{arrows}{\mathrel}
1101 \fdsy@DeclareSymbol{\upVdash}{arrows}{\mathrel}
1102 \fdsy@DeclareSymbol{\leftVdash}{arrows}{\mathrel}
1103 \fdsy@DeclareAlias{\dashV}{arrows}{\mathrel}
1104 \fdsy@DeclareSymbol{\downVdash}{arrows}{\mathrel}
1105 \fdsy@DeclareSymbol{\rightVDash}{arrows}{\mathrel}
1106 \fdsy@DeclareAlias{\VDash}{arrows}{\mathrel}
1107 \fdsy@DeclareSymbol{\upVDash}{arrows}{\mathrel}
1108 \fdsy@DeclareSymbol{\leftVDash}{arrows}{\mathrel}
1109 \fdsy@DeclareAlias{\DashV}{arrows}{\mathrel}
1110 \fdsy@DeclareSymbol{\downVDash}{arrows}{\mathrel}

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1111 \fdsy@DeclareSymbol{\Vvdash}{arrows}{\mathrel}
1112 \fdsy@DeclareSymbol{\dashVv}{arrows}{\mathrel}
1113 \fdsy@DeclareSymbol{\VDdash}{arrows}{\mathrel}
1114 \fdsy@DeclareSymbol{\Ddashv}{arrows}{\mathrel}
1115
1116 \DeclareRobustCommand{\relbar}{\mathrel{\smash-}}
1117 \DeclareRobustCommand{\Relbar}{\mathrel=}
1118 \let\joinrel\undefined
1119 \DeclareRobustCommand\joinrel{\mathrel{\mkern-4mu}}
1120 \DeclareRobustCommand\longrightarrow{\DOTSB\relbar\joinrel\rightarrow}
1121 \DeclareRobustCommand\longleftarrow{\DOTSB\leftarrow\joinrel\relbar}
1122 \DeclareRobustCommand\longleftrightarrow{\DOTSB\leftarrow\joinrel\rightarrow}
1123 \DeclareRobustCommand\Longrightarrow{\DOTSB\Relbar\joinrel\Rightarrow}
1124 \DeclareRobustCommand\Longleftarrow{\DOTSB\Leftarrow\joinrel\Relbar}
1125 \DeclareRobustCommand\Longleftrightharpoon{\DOTSB\Leftarrow\joinrel\rightarrow}
1126 \DeclareRobustCommand\longmapsto{\DOTSB\leftfootline\mkern-7mu\rightarrow}
1127 \DeclareRobustCommand\emptyblackspoon{\DOTSB\leftspoon\mkern-13mu\rightblackspoon}
1128 \let\origof\emptyblackspoon
1129 \DeclareRobustCommand\filledemptyspoon{\DOTSB\leftblackspoon\mkern-13mu\rightspoon}
1130 \let\imageof\filledemptyspoon
1131 \DeclareRobustCommand\leftrightspoon{\DOTSB\leftspoon\mkern-13mu\rightspoon}
1132 \let\dualmap\leftrightspoon
1133 \DeclareRobustCommand\leftrightblackspoon{\DOTSB\leftblackspoon\mkern-13mu\rightblackspoon}

FdSymbolD: stroked arrows
1134 \fdsy@setslot{0}
1135 \fdsy@DeclareSymbol{\nrightarrow}{narrows}{\mathrel}
1136 \fdsy@DeclareAlias{\nto}{narrows}{\mathrel}
1137 \fdsy@DeclareSymbol{\nuparrow}{narrows}{\mathrel}
1138 \fdsy@DeclareSymbol{\nleftarrow}{narrows}{\mathrel}
1139 \fdsy@DeclareAlias{\ngets}{narrows}{\mathrel}
1140 \fdsy@DeclareSymbol{\ndownarrow}{narrows}{\mathrel}
1141 \fdsy@DeclareSymbol{\nnearrow}{narrows}{\mathrel}
1142 \fdsy@DeclareSymbol{\nnwarrow}{narrows}{\mathrel}
1143 \fdsy@DeclareSymbol{\nswarrow}{narrows}{\mathrel}
1144 \fdsy@DeclareSymbol{\nsearrow}{narrows}{\mathrel}
1145 \fdsy@DeclareSymbol{\nrightarrow}{narrows}{\mathrel}
1146 \fdsy@DeclareSymbol{\nUparrow}{narrows}{\mathrel}
1147 \fdsy@DeclareSymbol{\nLeftarrow}{narrows}{\mathrel}
1148 \fdsy@DeclareSymbol{\nDownarrow}{narrows}{\mathrel}
1149 \fdsy@DeclareSymbol{\nNearrow}{narrows}{\mathrel}
1150 \fdsy@DeclareSymbol{\nNwarrow}{narrows}{\mathrel}
1151 \fdsy@DeclareSymbol{\nSwarrow}{narrows}{\mathrel}
1152 \fdsy@DeclareSymbol{\nsearrow}{narrows}{\mathrel}
1153 \fdsy@DeclareSymbol{\nleftrightharpoon}{narrows}{\mathrel}
1154 \fdsy@DeclareSymbol{\nupdownarrow}{narrows}{\mathrel}

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1155 \fdsy@DeclareSymbol{\nneswarrow}{narrows}{\mathrel}
1156 \fdsy@DeclareSymbol{\nnwsearrow}{narrows}{\mathrel}
1157 \fdsy@DeclareSymbol{\nLefttrightharpoonright}{narrows}{\mathrel}
1158 \fdsy@DeclareSymbol{\nUpdownarrow}{narrows}{\mathrel}
1159 \fdsy@DeclareSymbol{\nNeswarrow}{narrows}{\mathrel}
1160 \fdsy@DeclareSymbol{\nNwsearrow}{narrows}{\mathrel}
1161 \fdsy@DeclareSymbol{\ntwoheadrightarrow}{narrows}{\mathrel}
1162 \fdsy@DeclareSymbol{\ntwoheaduparrow}{narrows}{\mathrel}
1163 \fdsy@DeclareSymbol{\ntwoheadleftarrow}{narrows}{\mathrel}
1164 \fdsy@DeclareSymbol{\ntwoheaddownarrow}{narrows}{\mathrel}
1165 \fdsy@DeclareSymbol{\ntwoheadnearrow}{narrows}{\mathrel}
1166 \fdsy@DeclareSymbol{\ntwoheadnwarrow}{narrows}{\mathrel}
1167 \fdsy@DeclareSymbol{\ntwoheadswarrow}{narrows}{\mathrel}
1168 \fdsy@DeclareSymbol{\ntwoheadsearrow}{narrows}{\mathrel}
1169 \fdsy@DeclareSymbol{\nrightarrowtail}{narrows}{\mathrel}
1170 \fdsy@DeclareSymbol{\nuparrowtail}{narrows}{\mathrel}
1171 \fdsy@DeclareSymbol{\nleftarrowtail}{narrows}{\mathrel}
1172 \fdsy@DeclareSymbol{\ndownarrowtail}{narrows}{\mathrel}
1173 \fdsy@DeclareSymbol{\nnearrowtail}{narrows}{\mathrel}
1174 \fdsy@DeclareSymbol{\nnwarrowtail}{narrows}{\mathrel}
1175 \fdsy@DeclareSymbol{\nswarrowtail}{narrows}{\mathrel}
1176 \fdsy@DeclareSymbol{\nsearrowtail}{narrows}{\mathrel}
1177 \fdsy@DeclareSymbol{\nrightarrowtail}{narrows}{\mathrel}
1178 \fdsy@DeclareAlias{\nmapsto}{narrows}{\mathrel}
1179 \fdsy@DeclareSymbol{\nupmapsto}{narrows}{\mathrel}
1180 \fdsy@DeclareAlias{\nmapsup}{narrows}{\mathrel}
1181 \fdsy@DeclareSymbol{\nleftmapsto}{narrows}{\mathrel}
1182 \fdsy@DeclareAlias{\nmapsfrom}{narrows}{\mathrel}
1183 \fdsy@DeclareSymbol{\ndownmapsto}{narrows}{\mathrel}
1184 \fdsy@DeclareAlias{\nmapsdown}{narrows}{\mathrel}
1185 \fdsy@DeclareSymbol{\nnemapsto}{narrows}{\mathrel}
1186 \fdsy@DeclareSymbol{\nnwmapsto}{narrows}{\mathrel}
1187 \fdsy@DeclareSymbol{\nswmapsto}{narrows}{\mathrel}
1188 \fdsy@DeclareSymbol{\nsemapsto}{narrows}{\mathrel}
1189 \fdsy@DeclareSymbol{\nhookrightarrow}{narrows}{\mathrel}
1190 \fdsy@DeclareSymbol{\nhookuparrow}{narrows}{\mathrel}
1191 \fdsy@DeclareSymbol{\nvarhookleftarrow}{narrows}{\mathrel}
1192 \fdsy@DeclareSymbol{\nvarhookdownarrow}{narrows}{\mathrel}
1193 \fdsy@DeclareSymbol{\nvarhooknearrow}{narrows}{\mathrel}
1194 \fdsy@DeclareSymbol{\nhooknwarrow}{narrows}{\mathrel}
1195 \fdsy@DeclareAlias{\nhknwarrow}{narrows}{\mathrel}
1196 \fdsy@DeclareSymbol{\nvarhookswarrow}{narrows}{\mathrel}
1197 \fdsy@DeclareSymbol{\nhooksearrow}{narrows}{\mathrel}
1198 \fdsy@DeclareAlias{\nhksearrow}{narrows}{\mathrel}
1199 \fdsy@DeclareSymbol{\nvarhookrightarrow}{narrows}{\mathrel}

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1200 \fdsy@DeclareSymbol{\nvarhookuparrow}{narrows}{\mathrel}
1201 \fdsy@DeclareSymbol{\nhookleftarrow}{narrows}{\mathrel}
1202 \fdsy@DeclareSymbol{\nhookdownarrow}{narrows}{\mathrel}
1203 \fdsy@DeclareSymbol{\nhooknearrow}{narrows}{\mathrel}
1204 \fdsy@DeclareAlias{\nhknearrow}{narrows}{\mathrel}
1205 \fdsy@DeclareSymbol{\nvarhooknwarrow}{narrows}{\mathrel}
1206 \fdsy@DeclareSymbol{\nhookswarrow}{narrows}{\mathrel}
1207 \fdsy@DeclareAlias{\nhkswarrow}{narrows}{\mathrel}
1208 \fdsy@DeclareSymbol{\nvarhooksearrow}{narrows}{\mathrel}
1209 \fdsy@DeclareSymbol{\nrightharpoonup}{narrows}{\mathrel}
1210 \fdsy@DeclareSymbol{\nupharpoonleft}{narrows}{\mathrel}
1211 \fdsy@DeclareSymbol{\nleftharpoondown}{narrows}{\mathrel}
1212 \fdsy@DeclareSymbol{\ndownharpoonright}{narrows}{\mathrel}
1213 \fdsy@DeclareSymbol{\nneharpoonnw}{narrows}{\mathrel}
1214 \fdsy@DeclareSymbol{\nnwharpoonsw}{narrows}{\mathrel}
1215 \fdsy@DeclareSymbol{\nswharpoonse}{narrows}{\mathrel}
1216 \fdsy@DeclareSymbol{\nseharpoonne}{narrows}{\mathrel}
1217 \fdsy@DeclareSymbol{\nrightharpoondown}{narrows}{\mathrel}
1218 \fdsy@DeclareSymbol{\nupharpoonright}{narrows}{\mathrel}
1219 \fdsy@DeclareAlias{\nrestriction}{narrows}{\mathrel}
1220 \fdsy@DeclareSymbol{\nleftharpoonup}{narrows}{\mathrel}
1221 \fdsy@DeclareSymbol{\ndownharpoonleft}{narrows}{\mathrel}
1222 \fdsy@DeclareSymbol{\nneharpoonse}{narrows}{\mathrel}
1223 \fdsy@DeclareSymbol{\nnwharpoonne}{narrows}{\mathrel}
1224 \fdsy@DeclareSymbol{\nswharpoonnw}{narrows}{\mathrel}
1225 \fdsy@DeclareSymbol{\nseharpoonsw}{narrows}{\mathrel}
1226 \fdsy@DeclareSymbol{\nleftrightharpoonupdown}{narrows}{\mathrel}
1227 \fdsy@DeclareSymbol{\nupdownharpoonleftright}{narrows}{\mathrel}
1228 \fdsy@DeclareSymbol{\nneswharpoonnwse}{narrows}{\mathrel}
1229 \fdsy@DeclareSymbol{\nnwseharpoonnesw}{narrows}{\mathrel}
1230 \fdsy@DeclareSymbol{\nleftrightharpoondownup}{narrows}{\mathrel}
1231 \fdsy@DeclareSymbol{\nupdownharpoonrightleft}{narrows}{\mathrel}
1232 \fdsy@DeclareSymbol{\nneswharpoonsenw}{narrows}{\mathrel}
1233 \fdsy@DeclareSymbol{\nnwseharpoonswne}{narrows}{\mathrel}
1234 \fdsy@DeclareSymbol{\nrightharpoons}{narrows}{\mathrel}
1235 \fdsy@DeclareSymbol{\nupdownharpoons}{narrows}{\mathrel}
1236 \fdsy@DeclareAlias{\nupdownharpoonsleftright}{narrows}{\mathrel}
1237 \fdsy@DeclareSymbol{\nneswharpoons}{narrows}{\mathrel}
1238 \fdsy@DeclareSymbol{\nsenwharpoons}{narrows}{\mathrel}
1239 \fdsy@DeclareSymbol{\nleftrightharpoons}{narrows}{\mathrel}
1240 \fdsy@DeclareSymbol{\ndownupharpoons}{narrows}{\mathrel}
1241 \fdsy@DeclareAlias{\ndownupharpoonsleftright}{narrows}{\mathrel}
1242 \fdsy@DeclareSymbol{\nswneharpoons}{narrows}{\mathrel}
1243 \fdsy@DeclareSymbol{\nnwseharpoons}{narrows}{\mathrel}
1244 \fdsy@DeclareSymbol{\nrightrightarrow}{narrows}{\mathrel}

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1245 \fdsy@DeclareAlias{\ndasharrow}{narrows}{\mathrel}
1246 \fdsy@DeclareAlias{\ndashrightarrow}{narrows}{\mathrel}
1247 \fdsy@DeclareSymbol{\nupbkarrow}{narrows}{\mathrel}
1248 \fdsy@DeclareSymbol{\nleftbkarrow}{narrows}{\mathrel}
1249 \fdsy@DeclareAlias{\ndashleftarrow}{narrows}{\mathrel}
1250 \fdsy@DeclareSymbol{\ndownbkarrow}{narrows}{\mathrel}
1251 \fdsy@DeclareSymbol{\nnebkarrow}{narrows}{\mathrel}
1252 \fdsy@DeclareSymbol{\nnwbkarrow}{narrows}{\mathrel}
1253 \fdsy@DeclareSymbol{\nswbkarrow}{narrows}{\mathrel}
1254 \fdsy@DeclareSymbol{\nsebkarrow}{narrows}{\mathrel}
1255 \fdsy@DeclareSymbol{\nrighthspoon}{narrows}{\mathrel}
1256 \fdsy@DeclareAlias{\nmultimap}{narrows}{\mathrel}
1257 \fdsy@DeclareSymbol{\nupspoon}{narrows}{\mathrel}
1258 \fdsy@DeclareAlias{\ncirmid}{narrows}{\mathrel}
1259 \fdsy@DeclareSymbol{\nleftspoon}{narrows}{\mathrel}
1260 \fdsy@DeclareAlias{\nmultimapinv}{narrows}{\mathrel}
1261 \fdsy@DeclareSymbol{\ndownspoon}{narrows}{\mathrel}
1262 \fdsy@DeclareAlias{\nmidcir}{narrows}{\mathrel}
1263 \fdsy@DeclareSymbol{\nrightrightarrow}{narrows}{\mathrel}
1264 \fdsy@DeclareSymbol{\nupblackspoon}{narrows}{\mathrel}
1265 \fdsy@DeclareSymbol{\nleftblackspoon}{narrows}{\mathrel}
1266 \fdsy@DeclareSymbol{\ndownblackspoon}{narrows}{\mathrel}
1267 \fdsy@DeclareSymbol{\nrightrightarrow}{narrows}{\mathrel}
1268 \fdsy@DeclareSymbol{\nuppitchfork}{narrows}{\mathrel}
1269 \fdsy@DeclareAlias{\npitchfork}{narrows}{\mathrel}
1270 \fdsy@DeclareSymbol{\nleftpitchfork}{narrows}{\mathrel}
1271 \fdsy@DeclareSymbol{\ndownpitchfork}{narrows}{\mathrel}
1272 \fdsy@DeclareSymbol{\nrightrightarrows}{narrows}{\mathrel}
1273 \fdsy@DeclareSymbol{\nupuparrows}{narrows}{\mathrel}
1274 \fdsy@DeclareSymbol{\nleftleftarrows}{narrows}{\mathrel}
1275 \fdsy@DeclareSymbol{\ndowndownarrows}{narrows}{\mathrel}
1276 \fdsy@DeclareSymbol{\nnene arrows}{narrows}{\mathrel}
1277 \fdsy@DeclareSymbol{\nnwnwarrows}{narrows}{\mathrel}
1278 \fdsy@DeclareSymbol{\nswswarrows}{narrows}{\mathrel}
1279 \fdsy@DeclareSymbol{\nsesearrows}{narrows}{\mathrel}
1280 \fdsy@DeclareSymbol{\nrightrightarrows}{narrows}{\mathrel}
1281 \fdsy@DeclareSymbol{\nupdownarrows}{narrows}{\mathrel}
1282 \fdsy@DeclareSymbol{\nneswarrows}{narrows}{\mathrel}
1283 \fdsy@DeclareSymbol{\nnwsearrows}{narrows}{\mathrel}
1284 \fdsy@DeclareSymbol{\nleftleftarrows}{narrows}{\mathrel}
1285 \fdsy@DeclareSymbol{\ndownuparrows}{narrows}{\mathrel}
1286 \fdsy@DeclareSymbol{\nswnearrows}{narrows}{\mathrel}
1287 \fdsy@DeclareSymbol{\nsenwarrows}{narrows}{\mathrel}
1288 \fdsy@DeclareSymbol{\nrightrightarrow}{narrows}{\mathrel}
1289 \fdsy@DeclareAlias{\nleadsto}{narrows}{\mathrel}

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1290 \fdsy@DeclareAlias{\nrightrightarrow}{\mathrel}
1291 \fdsy@DeclareAlias{\nrightrightarrow}{\mathrel}
1292 \fdsy@DeclareSymbol{\nvarupwavedarrow}{\mathrel}
1293 \fdsy@DeclareAlias{\nupleftrightarrow}{\mathrel}
1294 \fdsy@DeclareSymbol{\nvarleftwavedarrow}{\mathrel}
1295 \fdsy@DeclareAlias{\nleftleftrightarrow}{\mathrel}
1296 \fdsy@DeclareSymbol{\ndownwavedarrow}{\mathrel}
1297 \fdsy@DeclareAlias{\ndownleftrightarrow}{\mathrel}
1298 \fdsy@DeclareSymbol{\nvarrightwavedarrow}{\mathrel}
1299 \fdsy@DeclareAlias{\nrightrightarrow}{\mathrel}
1300 \fdsy@DeclareSymbol{\nupwavedarrow}{\mathrel}
1301 \fdsy@DeclareAlias{\nupleftrightarrow}{\mathrel}
1302 \fdsy@DeclareSymbol{\nleftwavedarrow}{\mathrel}
1303 \fdsy@DeclareAlias{\nleftleftrightarrow}{\mathrel}
1304 \fdsy@DeclareAlias{\nleftleftrightarrow}{\mathrel}
1305 \fdsy@DeclareSymbol{\nvardownwavedarrow}{\mathrel}
1306 \fdsy@DeclareAlias{\ndownleftrightarrow}{\mathrel}
1307 \fdsy@DeclareSymbol{\nleftrightrightarrow}{\mathrel}
1308 \fdsy@DeclareAlias{\nleftrightrightarrow}{\mathrel}
1309 \fdsy@DeclareSymbol{\nupdownwavedarrow}{\mathrel}
1310 \fdsy@DeclareAlias{\nupdownleftrightarrow}{\mathrel}
1311 \fdsy@DeclareSymbol{\nvarleftrightrightarrow}{\mathrel}
1312 \fdsy@DeclareAlias{\nrightrightarrow}{\mathrel}
1313 \fdsy@DeclareSymbol{\nvarupdownwavedarrow}{\mathrel}
1314 \fdsy@DeclareAlias{\ndownupleftrightarrow}{\mathrel}
1315 \fdsy@DeclareSymbol{\ncwoverarcarrow}{\mathrel}
1316 \fdsy@DeclareAlias{\ncurvarrowright}{\mathrel}
1317 \fdsy@DeclareAlias{\nrightrightarrow}{\mathrel}
1318 \fdsy@DeclareSymbol{\ncwleftarcarrow}{\mathrel}
1319 \fdsy@DeclareAlias{\nuplcurvarrow}{\mathrel}
1320 \fdsy@DeclareSymbol{\ncwunderarcarrow}{\mathrel}
1321 \fdsy@DeclareAlias{\nleftlcurvarrow}{\mathrel}
1322 \fdsy@DeclareSymbol{\ncwrightarcarrow}{\mathrel}
1323 \fdsy@DeclareAlias{\ndownlcurvarrow}{\mathrel}
1324 \fdsy@DeclareSymbol{\ncwnwarcarrow}{\mathrel}
1325 \fdsy@DeclareAlias{\nrightrightarrow}{\mathrel}
1326 \fdsy@DeclareAlias{\nnelcurvarrow}{\mathrel}
1327 \fdsy@DeclareSymbol{\ncwswarcarrow}{\mathrel}
1328 \fdsy@DeclareAlias{\nupleftcurvedarrow}{\mathrel}
1329 \fdsy@DeclareAlias{\nnwlcurvarrow}{\mathrel}
1330 \fdsy@DeclareSymbol{\ncwsearcarrow}{\mathrel}
1331 \fdsy@DeclareAlias{\nleftdowncurvedarrow}{\mathrel}
1332 \fdsy@DeclareAlias{\nswlcurvarrow}{\mathrel}
1333 \fdsy@DeclareSymbol{\ncwnearcarrow}{\mathrel}
1334 \fdsy@DeclareAlias{\ndownrightcurvedarrow}{\mathrel}

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1335 \fdsy@DeclareAlias{\nsecurvearrow}{narrows}{\mathrel}
1336 \fdsy@DeclareSymbol{\nacwunderarcarrow}{narrows}{\mathrel}
1337 \fdsy@DeclareAlias{\nrightrcurvearrow}{narrows}{\mathrel}
1338 \fdsy@DeclareSymbol{\nacwrightarcarrow}{narrows}{\mathrel}
1339 \fdsy@DeclareAlias{\nuprcurvearrow}{narrows}{\mathrel}
1340 \fdsy@DeclareSymbol{\nacwoverarcarrow}{narrows}{\mathrel}
1341 \fdsy@DeclareAlias{\ncurvearrowleft}{narrows}{\mathrel}
1342 \fdsy@DeclareAlias{\nleftcurvearrow}{narrows}{\mathrel}
1343 \fdsy@DeclareSymbol{\nacwleftarcarrow}{narrows}{\mathrel}
1344 \fdsy@DeclareAlias{\ndownrcurvearrow}{narrows}{\mathrel}
1345 \fdsy@DeclareSymbol{\nacwsearcarrow}{narrows}{\mathrel}
1346 \fdsy@DeclareAlias{\nuprightcurvearrow}{narrows}{\mathrel}
1347 \fdsy@DeclareAlias{\nnercurvearrow}{narrows}{\mathrel}
1348 \fdsy@DeclareSymbol{\nacwnearcarrow}{narrows}{\mathrel}
1349 \fdsy@DeclareAlias{\nleftupcurvedarrow}{narrows}{\mathrel}
1350 \fdsy@DeclareAlias{\nnwrcurvearrow}{narrows}{\mathrel}
1351 \fdsy@DeclareSymbol{\nacwnwarcarrow}{narrows}{\mathrel}
1352 \fdsy@DeclareAlias{\ndownleftcurvedarrow}{narrows}{\mathrel}
1353 \fdsy@DeclareAlias{\nswrcurvearrow}{narrows}{\mathrel}
1354 \fdsy@DeclareSymbol{\nacwswarcarrow}{narrows}{\mathrel}
1355 \fdsy@DeclareAlias{\nrightdowncurvedarrow}{narrows}{\mathrel}
1356 \fdsy@DeclareAlias{\nsercurvearrow}{narrows}{\mathrel}
1357 \fdsy@DeclareSymbol{\nbdoverarcarrow}{narrows}{\mathrel}
1358 \fdsy@DeclareAlias{\nleftrighcurvearrow}{narrows}{\mathrel}
1359 \fdsy@DeclareSymbol{\nbdleftarcarrow}{narrows}{\mathrel}
1360 \fdsy@DeclareAlias{\nupdowncurvearrow}{narrows}{\mathrel}
1361 \fdsy@DeclareSymbol{\nbdunderarcarrow}{narrows}{\mathrel}
1362 \fdsy@DeclareAlias{\nrightrightcurvearrow}{narrows}{\mathrel}
1363 \fdsy@DeclareSymbol{\nbdrightarcarrow}{narrows}{\mathrel}
1364 \fdsy@DeclareAlias{\ndownupcurvearrow}{narrows}{\mathrel}
1365 \fdsy@DeclareSymbol{\nbdnwarcarrow}{narrows}{\mathrel}
1366 \fdsy@DeclareAlias{\nneswcurvearrow}{narrows}{\mathrel}
1367 \fdsy@DeclareSymbol{\nbdswarcarrow}{narrows}{\mathrel}
1368 \fdsy@DeclareAlias{\nnwsecurvearrow}{narrows}{\mathrel}
1369 \fdsy@DeclareSymbol{\nbdsearcarrow}{narrows}{\mathrel}
1370 \fdsy@DeclareAlias{\nswnecurvearrow}{narrows}{\mathrel}
1371 \fdsy@DeclareSymbol{\nbdnearcarrow}{narrows}{\mathrel}
1372 \fdsy@DeclareAlias{\nsenwcurvearrow}{narrows}{\mathrel}
1373 \fdsy@DeclareSymbol{\nleftfootline}{narrows}{\mathrel}
1374 \fdsy@DeclareAlias{\nvlongdash}{narrows}{\mathrel}
1375 \fdsy@DeclareSymbol{\nrightfootline}{narrows}{\mathrel}
1376 \fdsy@DeclareAlias{\nlongdashv}{narrows}{\mathrel}
1377 \fdsy@DeclareSymbol{\nacwcirculararrowup}{narrows}{\mathrel}
1378 \fdsy@DeclareSymbol{\nacwcirculararrowleft}{narrows}{\mathrel}
1379 \fdsy@DeclareAlias{\ncirculararrowleft}{narrows}{\mathrel}

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1380 \fdsy@DeclareAlias{\nacwopencirclearrow}{narrows}{\mathrel}
1381 \fdsy@DeclareSymbol{\nacwcirclearrowdown}{narrows}{\mathrel}
1382 \fdsy@DeclareAlias{\nacwgapcirclearrow}{narrows}{\mathrel}
1383 \fdsy@DeclareSymbol{\nacwcirclearrowright}{narrows}{\mathrel}
1384 \fdsy@DeclareSymbol{\ncwcirclearrowdown}{narrows}{\mathrel}
1385 \fdsy@DeclareAlias{\ncwgapcirclearrow}{narrows}{\mathrel}
1386 \fdsy@DeclareSymbol{\ncwcirclearrowright}{narrows}{\mathrel}
1387 \fdsy@DeclareAlias{\ncirclearrowright}{narrows}{\mathrel}
1388 \fdsy@DeclareAlias{\ncwopencirclearrow}{narrows}{\mathrel}
1389 \fdsy@DeclareSymbol{\ncwcirclearrowup}{narrows}{\mathrel}
1390 \fdsy@DeclareSymbol{\ncwcirclearrowleft}{narrows}{\mathrel}
1391 \fdsy@DeclareSymbol{\nRrightarrow}{narrows}{\mathrel}
1392 \fdsy@DeclareSymbol{\nUparrow}{narrows}{\mathrel}
1393 \fdsy@DeclareSymbol{\nLleftarrow}{narrows}{\mathrel}
1394 \fdsy@DeclareSymbol{\nDdownarrow}{narrows}{\mathrel}
1395 \fdsy@setslot{224}
1396 \fdsy@DeclareSymbol{\nrightvdash}{narrows}{\mathrel}
1397 \fdsy@DeclareAlias{\nvdash}{narrows}{\mathrel}
1398 \fdsy@DeclareSymbol{\nupvdash}{narrows}{\mathrel}
1399 \fdsy@DeclareAlias{\nperp}{narrows}{\mathrel}
1400 \fdsy@DeclareSymbol{\nleftvdash}{narrows}{\mathrel}
1401 \fdsy@DeclareAlias{\ndashv}{narrows}{\mathrel}
1402 \fdsy@DeclareSymbol{\ndownvdash}{narrows}{\mathrel}
1403 \fdsy@DeclareSymbol{\nrightassert}{narrows}{\mathrel}
1404 \fdsy@DeclareAlias{\nassert}{narrows}{\mathrel}
1405 \fdsy@DeclareAlias{\nshorttright}{narrows}{\mathrel}
1406 \fdsy@DeclareSymbol{\nupassert}{narrows}{\mathrel}
1407 \fdsy@DeclareAlias{\nshortuptack}{narrows}{\mathrel}
1408 \fdsy@DeclareSymbol{\nleftassert}{narrows}{\mathrel}
1409 \fdsy@DeclareAlias{\nshortlefttack}{narrows}{\mathrel}
1410 \fdsy@DeclareSymbol{\ndownassert}{narrows}{\mathrel}
1411 \fdsy@DeclareAlias{\nshortdowntack}{narrows}{\mathrel}
1412 \fdsy@DeclareSymbol{\nrightvDash}{narrows}{\mathrel}
1413 \fdsy@DeclareAlias{\nvDash}{narrows}{\mathrel}
1414 \fdsy@DeclareSymbol{\nupvDash}{narrows}{\mathrel}
1415 \fdsy@DeclareAlias{\nVbar}{narrows}{\mathrel}
1416 \fdsy@DeclareSymbol{\nleftvDash}{narrows}{\mathrel}
1417 \fdsy@DeclareAlias{\nDashv}{narrows}{\mathrel}
1418 \fdsy@DeclareSymbol{\ndownvDash}{narrows}{\mathrel}
1419 \fdsy@DeclareAlias{\nbarV}{narrows}{\mathrel}
1420 \fdsy@DeclareSymbol{\nrightmodels}{narrows}{\mathrel}
1421 \fdsy@DeclareAlias{\nmodels}{narrows}{\mathrel}
1422 \fdsy@DeclareSymbol{\nupmodels}{narrows}{\mathrel}
1423 \fdsy@DeclareSymbol{\nleftmodels}{narrows}{\mathrel}
1424 \fdsy@DeclareSymbol{\ndownmodels}{narrows}{\mathrel}

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1425 \fdsy@DeclareSymbol{\nrightVdash}{narrows}{\mathrel}
1426 \fdsy@DeclareAlias{\nVdash}{narrows}{\mathrel}
1427 \fdsy@DeclareSymbol{\nupVdash}{narrows}{\mathrel}
1428 \fdsy@DeclareSymbol{\nleftVdash}{narrows}{\mathrel}
1429 \fdsy@DeclareAlias{\ndashV}{narrows}{\mathrel}
1430 \fdsy@DeclareSymbol{\ndownVdash}{narrows}{\mathrel}
1431 \fdsy@DeclareSymbol{\nrightVDash}{narrows}{\mathrel}
1432 \fdsy@DeclareAlias{\nVDash}{narrows}{\mathrel}
1433 \fdsy@DeclareSymbol{\nupVDash}{narrows}{\mathrel}
1434 \fdsy@DeclareSymbol{\nleftVDash}{narrows}{\mathrel}
1435 \fdsy@DeclareAlias{\nDashV}{narrows}{\mathrel}
1436 \fdsy@DeclareSymbol{\ndownVDash}{narrows}{\mathrel}
1437 \fdsy@DeclareSymbol{\nVvdash}{narrows}{\mathrel}
1438 \fdsy@DeclareSymbol{\ndashVv}{narrows}{\mathrel}
1439 \fdsy@DeclareSymbol{\nvDdash}{narrows}{\mathrel}
1440 \fdsy@DeclareSymbol{\nDdashv}{narrows}{\mathrel}

FdSymbolE: large operators
1441 \fdsy@setslot{0}
1442 \fdsy@DeclareSymbol{\tbigplus}{largesymbols}{\mathop}
1443 \fdsy@DeclareSymbol{\dbigplus}{largesymbols}{\mathop}
1444 \fdsy@DeclareSymbol{\tbigtimes}{largesymbols}{\mathop}
1445 \fdsy@DeclareSymbol{\dbigtimes}{largesymbols}{\mathop}
1446 \fdsy@DeclareSymbol{\tbigwedge}{largesymbols}{\mathop}
1447 \fdsy@DeclareSymbol{\dbigwedge}{largesymbols}{\mathop}
1448 \fdsy@DeclareSymbol{\tbigvee}{largesymbols}{\mathop}
1449 \fdsy@DeclareSymbol{\dbigvee}{largesymbols}{\mathop}
1450 \fdsy@DeclareSymbol{\tbigwedgedot}{largesymbols}{\mathop}
1451 \fdsy@DeclareSymbol{\dbigwedgedot}{largesymbols}{\mathop}
1452 \fdsy@DeclareSymbol{\tbigveedot}{largesymbols}{\mathop}
1453 \fdsy@DeclareSymbol{\dbigveedot}{largesymbols}{\mathop}
1454 \fdsy@DeclareSymbol{\tbigdoublewedge}{largesymbols}{\mathop}
1455 \fdsy@DeclareAlias{\tconjquant}{largesymbols}{\mathop}
1456 \fdsy@DeclareSymbol{\dbigdoublewedge}{largesymbols}{\mathop}
1457 \fdsy@DeclareAlias{\dconjquant}{largesymbols}{\mathop}
1458 \fdsy@DeclareSymbol{\tbigdoublevee}{largesymbols}{\mathop}
1459 \fdsy@DeclareAlias{\tdisjquant}{largesymbols}{\mathop}
1460 \fdsy@DeclareSymbol{\dbigdoublevee}{largesymbols}{\mathop}
1461 \fdsy@DeclareAlias{\ddisjquant}{largesymbols}{\mathop}
1462 \fdsy@DeclareSymbol{\tbigcurlywedge}{largesymbols}{\mathop}
1463 \fdsy@DeclareSymbol{\dbigcurlywedge}{largesymbols}{\mathop}
1464 \fdsy@DeclareSymbol{\tbigcurlyvee}{largesymbols}{\mathop}
1465 \fdsy@DeclareSymbol{\dbigcurlyvee}{largesymbols}{\mathop}
1466 \fdsy@DeclareSymbol{\tbigcurlywedgedot}{largesymbols}{\mathop}
1467 \fdsy@DeclareSymbol{\dbigcurlywedgedot}{largesymbols}{\mathop}
1468 \fdsy@DeclareSymbol{\tbigcurlyveedot}{largesymbols}{\mathop}

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1469 \fdsy@DeclareSymbol{\dbigcurlyveedot}{largesymbols}{\mathop}
1470 \fdsy@DeclareSymbol{\tbigdoublecurlywedge}{largesymbols}{\mathop}
1471 \fdsy@DeclareSymbol{\dbigdoublecurlywedge}{largesymbols}{\mathop}
1472 \fdsy@DeclareSymbol{\tbigdoublecurlyvee}{largesymbols}{\mathop}
1473 \fdsy@DeclareSymbol{\dbigdoublecurlyvee}{largesymbols}{\mathop}
1474 \fdsy@DeclareSymbol{\tbigcap}{largesymbols}{\mathop}
1475 \fdsy@DeclareSymbol{\dbigcap}{largesymbols}{\mathop}
1476 \fdsy@DeclareSymbol{\tbigcup}{largesymbols}{\mathop}
1477 \fdsy@DeclareSymbol{\dbigcup}{largesymbols}{\mathop}
1478 \fdsy@DeclareSymbol{\tbigcapdot}{largesymbols}{\mathop}
1479 \fdsy@DeclareSymbol{\dbigcapdot}{largesymbols}{\mathop}
1480 \fdsy@DeclareSymbol{\tbigcupdot}{largesymbols}{\mathop}
1481 \fdsy@DeclareSymbol{\dbigcupdot}{largesymbols}{\mathop}
1482 \fdsy@DeclareSymbol{\tbigcapplus}{largesymbols}{\mathop}
1483 \fdsy@DeclareSymbol{\dbigcapplus}{largesymbols}{\mathop}
1484 \fdsy@DeclareSymbol{\tbigcupplus}{largesymbols}{\mathop}
1485 \fdsy@DeclareAlias{\tbiguplus}{largesymbols}{\mathop}
1486 \fdsy@DeclareSymbol{\dbigcupplus}{largesymbols}{\mathop}
1487 \fdsy@DeclareAlias{\dbiguplus}{largesymbols}{\mathop}
1488 \fdsy@DeclareSymbol{\tbigsqcap}{largesymbols}{\mathop}
1489 \fdsy@DeclareSymbol{\dbigsqcap}{largesymbols}{\mathop}
1490 \fdsy@DeclareSymbol{\tbigsqcup}{largesymbols}{\mathop}
1491 \fdsy@DeclareSymbol{\dbigsqcup}{largesymbols}{\mathop}
1492 \fdsy@DeclareSymbol{\tbigsqcapdot}{largesymbols}{\mathop}
1493 \fdsy@DeclareSymbol{\dbigsqcapdot}{largesymbols}{\mathop}
1494 \fdsy@DeclareSymbol{\tbigsqcupdot}{largesymbols}{\mathop}
1495 \fdsy@DeclareSymbol{\dbigsqcupdot}{largesymbols}{\mathop}
1496 \fdsy@DeclareSymbol{\tbigsqcapplus}{largesymbols}{\mathop}
1497 \fdsy@DeclareSymbol{\dbigsqcapplus}{largesymbols}{\mathop}
1498 \fdsy@DeclareSymbol{\tbigsqcupplus}{largesymbols}{\mathop}
1499 \fdsy@DeclareSymbol{\dbigsqcupplus}{largesymbols}{\mathop}
1500 \fdsy@DeclareSymbol{\tbigoplus}{largesymbols}{\mathop}
1501 \fdsy@DeclareSymbol{\dbigoplus}{largesymbols}{\mathop}
1502 \fdsy@DeclareSymbol{\tbigotimes}{largesymbols}{\mathop}
1503 \fdsy@DeclareSymbol{\dbigotimes}{largesymbols}{\mathop}
1504 \fdsy@DeclareSymbol{\tbigodot}{largesymbols}{\mathop}
1505 \fdsy@DeclareSymbol{\dbigodot}{largesymbols}{\mathop}
1506 \fdsy@DeclareSymbol{\tbigooast}{largesymbols}{\mathop}
1507 \fdsy@DeclareSymbol{\dbigoast}{largesymbols}{\mathop}
1508 \fdsy@DeclareSymbol{\tprod}{largesymbols}{\mathop}
1509 \fdsy@DeclareSymbol{\dprod}{largesymbols}{\mathop}
1510 \fdsy@DeclareSymbol{\tcoproduct}{largesymbols}{\mathop}
1511 \fdsy@DeclareSymbol{\dcoproduct}{largesymbols}{\mathop}
1512 \fdsy@DeclareSymbol{\tsum}{largesymbols}{\mathop}
1513 \fdsy@DeclareSymbol{\dsum}{largesymbols}{\mathop}

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1514 \fdsy@DeclareSymbol{\tosum}{largesymbols}{\mathop}
1515 \fdsy@DeclareSymbol{\dosum}{largesymbols}{\mathop}
1516 \fdsy@DeclareSymbol{\tint}{largesymbols}{\mathop}
1517 \fdsy@DeclareSymbol{\dint}{largesymbols}{\mathop}
1518 \fdsy@DeclareSymbol{\ttiint}{largesymbols}{\mathop}
1519 \fdsy@DeclareSymbol{\diint}{largesymbols}{\mathop}
1520 \fdsy@DeclareSymbol{\tiiint}{largesymbols}{\mathop}
1521 \fdsy@DeclareSymbol{\diiint}{largesymbols}{\mathop}
1522 \fdsy@DeclareSymbol{\tiiiint}{largesymbols}{\mathop}
1523 \fdsy@DeclareSymbol{\diiiint}{largesymbols}{\mathop}
1524 \fdsy@DeclareSymbol{\tidotsint}{largesymbols}{\mathop}
1525 \fdsy@DeclareAlias{\tdotsint}{largesymbols}{\mathop}
1526 \fdsy@DeclareSymbol{\didotsint}{largesymbols}{\mathop}
1527 \fdsy@DeclareAlias{\ddotsint}{largesymbols}{\mathop}
1528 \fdsy@DeclareSymbol{\tlandupint}{largesymbols}{\mathop}
1529 \fdsy@DeclareAlias{\tintclockwise}{largesymbols}{\mathop}
1530 \fdsy@DeclareSymbol{\dlandupint}{largesymbols}{\mathop}
1531 \fdsy@DeclareAlias{\dintclockwise}{largesymbols}{\mathop}
1532 \fdsy@DeclareSymbol{\tlanddownint}{largesymbols}{\mathop}
1533 \fdsy@DeclareAlias{\tawint}{largesymbols}{\mathop}
1534 \fdsy@DeclareAlias{\tintctrclockwise}{largesymbols}{\mathop}
1535 \fdsy@DeclareSymbol{\dlanddownint}{largesymbols}{\mathop}
1536 \fdsy@DeclareAlias{\dawint}{largesymbols}{\mathop}
1537 \fdsy@DeclareAlias{\dintctrclockwise}{largesymbols}{\mathop}
1538 \fdsy@DeclareSymbol{\tintbar}{largesymbols}{\mathop}
1539 \fdsy@DeclareSymbol{\dintbar}{largesymbols}{\mathop}
1540 \fdsy@DeclareSymbol{\tintBar}{largesymbols}{\mathop}
1541 \fdsy@DeclareSymbol{\dintBar}{largesymbols}{\mathop}
1542 \fdsy@DeclareSymbol{\tfint}{largesymbols}{\mathop}
1543 \fdsy@DeclareSymbol{\dfint}{largesymbols}{\mathop}
1544 \fdsy@DeclareSymbol{\toint}{largesymbols}{\mathop}
1545 \fdsy@DeclareSymbol{\doint}{largesymbols}{\mathop}
1546 \fdsy@DeclareSymbol{\toiint}{largesymbols}{\mathop}
1547 \fdsy@DeclareSymbol{\doiint}{largesymbols}{\mathop}
1548 \fdsy@DeclareSymbol{\toiiint}{largesymbols}{\mathop}
1549 \fdsy@DeclareSymbol{\doiint}{largesymbols}{\mathop}
1550 \fdsy@DeclareSymbol{\trcircularrightint}{largesymbols}{\mathop}
1551 \fdsy@DeclareAlias{\tointctrclockwise}{largesymbols}{\mathop}
1552 \fdsy@DeclareSymbol{\drcircularrightint}{largesymbols}{\mathop}
1553 \fdsy@DeclareAlias{\dointctrclockwise}{largesymbols}{\mathop}
1554 \fdsy@DeclareSymbol{\tlcircularrightint}{largesymbols}{\mathop}
1555 \fdsy@DeclareAlias{\tvarointclockwise}{largesymbols}{\mathop}
1556 \fdsy@DeclareSymbol{\dlcircularrightint}{largesymbols}{\mathop}
1557 \fdsy@DeclareAlias{\dvarointclockwise}{largesymbols}{\mathop}
1558 \fdsy@DeclareSymbol{\trcircleleftint}{largesymbols}{\mathop}

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1559 \fdsy@DeclareAlias{\tvarointctrclockwise}{largesymbols}{\mathop}
1560 \fdsy@DeclareSymbol{\drcircleleftint}{largesymbols}{\mathop}
1561 \fdsy@DeclareAlias{\dvarointctrclockwise}{largesymbols}{\mathop}
1562 \fdsy@DeclareSymbol{\tlcircleleftint}{largesymbols}{\mathop}
1563 \fdsy@DeclareAlias{\tointclockwise}{largesymbols}{\mathop}
1564 \fdsy@DeclareSymbol{\dlcircleleftint}{largesymbols}{\mathop}
1565 \fdsy@DeclareAlias{\dointclockwise}{largesymbols}{\mathop}
1566 \fdsy@DeclareSymbol{\tsumint}{largesymbols}{\mathop}
1567 \fdsy@DeclareSymbol{\dsumint}{largesymbols}{\mathop}
1568 \let\intop\tint
1569 \let\ointop\toint
1570
1571 \fdsy@DeclareOperator{\bigplus}{\dbigplus}{\tbigplus}
1572 \fdsy@DeclareOperator{\bigtimes}{\dbigtimes}{\tbigtimes}
1573 \fdsy@DeclareOperator{\bigwedge}{\dbigwedge}{\tbigwedge}
1574 \fdsy@DeclareOperator{\bigvee}{\dbigvee}{\tbigvee}
1575 \fdsy@DeclareOperator{\bigwedgedot}{\dbigwedgedot}{\tbigwedgedot}
1576 \fdsy@DeclareOperator{\bigveedot}{\dbigveedot}{\tbigveedot}
1577 \fdsy@DeclareOperator{\bigdoublewedge}{\dbigdoublewedge}{\tbigdoublewedge}
1578 \fdsy@DeclareOperator{\conjquant}{\dconjquant}{\tconjquant}
1579 \fdsy@DeclareOperator{\bigdoublevee}{\dbigdoublevee}{\tbigdoublevee}
1580 \fdsy@DeclareOperator{\disjquant}{\ddisjquant}{\tdisjquant}
1581 \fdsy@DeclareOperator{\bigcurlywedge}{\dbigcurlywedge}{\tbigcurlywedge}
1582 \fdsy@DeclareOperator{\bigcurlyvee}{\dbigcurlyvee}{\tbigcurlyvee}
1583 \fdsy@DeclareOperator{\bigcurlywedgedot}{\dbigcurlywedgedot}{\tbigcurlywedgedot}
1584 \fdsy@DeclareOperator{\bigcurlyveedot}{\dbigcurlyveedot}{\tbigcurlyveedot}
1585 \fdsy@DeclareOperator{\bigdoublecurlywedge}{\dbigdoublecurlywedge}{\tbigdoublecurlywedge}
1586 \fdsy@DeclareOperator{\bigdoublecurlyvee}{\dbigdoublecurlyvee}{\tbigdoublecurlyvee}
1587 \fdsy@DeclareOperator{\bigcap}{\dbigcap}{\tbigcap}
1588 \fdsy@DeclareOperator{\bigcup}{\dbigcup}{\tbigcup}
1589 \fdsy@DeclareOperator{\bigcapdot}{\dbigcapdot}{\tbigcapdot}
1590 \fdsy@DeclareOperator{\bigcupdot}{\dbigcupdot}{\tbigcupdot}
1591 \fdsy@DeclareOperator{\bigcapplus}{\dbigcapplus}{\tbigcapplus}
1592 \fdsy@DeclareOperator{\bigcupplus}{\dbigcupplus}{\tbigcupplus}
1593 \fdsy@DeclareOperator{\biguplus}{\dbiguplus}{\tbiguplus}
1594 \fdsy@DeclareOperator{\bigsqcap}{\dbigsqcap}{\tbigsqcap}
1595 \fdsy@DeclareOperator{\bigsqcup}{\dbigsqcup}{\tbigsqcup}
1596 \fdsy@DeclareOperator{\bigsqcapdot}{\dbigsqcapdot}{\tbigsqcapdot}
1597 \fdsy@DeclareOperator{\bigsqcupdot}{\dbigsqcupdot}{\tbigsqcupdot}
1598 \fdsy@DeclareOperator{\bigsqcapplus}{\dbigsqcapplus}{\tbigsqcapplus}
1599 \fdsy@DeclareOperator{\bigsqcupplus}{\dbigsqcupplus}{\tbigsqcupplus}
1600 \fdsy@DeclareOperator{\bigoplus}{\dbigoplus}{\tbigoplus}
1601 \fdsy@DeclareOperator{\bigotimes}{\dbigotimes}{\tbigotimes}
1602 \fdsy@DeclareOperator{\bigodot}{\dbigodot}{\tbigodot}
1603 \fdsy@DeclareOperator{\bigooast}{\dbigoast}{\tbigooast}

```

```

1604 \fdsy@DeclareOperator{\sum}{\dsum}{\tsum}
1605 \fdsy@DeclareOperator{\osum}{\dosum}{\tosum}
1606 \fdsy@DeclareOperator{\prod}{\dprod}{\tprod}
1607 \fdsy@DeclareOperator{\coprod}{\dcoprod}{\tcoprod}
1608 \fdsy@DeclareIntegral{\iint}{\diint}{\tiint}
1609 \fdsy@DeclareIntegral{\iiint}{\diiint}{\tiiint}
1610 \fdsy@DeclareIntegral{\iiiiint}{\diiiiint}{\tiiiint}
1611 \fdsy@DeclareIntegral{\idotsint}{\didotsint}{\tidotsint}
1612 \fdsy@DeclareIntegral{\dotsint}{\ddotsint}{\tdotsint}
1613 \fdsy@DeclareIntegral{\landupint}{\dlandupint}{\tlandupint}
1614 \fdsy@DeclareIntegral{\intclockwise}{\dintclockwise}{\tintclockwise}
1615 \fdsy@DeclareIntegral{\landdownint}{\dlanddownint}{\tlanddownint}
1616 \fdsy@DeclareIntegral{\awint}{\dawint}{\tawint}
1617 \fdsy@DeclareIntegral{\intctr clockwise}{\dintctr clockwise}{\tintctr clockwise}
1618 \fdsy@DeclareIntegral{\landdownint}{\dlanddownint}{\tlanddownint}
1619 \fdsy@DeclareIntegral{\intbar}{\dintbar}{\tintbar}
1620 \fdsy@DeclareIntegral{\intBar}{\dintBar}{\tintBar}
1621 \fdsy@DeclareIntegral{\fint}{\dfint}{\tfint}
1622 \fdsy@DeclareIntegral{\oiint}{\doiint}{\toiint}
1623 \fdsy@DeclareIntegral{\oiiint}{\doiiint}{\toiiint}
1624 \fdsy@DeclareIntegral{\rcirc lerightint}{\drcirc lerightint}{\trcirc lerightint}
1625 \fdsy@DeclareIntegral{\ointctr clockwise}{\dointctr clockwise}{\tointctr clockwise}
1626 \fdsy@DeclareIntegral{\lcirc lerightint}{\dlcirc lerightint}{\tlcirc lerightint}
1627 \fdsy@DeclareIntegral{\varoint clockwise}{\dvaroint clockwise}{\tvaroint clockwise}
1628 \fdsy@DeclareIntegral{\rcircleleftint}{\drcircleleftint}{\trcircleleftint}
1629 \fdsy@DeclareIntegral{\varointctr clockwise}{\dvarointctr clockwise}{\tvarointctr clockwise}
1630 \fdsy@DeclareIntegral{\lcircleleftint}{\dlcircleleftint}{\tlcircleleftint}
1631 \fdsy@DeclareIntegral{\oint clockwise}{\doint clockwise}{\toint clockwise}
1632 \fdsy@DeclareIntegral{\sumint}{\dsumint}{\tsumint}
1633
1634 \def\intkern@{\mkern-8.5mu\mathchoice{\mkern-1mu}{}}{}{}{}
1635 \def\intdots@{\mkern-6mu%
1636   \mathchoice{\@cdots}%
1637   {{\cdotp}\mkern0.5mu{\cdotp}\mkern0.5mu{\cdotp}}%
1638   {{\cdotp}{\cdotp}{\cdotp}}%
1639   {{\cdotp}{\cdotp}{\cdotp}}%
1640   \mkern-6mu}

```

Math accents.

```

1641 \DeclareMathAccent{\widehat}{\mathord}{largesymbols}{"72}
1642 \DeclareMathAccent{\widetilde}{\mathord}{largesymbols}{"78}
1643 \DeclareMathAccent{\wideparen}{\mathord}{largesymbols}{"7E}
1644 \DeclareMathAccent{\vec}{\mathord}{largesymbols}{"84}
1645 \DeclareMathAccent{\middlebar}{\mathord}{largesymbols}{"85}
1646 \DeclareMathAccent{\middleslash}{\mathord}{largesymbols}{"86}
1647 \DeclareMathAccent{\strokethrough}{\mathord}{largesymbols}{"87}

```

```

FdSymbolF: delimiters
1648 \let\lfloor\undefined
1649 \let\rfloor\undefined
1650 \let\lceil\undefined
1651 \let\rceil\undefined
1652 \let\langle\undefined
1653 \let\rangle\undefined
1654 \iffdsy@largedelims
1655 \fdsy@DeclareOpen{(){delimiters}"01}
1656 \fdsy@DeclareClose{){delimiters}"07}
1657 \fdsy@DeclareOpen{\lparen}{delimiters}"01}
1658 \fdsy@DeclareClose{\rparen}{delimiters}"07}
1659 \fdsy@DeclareOpen{[]}{delimiters}"13}
1660 \fdsy@DeclareClose{[]}{delimiters}"19}
1661 \fdsy@DeclareOpen{\lbrack}{delimiters}"13}
1662 \fdsy@DeclareClose{\rbrack}{delimiters}"19}
1663 \fdsy@DeclareOpen{\lfloor}{delimiters}"1F}
1664 \fdsy@DeclareClose{\rfloor}{delimiters}"25}
1665 \fdsy@DeclareOpen{\lceil}{delimiters}"2B}
1666 \fdsy@DeclareClose{\rceil}{delimiters}"31}
1667 \fdsy@DeclareOpen{\ulcorner}{delimiters}"37}
1668 \fdsy@DeclareClose{\urcorner}{delimiters}"3D}
1669 \fdsy@DeclareOpen{\llcorner}{delimiters}"43}
1670 \fdsy@DeclareClose{\lrcorner}{delimiters}"49}
1671 \fdsy@DeclareOpen{\ulcorner}{delimiters}"4F}
1672 \fdsy@DeclareClose{\ulcorner}{delimiters}"55}
1673 \fdsy@DeclareOpen{\lsem}{delimiters}"61}
1674 \fdsy@DeclareClose{\rsem}{delimiters}"67}
1675 \fdsy@DeclareOpen{\lBrack}{delimiters}"61}
1676 \fdsy@DeclareClose{\rBrack}{delimiters}"67}
1677 \fdsy@DeclareOpen{\lbrace}{delimiters}"73}
1678 \fdsy@DeclareClose{\rbrace}{delimiters}"79}
1679 \fdsy@DeclareOpen{<}{delimiters}"86}
1680 \fdsy@DeclareClose{>}{delimiters}"8C}
1681 \fdsy@DeclareOpen{\langle}{delimiters}"86}
1682 \fdsy@DeclareClose{\rangle}{delimiters}"8C}
1683 \fdsy@DeclareOpen{\lAngle}{delimiters}"92}
1684 \fdsy@DeclareClose{\rAngle}{delimiters}"98}
1685 \fdsy@DeclareOpen{\lAngledot}{delimiters}"9E}
1686 \fdsy@DeclareClose{\rAngledot}{delimiters}"A4}
1687 \fdsy@DeclareDelimiter{/}{\mathord}{delimiters}"AA}
1688 \fdsy@DeclareDelimiter{\mathslash}{\mathord}{delimiters}"AA}
1689 \DeclareMathSymbol{\divslash}{\mathbin}{delimiters}"AA}
1690 \fdsy@DeclareDelimiter{\backslash}{\mathord}{delimiters}"B0}
1691 \expandafter\DeclareMathDelimiter\backslashchar%

```



```

1692     {\mathord}{delimiters}"B0}{delimiters}"B0}
1693 \DeclareMathSymbol{\setminus}{\mathbin}{delimiters}"B0}
1694 \fdsy@DeclareDelimiter{|}{\mathord}{delimiters}"B7}
1695 \fdsy@DeclareDelimiter{\vert}{\mathord}{delimiters}"B7}
1696 \fdsy@DeclareOpen{\lvert}{delimiters}"B7}
1697 \fdsy@DeclareClose{\rvert}{delimiters}"B7}
1698 \DeclareMathSymbol{\mid}{\mathrel}{delimiters}"B7}
1699 \DeclareMathSymbol{\nmid}{\mathrel}{delimiters}"BA}
1700 \fdsy@DeclareDelimiter{\Vert}{\mathord}{delimiters}"BE}
1701 \fdsy@DeclareOpen{\lVert}{delimiters}"BE}
1702 \fdsy@DeclareClose{\rVert}{delimiters}"BE}
1703 \DeclareMathSymbol{\parallel}{\mathrel}{delimiters}"BE}
1704 \DeclareMathSymbol{\nparallel}{\mathrel}{delimiters}"C1}
1705 \fdsy@DeclareDelimiter{\Vvert}{\mathord}{delimiters}"C4}
1706 \fdsy@DeclareOpen{\lVvert}{delimiters}"C4}
1707 \fdsy@DeclareClose{\rVvert}{delimiters}"C4}
1708 \else
1709 \fdsy@DeclareOpen{(){delimiters}"00}
1710 \fdsy@DeclareClose{)}{delimiters}"06}
1711 \fdsy@DeclareOpen{\lparen}{delimiters}"00}
1712 \fdsy@DeclareClose{\rparen}{delimiters}"06}
1713 \fdsy@DeclareOpen{[]}{delimiters}"12}
1714 \fdsy@DeclareClose{[]}{delimiters}"18}
1715 \fdsy@DeclareOpen{\lbrack}{delimiters}"12}
1716 \fdsy@DeclareClose{\rbrack}{delimiters}"18}
1717 \fdsy@DeclareOpen{\lfloor}{delimiters}"1E}
1718 \fdsy@DeclareClose{\rfloor}{delimiters}"24}
1719 \fdsy@DeclareOpen{\lceil}{delimiters}"2A}
1720 \fdsy@DeclareClose{\rceil}{delimiters}"30}
1721 \fdsy@DeclareOpen{\ulcorner}{delimiters}"36}
1722 \fdsy@DeclareClose{\urcorner}{delimiters}"3C}
1723 \fdsy@DeclareOpen{\llcorner}{delimiters}"42}
1724 \fdsy@DeclareClose{\lrcorner}{delimiters}"48}
1725 \fdsy@DeclareOpen{\ulcorner}{delimiters}"4E}
1726 \fdsy@DeclareClose{\ulcorner}{delimiters}"54}
1727 \fdsy@DeclareOpen{\lsem}{delimiters}"60}
1728 \fdsy@DeclareClose{\rsem}{delimiters}"66}
1729 \fdsy@DeclareOpen{\lBrack}{delimiters}"60}
1730 \fdsy@DeclareClose{\rBrack}{delimiters}"66}
1731 \fdsy@DeclareOpen{\lbrace}{delimiters}"72}
1732 \fdsy@DeclareClose{\rbrace}{delimiters}"78}
1733 \fdsy@DeclareOpen{<}{delimiters}"85}
1734 \fdsy@DeclareClose{>}{delimiters}"8B}
1735 \fdsy@DeclareOpen{\langle}{delimiters}"85}
1736 \fdsy@DeclareClose{\rangle}{delimiters}"8B}

```

```

1737 \fdsy@DeclareOpen{\lAngle}{delimiters}{ "91}
1738 \fdsy@DeclareClose{\rAngle}{delimiters}{ "97}
1739 \fdsy@DeclareOpen{\langedot}{delimiters}{ "9D}
1740 \fdsy@DeclareClose{\rangedot}{delimiters}{ "A3}
1741 \fdsy@DeclareDelimiter{/}{\mathord}{delimiters}{ "A9}
1742 \fdsy@DeclareDelimiter{\mathslash}{\mathord}{delimiters}{ "A9}
1743 \DeclareMathSymbol{\divslash}{\mathbin}{delimiters}{ "A9}
1744 \fdsy@DeclareDelimiter{\backslash}{\mathord}{delimiters}{ "AF}
1745 \expandafter\DeclareMathDelimiter\@backslashchar%
1746     {\mathord}{delimiters}{ "AF}{delimiters}{ "AF}
1747 \DeclareMathSymbol{\setminus}{\mathbin}{delimiters}{ "AF}
1748 \fdsy@DeclareDelimiter{|}{\mathord}{delimiters}{ "B6}
1749 \fdsy@DeclareDelimiter{\vert}{\mathord}{delimiters}{ "B6}
1750 \fdsy@DeclareOpen{\lvert}{delimiters}{ "B6}
1751 \fdsy@DeclareClose{\rvert}{delimiters}{ "B6}
1752 \DeclareMathSymbol{\mid}{\mathrel}{delimiters}{ "B6}
1753 \DeclareMathSymbol{\nmid}{\mathrel}{delimiters}{ "B9}
1754 \fdsy@DeclareDelimiter{\Vert}{\mathord}{delimiters}{ "BD}
1755 \fdsy@DeclareOpen{\lVert}{delimiters}{ "BD}
1756 \fdsy@DeclareClose{\rVert}{delimiters}{ "BD}
1757 \DeclareMathSymbol{\parallel}{\mathrel}{delimiters}{ "BD}
1758 \DeclareMathSymbol{\nparallel}{\mathrel}{delimiters}{ "C0}
1759 \fdsy@DeclareDelimiter{\Vvert}{\mathord}{delimiters}{ "C3}
1760 \fdsy@DeclareOpen{\lVvert}{delimiters}{ "C3}
1761 \fdsy@DeclareClose{\rVvert}{delimiters}{ "C3}
1762 \fi
1763 \let\lVert\lVert
1764 \let\divides\mid
1765 \let\ndivides\nmid
1766 \DeclareMathSymbol{\shortmid}{\mathrel}{delimiters}{ "B5}
1767 \DeclareMathSymbol{\nshortmid}{\mathrel}{delimiters}{ "B8}
1768 \DeclareMathSymbol{\shortparallel}{\mathrel}{delimiters}{ "BC}
1769 \DeclareMathSymbol{\nshortparallel}{\mathrel}{delimiters}{ "BF}
1770 \fdsy@DeclareDelimiter{\arrowvert}{\mathord}{delimiters}{ "BB}
1771 \fdsy@DeclareDelimiter{\Arrowvert}{\mathord}{delimiters}{ "C2}
1772 \fdsy@DeclareClose{\lgroup}{delimiters}{ "7E}
1773 \fdsy@DeclareOpen{\rgroup}{delimiters}{ "7F}
1774 \fdsy@DeclareClose{\rmoustache}{delimiters}{ "80}
1775 \fdsy@DeclareOpen{\lmoustache}{delimiters}{ "81}
1776 \fdsy@DeclareDelimiter{\bracevert}{\mathord}{delimiters}{ "84}
1777 \let\uparrow\undefined
1778 \let\downarrow\undefined
1779 \let\updownarrow\undefined
1780 \let\Uparrow\undefined
1781 \let\Downarrow\undefined

```

```

1782 \let\Updownarrow\undefined
1783 \DeclareMathDelimiter{\uparrow}{\mathrel}{arrows}{"01}{delimiters}"C6}
1784 \DeclareMathDelimiter{\downarrow}{\mathrel}{arrows}{"03}{delimiters}"C7}
1785 \DeclareMathDelimiter{\updownarrow}{\mathrel}{arrows}{"11}{delimiters}"C8}
1786 \DeclareMathDelimiter{\Uparrow}{\mathrel}{arrows}{"09}{delimiters}"C9}
1787 \DeclareMathDelimiter{\Downarrow}{\mathrel}{arrows}{"0B}{delimiters}"CA}
1788 \DeclareMathDelimiter{\Updownarrow}{\mathrel}{arrows}{"15}{delimiters}"CB}

```

Horizontal braces.

```

1789 \DeclareMathSymbol{\braceld}{\mathord}{delimiters}"CC}
1790 \DeclareMathSymbol{\bracelu}{\mathord}{delimiters}"CD}
1791 \DeclareMathSymbol{\bracerd}{\mathord}{delimiters}"CE}
1792 \DeclareMathSymbol{\braceru}{\mathord}{delimiters}"CF}
1793 \DeclareMathSymbol{\bracemd}{\mathord}{delimiters}"D0}
1794 \DeclareMathSymbol{\bracemu}{\mathord}{delimiters}"D1}
1795 \DeclareMathSymbol{\bracemid}{\mathord}{delimiters}"D2}
1796
1797 \def\bracefill@#1#2#3#4#5{$\m@th#5#1\leaders\hbox{$#4$}\hfill#2\leaders\hbox{$#4$}\hfill#3$}
1798 \def\downbracefill@{\bracefill@\braceld\bracemd\bracerd\bracemid}
1799 \def\upbracefill@{\bracefill@\bracelu\bracemu\braceru\bracemid}
1800 \def\downgroupfill@{\bracefill@\braceld{}\bracerd\bracemid}
1801 \def\upgroupfill@{\bracefill@\bracelu{}\braceru\bracemid}
1802 \def\linesegmentfill@{\arrowfill@\leftfootline\relbar\rightfootline}
1803 \def\leftharpoonfill@{\arrowfill@\leftharpoondown\relbar\relbar}
1804 \def\rightharpoonfill@{\arrowfill@\relbar\relbar\rightharpoonup}
1805
1806 \DeclareRobustCommand{\overbrace}[1]{\mathop{\mathpalette{\overarrow@downbracefill@}{#1}}\limits}
1807 \DeclareRobustCommand{\underbrace}[1]{\mathop{\mathpalette{\underarrow@upbracefill@}{#1}}\limits}
1808 \DeclareRobustCommand{\overgroup}{\mathpalette{\overarrow@downgroupfill@}}
1809 \DeclareRobustCommand{\undergroup}{\mathpalette{\underarrow@upgroupfill@}}
1810 \DeclareRobustCommand{\overlinesegment}{\mathpalette{\overarrow@linesegmentfill@}}
1811 \DeclareRobustCommand{\overleftharpoon}{\mathpalette{\overarrow@leftharpoonfill@}}
1812 \DeclareRobustCommand{\overrightharpoon}{\mathpalette{\overarrow@rightharpoonfill@}}
1813 \DeclareRobustCommand{\underlinesegment}{\mathpalette{\underarrow@linesegmentfill@}}

```

Radical symbols.

```

1814 \iffdsy@largedelims
1815 \DeclareMathRadical{\sqrtsign}{delimiters}"D4}{delimiters}"D4}
1816 \DeclareMathSymbol{\surd}{\mathop}{delimiters}"D4}
1817 \else
1818 \DeclareMathRadical{\sqrtsign}{delimiters}"D3}{delimiters}"D3}
1819 \DeclareMathSymbol{\surd}{\mathop}{delimiters}"D3}
1820 \fi

```

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

```

1821 \def\r@@t#1#2{\setbox\z@\hbox{$\m@th#1\sqrt{#2}$}%

```

```

1822 \dimen@ \ht\z@ \advance\dimen@-\dp\z@
1823 \mkern5mu\raise.6\dimen@ \copy\rootbox \mkern-8mu\box\z@}

```

Mathchars.

```

1824 \DeclareMathSymbol{+}{\mathbin}{symbols}{11}
1825 \DeclareMathSymbol{-}{\mathbin}{symbols}{0E}
1826 \DeclareMathSymbol{*}{\mathbin}{symbols}{93}
1827 \DeclareMathSymbol{:}{\mathrel}{symbols}{02}
1828 \DeclareMathSymbol{=}{\mathrel}{relations}{00}
1829 \DeclareMathSymbol{<}{\mathrel}{relations}{22}
1830 \DeclareMathSymbol{>}{\mathrel}{relations}{23}
1831 \iffdsy@largedelims
1832 \DeclareMathSymbol{|}{\mathord}{delimiters}{B6}
1833 \DeclareMathSymbol{(}{\mathopen}{delimiters}{01}
1834 \DeclareMathSymbol{)}{\mathclose}{delimiters}{07}
1835 \DeclareMathSymbol{[}{\mathopen}{delimiters}{13}
1836 \DeclareMathSymbol{]}{\mathclose}{delimiters}{19}
1837 \DeclareMathSymbol{/}{\mathord}{delimiters}{AA}
1838 \else
1839 \DeclareMathSymbol{|}{\mathord}{delimiters}{B5}
1840 \DeclareMathSymbol{(}{\mathopen}{delimiters}{00}
1841 \DeclareMathSymbol{)}{\mathclose}{delimiters}{06}
1842 \DeclareMathSymbol{[}{\mathopen}{delimiters}{12}
1843 \DeclareMathSymbol{]}{\mathclose}{delimiters}{18}
1844 \DeclareMathSymbol{/}{\mathord}{delimiters}{A9}
1845 \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.

```

1846 \def\c@ncel#1#2{\m@th\oalign{$\hfil#1/\hfil$\cr\c@ncel$#1#2$}}
1847 \def\not#1{\mathrel{\m@th\mathpalette\c@ncel{#1}}}
1848 \end{style}

```