

The stix2 package

STI Pub Companies*

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*This package was developed by Khaled Hosny on behalf of the STI Pub companies, who gratefully acknowledge his efforts.

1 Introduction

The STIX fonts are a set of OpenType fonts designed for use with typesetting engines such as \XeTeX or \LuaTeX that directly support Unicode and modern font technologies. When used with one of these engines, no extra support is needed beyond the `unicode-math` package. This is the recommended way of using the STIX fonts with \TeX .

The `stix2` package provides support for versions of \TeX that are limited to TFM files, Type 1 PostScript fonts, and 8-bit font encodings. Version 2.0.0 of the STIX fonts are being released in this format in hopes of easing the transition from legacy \TeX engines to modern fully Unicode-compatible systems. The Type 1 versions are merely a repackaging of the original OpenType versions and should not be viewed as independent entities. Some glyphs that are traditionally available in \TeX math fonts are not yet available in the STIX Two OpenType fonts. In such cases, we have chosen to omit them from the `stix2` package rather than create incompatibilities between the OpenType and Type 1 versions. In addition, while development of the OpenType versions is ongoing, no further updates are planned to the Type 1 versions of the fonts.

The `stix2` package provides support for text fonts in the following \LaTeX encodings:

- T1 (the default encoding): The extended Latin “Cork” encoding
- OT1: Knuth’s original Computer Modern Roman encoding
- OT2: Cyrillic
- TS1: \LaTeX symbol encoding

Please note that the Type 1 versions of these fonts only expose a small subset of the text glyphs available in the full OpenType versions, which contain extensive coverage of the following Unicode blocks:

- Latin Extended A
- IPA Extensions
- Latin Extended Additional

as well as partial coverage of several other blocks.

The math support covers nearly every mathematical symbol in the STIX Two fonts. Section 4 lists math alphabets supported by the `stix2` package, while section 5 lists all defined math symbols. There are also three fonts containing extra miscellaneous symbols, `stix2-extra1`, `stix2-extra2` and `stix2-extra3`, provided as TFM and PFB files without support from the macro package.

2 Background

The *Scientific and Technical Information eXchange* (STIX) fonts are intended to satisfy the demanding needs of authors, publishers, printers, and others working in the scientific, medical, and technical fields. They combine a comprehensive Unicode-based collection of mathematical symbols and alphabets with a set of text faces suitable for professional publishing. The fonts are available royalty-free under the SIL Open Font License.

Version 2.0.0 of the STIX fonts, now known as “STIX Two”, is a thorough revision undertaken by the renowned type house Tiro Typeworks. The STIX Two fonts consist of four text fonts (Regular, Italic, Bold, and Bold Italic) and one Math font. Together, they provide a uniform set of fonts that can be used throughout the production process, whether that be a traditional print-only process, an entirely electronic one, or a combination of the two.

The STIX project began through the joint efforts of American Mathematical Society (AMS), American Institute of Physics (AIP), American Physical Society (APS), American Chemical Society (ACS), Institute of Electrical and Electronic Engineers (IEEE), and Elsevier. These companies are collectively known as the STI Pub companies.

3 Usage

Using STIX Two fonts with \LaTeX is as simple as loading the stix2 package:

```
\documentclass{article}
\usepackage{stix2}
\begin{document}
Some text, and a math formula  $(a+b=\sqrt{c})$ .
\end{document}
```

3.1 Options

<code>notext</code>	Do not change the default text fonts.
<code>nomath</code>	Do not change the default math fonts.
<code>not1</code>	Do not change the default font encoding to T1.
<code>notextcomp</code>	Do not load the textcomp package (provides symbols and oldstyle figures from TS1 encoding to be used with T1 encoded text fonts).
<code>lcgreekalpha</code>	By default lower case Greek, partial differential and nabla are given <code>\mathord</code> class which makes them insensitive to math alphabet changes (i.e. <code>\mathbf{\beta}</code> gives β instead of $\boldsymbol{\beta}$); with this option they will be given <code>\mathalpha</code> class just like Latin and upper case Greek.
<code>upint</code>	Use upright integrals by default (\int instead of \int). See Section 5.6 on page 19 for more details.

3.2 Compatibility with other packages

amsmath

The stix2 package should be used with at least amsmath v2.14, amssymb v3.01 and amsfonts v3.01.

With amsmath v2.14 or newer, it is recommended to load it (and/or packages that load it) *after* the stix2 package. Older versions of amsmath must be loaded *before* the stix2 package, otherwise errors will arise.

The following amsmath options affect not only symbols known to amsmath, but also new symbols defined by the stix2 package: `sumlimits`, `nosumlimits`, `intlimits` and `nointlimits`.

3.3 Feedback

Bug reports and technical support issues should be reported to <http://sourceforge.net/projects/stixfonts>.

4 Math alphabets

The following table lists math alphabets defined by the stix2 package with the Unicode ranges they cover:

	A-Z	a-z	Γ - Ω	α - ω	0-9
* <code>\mathrm</code>	00041-0005A	00061-0007A	00393-003A9	003B1-003C9	00030-00039
* <code>\mathbf</code>	1D400-1D419	1D41A-1D433	1D6AA-1D6C0	1D6C2-1D6DA	1D7CE-1D7D7
* <code>\mathit</code>	1D434-1D44D	1D44E-1D467	1D6E4-1D6FA	1D6FC-1D714	-
<code>\mathbfit</code>	1D468-1D481	1D482-1D49B	1D71E-1D734	1D736-1D74E	-
* <code>\mathcal</code>	•	-	-	-	-
* <code>\mathscr</code>	1D49C-1D4B5	1D4B6-1D4CF	-	-	-
<code>\mathbfscr</code>	1D4D0-1D4E9	1D4EA-1D503	-	-	-
* <code>\mathsf</code>	1D5A0-1D5B9	1D5BA-1D5D3	-	-	1D7E2-1D7EB
<code>\mathbfsf</code>	1D5D4-1D5ED	1D5EE-1D607	1D758-1D76E	1D770-1D788	1D7EC-1D7F5
* <code>\mathsfit</code>	1D608-1D621	1D622-1D63B	-	-	-
<code>\mathbfsf</code>	1D63C-1D655	1D656-1D66F	1D792-1D7A8	1D7AA-1D7C2	-
* <code>\mathbb</code>	1D538-1D551	1D552-1D56B	-	-	1D7D8-1D7E1
* <code>\mathfrak</code>	1D504-1D51D	1D51E-1D537	-	-	-
<code>\mathbffrac</code>	1D56C-1D585	1D586-1D59F	-	-	-
* <code>\mathtt</code>	1D670-1D689	1D68A-1D6A3	-	-	1D7F6-1D7FF

- Covered by STIX Two fonts but not in Unicode.
- Not covered.
- * Available by default when loading the stix2 package.

$\mathrm{T}_{\mathrm{E}}\mathrm{X}$ allows only 16 math alphabets to be used simultaneously, so not all of these alphabets can be used in one document. When the stix2 package is loaded, 12 math groups are allocated, with the 11 math alphabets that are marked above available by default, which leaves room for 4 other math groups to be allocated on demand when any of the other alphabets is used.

5 Math symbols

The following section lists all math symbols defined by the stix2 package. Symbols with * next to their name do not have a bold version; when `\boldmath` is active, the non-bold glyph will be used.

5.1 Alphabetics

Γ	U+0393 <code>\Gamma</code>	Υ	U+03A5 <code>\Upsilon</code>
Δ	U+0394 <code>\Delta</code>	Φ	U+03A6 <code>\Phi</code>
Θ	U+0398 <code>\Theta</code>	Ψ	U+03A8 <code>\Psi</code>
Λ	U+039B <code>\Lambda</code>	Ω	U+03A9 <code>\Omega</code>
Ξ	U+039E <code>\Xi</code>	α	U+03B1 <code>\alpha</code>
Π	U+03A0 <code>\Pi</code>	β	U+03B2 <code>\beta</code>
Σ	U+03A3 <code>\Sigma</code>	γ	U+03B3 <code>\gamma</code>




























































































δ	U+03B4	\delta
ϵ	U+03B5	\epsilon
ζ	U+03B6	\zeta
η	U+03B7	\eta
θ	U+03B8	\theta
ι	U+03B9	\iota
κ	U+03BA	\kappa
λ	U+03BB	\lambda
μ	U+03BC	\mu
ν	U+03BD	\nu
ξ	U+03BE	\xi
π	U+03C0	\pi
ρ	U+03C1	\rho
σ	U+03C3	\sigma
τ	U+03C4	\tau

υ	U+03C5	\upsilon
ϕ	U+03D5	\phi
χ	U+03C7	\chi
ψ	U+03C8	\psi
ω	U+03C9	\omega
ε	U+03F5	\varepsilon
ϑ	U+03D1	\vartheta
ϖ	U+03D6	\varpi
ϱ	U+03F1	\varrho
ς	U+03C2	\varsigma
φ	U+03C6	\varphi
∇	U+2207	\nabla
∂	U+2202	\partial
\imath	U+1D6A4	\imath
j	U+1D6A5	j

5.2 Ordinary symbols

#	U+0023	\#
\$	U+0024	\mathdollar
%	U+0025	\%
&	U+0026	\&
.	U+002E	.
/	U+002F	/
?	U+003F	?
@	U+0040	@
\	U+005C	\backslash
£	U+00A3	\mathsterling
§	U+00A7	\mathsection
¬	U+00AC	\neg, \lnot
¶	U+00B6	\mathparagraph
ð	U+00F0	\eth
Z	U+01B5	\Zbar*
ƒ	U+03DD	\digamma
κ	U+03F0	\varkappa
ε	U+03F6	\backepsilon
ε	U+03F6	\upbackepsilon
..	U+2025	\enleadertwodots
...	U+2026	\mathellipsis
′	U+2032	\prime
″	U+2033	\dprime
‴	U+2034	\trprime
‴	U+2035	\backprime
↖	U+2036	\backdprime
↗	U+2037	\backtrprime
^	U+2038	\caretinsert

!!	U+203C	\Exclam
-	U+2043	\hyphenbullet*
??	U+2047	\Question
≡	U+2057	\qprime
○	U+20DD	\enclosecircle
□	U+20DE	\enclosesquare*
◇	U+20DF	\enclosediamond*
△	U+20E4	\enclosetriangle
ℵ	U+2107	\Eulerconst
ℏ	U+210F	\hbar*
ℏ	U+210F	\hslash
ℑ	U+2111	\Im
ℓ	U+2113	\ell
℘	U+2118	\wp
℞	U+211C	\Re
ℳ	U+2127	\mho
ı	U+2129	\turnediota
Å	U+212B	\Angstrom
ℱ	U+2132	\Finv
ℵ	U+2135	\aleph
ℶ	U+2136	\beth
ℷ	U+2137	\gimel
ℸ	U+2138	\daleth
⊙	U+2141	\Game*
↵	U+2142	\sansLturned*
↶	U+2143	\sansLmirrored*
↷	U+2144	\Yup*

























	U+214A \PropertyLine*		U+2313 \profsurf*
	U+21A8 \updownarrowbar		U+2317 \viewdata*
	U+21B4 \linefeed		U+2319 \turnednot
	U+21B5 \carriagereturn		U+232C \varhexagonnlrbonds*
	U+21B8 \barovernorthwestarrow		U+2332 \conictaper*
	U+21B9 \barleftarrowrightarrowbar		U+2336 \topbot
	U+21BA \acwopencirclearrow		U+2340 \APLnotbackslash*
	U+21BB \cwopencirclearrow		U+2353 \APLboxupcaret*
	U+21DE \nHuparrow*		U+2370 \APLboxquestion*
	U+21DF \nHdownarrow*		U+237C \rangledownzigzagarrow*
	U+21E0 \leftdasharrow*		U+2394 \hexagon*
	U+21E1 \updasharrow*		U+23B6 \bbrktbrk
	U+21E2 \rightdasharrow*		U+23CE \varcarriagereturn*
	U+21E3 \downdasharrow*		U+23E0 \obrbrak
	U+21E6 \leftwhitearrow		U+23E1 \ubrbrak
	U+21E7 \upwhitearrow		U+23E2 \trapezium*
	U+21E8 \rightwhitearrow		U+23E3 \benzenr*
	U+21E9 \downwhitearrow		U+23E4 \strns*
	U+21EA \whitearrowupfrombar		U+23E5 \fltns*
	U+2200 \forall		U+23E6 \accurrent*
	U+2201 \complement		U+23E7 \elinters*
	U+2203 \exists		U+2423 \mathvisiblespace
	U+2204 \nexists		U+24C7 \circledR
	U+2205 \varnothing		U+24C8 \circledS
	U+2205 \emptyset		U+25A0 \mdlgblksquare*, \blacksquare
	U+2206 \Delta		U+25A1 \mdlgwhtsquare*, \square, \Box
	U+220E \blacksquare		U+25A2 \squoval*
	U+221E \infty		U+25A3 \blackinwhitesquare*
	U+221F \Lsh		U+25A4 \squarehfill*
	U+2220 \angle		U+25A5 \squarevfill*
	U+2221 \measuredangle		U+25A6 \squarehvfill*
	U+2222 \sphericalangle		U+25A7 \squarenwsewfill*
	U+2234 \therefore		U+25A8 \squarecrossfill*
	U+2235 \because		U+25AA \smbblksquare*
	U+223F \sim		U+25AB \smwhtsquare*
	U+22A4 \top		U+25AC \hrectangleblack*
	U+22A5 \bot		U+25AD \hrectangle*
	U+22B9 \dagger		U+25AE \vrectangleblack*
	U+22BE \measuredrightangle		U+25AF \vrectangle*
	U+22BF \vartriangleleft		U+25B0 \parallelogramblack*
	U+22EF \cdots		U+25B1 \parallelogram*
	U+2300 \oslash		U+25B2 \bigblacktriangleup*
	U+2302 \house		U+25B4 \blacktriangle*
	U+2310 \neg		U+25B6 \blacktriangleright*
	U+2311 \sqlozenge*		U+25B8 \smallblacktriangleright*
	U+2312 \proline*		
























▷ U+25B9 \smalltriangleright*
 ► U+25BA \blackpointerright*
 ▷ U+25BB \whitepointerright*
 ▼ U+25BC \bigblacktriangledown*
 ▽ U+25BD \bigtriangledown
 ▼ U+25BE \blacktriangledown*
 ▽ U+25BF \triangledown*
 ◀ U+25C0 \blacktriangleleft*
 ◀ U+25C2 \smallblacktriangleleft*
 ◁ U+25C3 \smalltriangleleft*
 ◀ U+25C4 \blackpointerleft*
 ◁ U+25C5 \whitepointerleft*
 ◆ U+25C6 \mdlgblkdiamond*
 ◇ U+25C7 \mdlgwhtdiamond*
 ◆ U+25C8 \blackinwhitediamond*
 ● U+25C9 \fisheye*
 ◇ U+25CA \mdlgwhtlozenge, \lozenge,
 \Diamond
 ○ U+25CC \dottedcircle*
 ⊙ U+25CD \circlevertfill*
 ⊙ U+25CE \bullseye*
 ● U+25CF \mdlgblkcircle*
 ◐ U+25D0 \circlelefthalfblack*
 ◑ U+25D1 \cirlerrighthalfblack*
 ◒ U+25D2 \circlebottomhalfblack*
 ◓ U+25D3 \cirtetophalfblack*
 ◔ U+25D4 \circleurquadblack*
 ◕ U+25D5 \blackcircleulquadwhite*
 ◖ U+25D6 \blacklefthalfcircle*
 ◗ U+25D7 \blackrighthalfcircle*
 ◘ U+25D8 \inversebullet*
 ◙ U+25D9 \inversewhitecircle*
 ◚ U+25DA \invwhiteupperhalfcircle*
 ◛ U+25DB \invwhitelowerhalfcircle*
 ⌒ U+25DC \ularc*
 ⌔ U+25DD \urarc*
 ⌒ U+25DE \lrarc*
 ⌔ U+25DF \llarc*
 ⌒ U+25E0 \topsemicircle*
 ⌔ U+25E1 \botsemicircle*
 ▲ U+25E2 \lblacktriangle*
 ▲ U+25E3 \llblacktriangle*
 ▴ U+25E4 \ulblacktriangle*
 ▴ U+25E5 \urblacktriangle*
 ○ U+25E6 \circ, \smwhtcircle
 ◼ U+25E7 \squareleftblack*

◼ U+25E8 \squarerightblack*
 ◼ U+25E9 \squareulblack*
 ◼ U+25EA \squarelrbblack*
 △ U+25EC \trianglecdot
 ▲ U+25ED \triangleleftblack*
 ▲ U+25EE \trianglerightrightblack*
 ○ U+25EF \lgwhtcircle*
 ◻ U+25F0 \squareulquad*
 ◻ U+25F1 \squareellquad*
 ◻ U+25F2 \squarelrquad*
 ◻ U+25F3 \squareurquad*
 ⊖ U+25F4 \circleulquad*
 ⊖ U+25F5 \circlellquad*
 ⊖ U+25F6 \circlelrquad*
 ⊖ U+25F7 \circleurquad*
 ▽ U+25F8 \ultriangle*
 ▽ U+25F9 \urtriangle*
 ▽ U+25FA \lltriangle*
 ◻ U+25FB \mdwhtsquare*
 ◼ U+25FC \mdblksquare*
 ◻ U+25FD \mdsmwhtsquare*
 ◼ U+25FE \mdsmbksquare*
 ▵ U+25FF \lrtriangle*
 ★ U+2605 \bigstar*
 ☆ U+2606 \bigwhitestar*
 ☼ U+2609 \astrosun
 ☠ U+2621 \danger
 ☺ U+263B \blacksmiley
 ☼ U+263C \sun
 ☾ U+263D \rightmoon
 ☾ U+263E \leftmoon
 ♀ U+2640 \female
 ♂ U+2642 \male
 ♠ U+2660 \spadesuit*
 ♥ U+2661 \heartsuit*
 ♦ U+2662 \diamondsuit*
 ♣ U+2663 \clubsuit*
 ♠ U+2664 \varspadesuit
 ♥ U+2665 \varheartsuit
 ♦ U+2666 \vardiamondsuit
 ♣ U+2667 \varclubsuit
 ♪ U+2669 \quarternote
 ♪ U+266A \eighthnote
 ♪ U+266B \twonotes
 ♭ U+266D \flat
 ♮ U+266E \natural




















U+266F \sharp
 ☉ U+267E \acidfree*
 🎲 U+2680 \dicei
 🎲 U+2681 \diceii
 🎲 U+2682 \diceiii
 🎲 U+2683 \diceiv
 🎲 U+2684 \dicev
 🎲 U+2685 \dicevi
 ⦿ U+2686 \circledrightdot
 ⦿ U+2687 \circledtwodots
 ⬤ U+2688 \blackcircledrightdot
 ⬤ U+2689 \blackcircledtwodots
 ♀ U+26A5 \Hermaphrodite
 ○ U+26AA \mdwhtcircle
 ● U+26AB \mdblkcircle
 ◦ U+26AC \mdsmwhtcircle
 ♀ U+26B2 \neuter
 ✓ U+2713 \checkmark
 ✠ U+2720 \maltese
 ⬤ U+272A \circledstar
 ★ U+2736 \varstar
 * U+273D \dingasterisk
 ➞ U+279B \draftingarrow*
 ∟ U+27C0 \threedangle*
 ⚠ U+27C1 \whiteinwhitetriangle*
 ⊆ U+27C3 \subsetcirc*
 ⊇ U+27C4 \supsetcirc*
 / U+27CB \diagup*
 \ U+27CD \diagdown*
 ◇ U+27D0 \diamondcdot*
 ✕ U+292B \rdiagovfdiag*
 ✕ U+292C \fdiagovrdiag*
 ↗ U+292D \seovnearrow*
 ↘ U+292E \neovsearrow*
 ↗ U+292F \fdiagovnearrow*
 ↘ U+2930 \rdiagovsearrow*
 ↗ U+2931 \neovnearrow*
 ↗ U+2932 \nwovnearrow*
 ↗ U+2933 \uprightcurvearrow*
 ↘ U+2934 \downrightcurvedarrow*
 ● U+2981 \mdsmbllkcircle*
 ⋮ U+2999 \fourvdots*
 ~ U+299A \vzigzag*
 ∠ U+299B \measuredangleleft*
 ⊥ U+299C \rightanglesqr*
 ⊥ U+299D \rightanglemdot*




















∠ U+299E \angles*
 ∠ U+299F \angdnr*
 ≧ U+29A0 \gtlpar*
 ∠ U+29A1 \sphericalangleup*
 ∠ U+29A2 \turnangle*
 ∠ U+29A3 \revangle*
 ∠ U+29A4 \angleubar*
 ∠ U+29A5 \revangleubar*
 ∠ U+29A6 \wideangledown*
 ∠ U+29A7 \wideangleup*
 ∠ U+29A8 \measanglerutone*
 ∠ U+29A9 \measanglerutonw*
 ∠ U+29AA \measanglerdtose*
 ∠ U+29AB \measangleldtosw*
 ∠ U+29AC \measangleurtone*
 ∠ U+29AD \measangleultonw*
 ∠ U+29AE \measangledrtose*
 ∠ U+29AF \measangledltosw*
 ∅ U+29B0 \revemptyset*
 ∅ U+29B1 \emptysetobar*
 ∅ U+29B2 \emptysetocirc*
 ∅ U+29B3 \emptysetoarr*
 ∅ U+29B4 \emptysetoarrl*
 ⊕ U+29BA \obot*
 ⊗ U+29BB \olcross*
 ⊗ U+29BC \odotslashdot*
 ⊕ U+29BD \uparrowoncircle*
 ⊙ U+29BE \circledwhitebullet*
 ⊙ U+29BF \circledbullet*
 ○ U+29C2 \cirscir*
 ○ U+29C3 \cirE*
 ☐ U+29C9 \boxonbox*
 △ U+29CA \triangleodot*
 △ U+29CB \triangleubar*
 △ U+29CC \triangles*
 ∞ U+29DC \iinfin*
 ∞ U+29DD \tieinfty*
 ∞ U+29DE \nvinfy*
 □ U+29E0 \laplac*
 ‡ U+29E7 \thermod*
 ▼ U+29E8 \downtriangleleftblack*
 ▼ U+29E9 \downtrianglerightblack*
 ◆ U+29EA \blackdiamonddownarrow*
 ◆ U+29EB \blacklozenge*
 ♀ U+29EC \circledownarrow*
 ♀ U+29ED \blackcircledownarrow*

	U+29EE \errbarsquare*
	U+29EF \errbarblacksquare*
	U+29F0 \errbardiamond*
	U+29F1 \errbarblackdiamond*
	U+29F2 \errbarcircle*
	U+29F3 \errbarblackcircle*
	U+2AE1 \perps
	U+2AF1 \topcir
	U+2B12 \squaretopblack
	U+2B13 \squarebotblack
	U+2B14 \squareurblack
	U+2B15 \squareellblack
	U+2B16 \diamondleftblack
	U+2B17 \diamondrightblack
	U+2B18 \diamondtopblack
	U+2B19 \diamondbotblack
	U+2B1A \dottedsquare
	U+2B1B \lgblksquare
	U+2B1C \lgwhtsquare
	U+2B1D \vysmblksquare
	U+2B1E \vysmwhtsquare
	U+2B1F \pentagonblack
	U+2B20 \pentagon
	U+2B21 \varhexagon

	U+2B22 \varhexagonblack
	U+2B23 \hexagonblack
	U+2B24 \lgblkcircle
	U+2B25 \mdblkdiamond
	U+2B26 \mdwhtdiamond
	U+2B27 \mdblklozenge
	U+2B28 \mdwhtlozenge
	U+2B29 \smbldiamond
	U+2B2A \smbldlozenge
	U+2B2B \smwhtlozenge
	U+2B2C \blkhorzoval
	U+2B2D \whthorzoval
	U+2B2E \blkvertoval
	U+2B2F \whtvertoval
	U+2B50 \medwhitestar
	U+2B51 \medblackstar
	U+2B52 \smwhitestar
	U+2B53 \rightpentagonblack
	U+2B54 \rightpentagon
	U+3012 \postalmark
	U+3030 \hzigzag
	U+1D55C \Bbbk
	U+XXXX \bracevert*

5.3 Binary operators

	U+002B +
	U+00B1 \pm
	U+00B7 \cdotp, \centerdot
	U+00D7 \times
	U+00F7 \div
	U+2020 \dagger
	U+2021 \ddagger
	U+2022 \smblkcircle
	U+2044 \frac{1}{2}
	U+214B \upand
	U+002D -
	U+2213 \mp
	U+2214 \dotplus
	U+2216 \smallsetminus
	U+2217 \ast
	U+2218 \vysmwhtcircle
	U+2219 \vysmblkcircle, \bullet
	U+2227 \wedge, \land
	U+2228 \vee, \lor

	U+2229 \cap
	U+222A \cup
	U+2238 \dotminus
	U+223E \invlazys
	U+2240 \wr
	U+228C \cupleftarrow
	U+228D \cupdot
	U+228E \uplus
	U+2293 \sqcap
	U+2294 \sqcup
	U+2295 \oplus
	U+2296 \ominus
	U+2297 \otimes
	U+2298 \oslash
	U+2299 \odot
	U+229A \circledcirc
	U+229B \circledast
	U+229C \circledequal
	U+229D \circleddash

\boxplus U+229E \boxplus
 \boxminus U+229F \boxminus
 \boxtimes U+22A0 \boxtimes
 \boxdot U+22A1 \boxdot
 \intercal U+22BA \intercal
 \veebar U+22BB \veebar
 \barwedge U+22BC \barwedge
 \barvee U+22BD \barvee
 \diamond U+22C4 \diamond, \smwhtdiamond
 \cdot U+22C5 \cdot
 \star U+22C6 \star
 \div U+22C7 \div
 \ltimes U+22C9 \ltimes
 \rtimes U+22CA \rtimes
 \leftthreetimes U+22CB \leftthreetimes
 \rightthreetimes U+22CC \rightthreetimes
 \curlyvee U+22CE \curlyvee
 \curlywedge U+22CF \curlywedge
 \Cap U+22D2 \Cap, \doublecap
 \Cup U+22D3 \Cup, \doublecup
 \varbarwedge U+2305 \varbarwedge*
 \vardoublebarwedge U+2306 \vardoublebarwedge*
 \Obar U+233D \Obar
 \triangle U+25B3 \triangle, \bigtriangleup
 \lhd U+22B2 \lhd
 \rhd U+22B3 \rhd
 \unlhd U+22B4 \unlhd
 \unrhd U+22B5 \unrhd
 \bigcirc U+25CB \bigcirc, \mdlgwhtcircle*
 $\boxed{}$ U+25EB \boxed{}*
 \veedot U+27C7 \veedot*
 \wedge U+27D1 \wedge, \wedgedot*
 \lozenge U+27E0 \lozenge, \lozengeminus*
 \diamond U+27E1 \diamond, \concavediamond*
 \diamondleft U+27E2 \diamondleft, \concavediamondtickleft*
 \diamondright U+27E3 \diamondright, \concavediamondtickright*
 \squareleft U+27E4 \squareleft, \whitesquaretickleft*
 \squeright U+27E5 \squeright, \whitesquaretickright*
 $\textcircled{:}$ U+2982 \textcircled{:}, \typecolon*
 \ominus U+29B5 \ominus, \circlehbar*
 \bigcirc U+29B6 \bigcirc, \circledvert*
 \bigcirc U+29B7 \bigcirc, \circledparallel*
 \oslash U+29B8 \oslash, \obslash*
 \oplus U+29B9 \oplus, \operp*
 \otimes U+29C0 \otimes, \olessthan*
 \odot U+29C1 \odot, \ogreaterthan*

\boxdiag U+29C4 \boxdiag
 \boxslash U+29C5 \boxslash
 \boxast U+29C6 \boxast
 \boxcirc U+29C7 \boxcirc
 \boxbox U+29C8 \boxbox*
 \triangle U+29CD \triangle, \triangleleserifs*
 \hourglass U+29D6 \hourglass*
 \blackhourglass U+29D7 \blackhourglass*
 \shuffle U+29E2 \shuffle*
 \mdlgblklozenge U+29EB \mdlgblklozenge*
 \setminus U+29F5 \setminus, \setminusminus*
 $\overline{}$ U+29F6 \overline{}, \dsol*
 $\overline{}$ U+29F7 \overline{}, \rsolbar*
 $\#$ U+29FA \#, \doubleplus*
 $\#$ U+29FB \#, \tripleplus*
 $+$ U+29FE \+, \tplus*
 $-$ U+29FF \-, \tminus*
 \oplus U+2A22 \oplus, \ringplus*
 \oplus U+2A23 \oplus, \plushat*
 \oplus U+2A24 \oplus, \simplus*
 $\dot{+}$ U+2A25 \dot{+}, \plusdot*
 $\dot{+}$ U+2A26 \dot{+}, \plussim*
 $\dot{+}$ U+2A27 \dot{+}, \plussubtwo*
 $\dot{+}$ U+2A28 \dot{+}, \plustrif*
 $\dot{-}$ U+2A29 \dot{-}, \commaminus*
 $\dot{-}$ U+2A2A \dot{-}, \minusdot*
 $\dot{-}$ U+2A2B \dot{-}, \minusfdots*
 $\dot{-}$ U+2A2C \dot{-}, \minusrdots*
 \oplus U+2A2D \oplus, \opluslhhrim*
 \oplus U+2A2E \oplus, \oplusrhrim*
 \times U+2A2F \times, \vectimes*
 $\dot{\times}$ U+2A30 \dot{\times}, \dottimes*
 \times U+2A31 \times, \timesbar*
 \times U+2A32 \times, \btimes*
 \times U+2A33 \times, \smashtimes*
 \otimes U+2A34 \otimes, \otimeslhhrim*
 \otimes U+2A35 \otimes, \otimesrhrim*
 \otimes U+2A36 \otimes, \otimesshat*
 \otimes U+2A37 \otimes, \otimestimes*
 \oplus U+2A38 \oplus, \odiv*
 \triangle U+2A39 \triangle, \triangleplus*
 \triangle U+2A3A \triangle, \triangleminus*
 \triangle U+2A3B \triangle, \triangleletimes*
 \int U+2A3C \int, \intprod*
 \int U+2A3D \int, \intprodr*
 $;$ U+2A3E \;, \fcmp*

⦶	U+2A3F	\amalg
⦶̇	U+2A40	\capdot*
⦶̈	U+2A41	\uminus*
⦶̊	U+2A42	\barcup*
⦶̋	U+2A43	\barcap*
⦶̌	U+2A44	\capwedge*
⦶̍	U+2A45	\cupvee*
⦶̎	U+2A46	\cupovercap*
⦶̏	U+2A47	\capovercup*
⦶̐	U+2A48	\cupbarcap*
⦶̑	U+2A49	\capbarcup*
⦶̒	U+2A4A	\twocups*
⦶̓	U+2A4B	\twocaps*
⦶̔	U+2A4C	\closedvarcup*
⦶̕	U+2A4D	\closedvarcap*
⦶̖	U+2A4E	\Sqcap*
⦶̗	U+2A4F	\Sqcup*
⦶̘	U+2A50	\closedvarcupsmashprod*
⦶̙	U+2A51	\wedgeodot*
⦶̚	U+2A52	\veeodot*
⦶̛	U+2A53	\Wedge*
⦶̜	U+2A54	\Vee*
⦶̝	U+2A55	\wedgeonwedge*

⦶̞	U+2A56	\veeonvee*
⦶̟	U+2A57	\bigslantedvee*
⦶̠	U+2A58	\bigslantedwedge*
⦶̡	U+2A5A	\wedgemidvert*
⦶̢	U+2A5B	\veemidvert*
⦶̣	U+2A5C	\midbarwedge*
⦶̤	U+2A5D	\midbarvee*
⦶̥	U+2A5E	\doublebarwedge
⦶̦	U+2A5F	\wedgebar*
⦶̧	U+2A60	\wedgedoublebar*
⦶̨	U+2A61	\varveebar*
⦶̩	U+2A62	\doublebarvee*
⦶̪	U+2A63	\veedoublebar
⦶̫	U+2A64	\dsup*
⦶̬	U+2A65	\rsub*
⦶̭	U+2A71	\eqqplus
⦶̮	U+2A72	\pluseqq
⦶̯	U+2AF4	\interleave
⦶̰	U+2AF5	\nhVvert
⦶̱	U+2AF6	\threedotcolon
⦶̲	U+2AFB	\trslash
⦶̳	U+2AFD	\sslash
⦶̴	U+2AFE	\talloblong

5.4 Relations

*	U+002A	*, \ast
:	U+003A	:
<	U+003C	<, \less
=	U+003D	=, \equal
>	U+003E	>, \greater
∘	U+2050	\closure*
|	U+20D2	\vertoverlay
←	U+2190	\leftarrow, \gets
↑	U+2191	\uparrow
→	U+2192	\rightarrow, \to
↓	U+2193	\downarrow
↔	U+2194	\leftrightarrow
↕	U+2195	\updownarrow
↗	U+2196	\nearrow
↘	U+2197	\searrow
↙	U+2198	\swarrow
↠	U+2199	\nleftarrow
↡	U+219A	\nrightarrow

↢	U+219C	\leftwavedarrow
↣	U+219D	\rightwavedarrow
↤	U+219E	\twoheadleftarrow
↥	U+219F	\twoheaduparrow
↦	U+21A0	\twoheadrightarrow
↧	U+21A1	\twoheaddownarrow
↩	U+21A2	\leftarrowtail
↪	U+21A3	\rightarrowtail
↫	U+21A4	\mapsfrom
↬	U+21A5	\mapsup
↭	U+21A6	\mapsto
↮	U+21A7	\mapsdown
↯	U+21A9	\hookleftarrow
↰	U+21AA	\hookrightarrow
↱	U+21AB	\looparrowleft
↲	U+21AC	\looparrowright
↳	U+21AD	\leftrightsquigarrow
↴	U+21AE	\nlefttriarow
↵	U+21AF	\downzigzagarrow

↵	U+21B0 \Lsh	⇒	U+21F6 \rightthreearrows*
↶	U+21B1 \Rsh	↵	U+21F7 \nvleftarrow*
↷	U+21B2 \Ldsh	➔	U+21F8 \nvrightarrow*
↸	U+21B3 \Rdsh	↵➔	U+21F9 \nvleftrightarrow*
↶↷	U+21B6 \curvearrowleft	↵↶	U+21FA \nVleftarrow*
↷↶	U+21B7 \curvearrowright	➔↶	U+21FB \nVrightarrow*
↶↷↶	U+21BA \circlearrowleft	↵↶↷	U+21FC \nVleftrightarrow*
↷↶↷	U+21BB \circlearrowright	↵	U+21FD \leftarrowtriangle*
↶↷↶↷	U+21BC \leftharpoonup	➔	U+21FE \rightarrowtriangle*
↶↷↶↷↶	U+21BD \leftharpoondown	↵➔	U+21FF \leftrightarrowtriangle*
↶↷↶↷↶↷	U+21BE \upharpoonright, \restriction	∈	U+2208 \in
↶↷↶↷↶↷↶	U+21BF \upharpoonleft	∉	U+2209 \notin
↶↷↶↷↶↷↶↷	U+21C0 \rightharpoonup	∈	U+220A \smallin
↶↷↶↷↶↷↶↷↶	U+21C1 \rightharpoondown	⊃	U+220B \ni, \owns
↶↷↶↷↶↷↶↷↶↷	U+21C2 \downharpoonright	⊄	U+220C \nni
↶↷↶↷↶↷↶↷↶↷↶	U+21C3 \downharpoonleft	⊃	U+220D \smallni
↶↷↶↷↶↷↶↷↶↷↶↷	U+21C4 \rightleftarrows	α	U+221D \propto
↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21C5 \updownarrows	α	U+221D \varpropto
↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21C6 \leftrightarrows	|	U+2223 \mid
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21C7 \leftleftarrows	|	U+2223 \shortmid
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21C8 \upuparrows	†	U+2224 \nmid
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21C9 \rightrightarrows	+	U+2224 \nshortmid*
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21CA \downdownarrows	||	U+2225 \parallel
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21CB \leftrightharpoons	||	U+2225 \shortparallel*
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21CC \rightleftharpoons	||	U+2226 \nparallel
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21CD \nLeftarrow	#	U+2226 \nshortparallel*
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21CE \nLeftrightarrow	::	U+2237 \Colon
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21CF \nRrightarrow	∴	U+2239 \dashcolon
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21D0 \Leftarrow	∴	U+223A \dotsminusdots
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21D1 \Uparrow	≈	U+223B \kernelcontraction
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21D2 \Rrightarrow	~	U+223C \sim
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21D3 \Downarrow	~	U+223C \thicksim
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21D4 \Leftrightarrow	~	U+223D \backsim
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21D5 \Updownarrow	≈	U+2241 \nsim
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21D6 \Nwarrow	≈	U+2242 \eqsim
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21D7 \Nearrow	≈	U+2243 \simeq
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21D8 \Searrow	≈	U+2244 \nsime
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21D9 \Svarrow	≈	U+2245 \cong
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21DA \Lleftarrow*	≈	U+2246 \simneq
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21DB \Rrightarrow*	≈	U+2247 \ncong
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21DC \leftsquigarrow	≈	U+2248 \approx
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21DD \rightsquigarrow, \leadsto	≈	U+2248 \thickapprox
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷	U+21E4 \barleftarrow*	≈	U+2249 \napprox
↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶↷↶	U+21E5 \rightarrowbar*	≈	U+224A \approxeq
↶↷	U+21F4 \circlearrowright*	≈	U+224B \approxident
↶↷↶	U+21F5 \downuparrows	≈	U+224C \backcong

\asymp U+224D \asymp
 \bumpeq U+224E \Bumpeq
 \bumpeq U+224F \bumpeq
 \doteq U+2250 \doteq
 \doteqdot U+2251 \Doteq, \doteqdot
 \fallingdotseq U+2252 \fallingdotseq
 \risingdotseq U+2253 \risingdotseq
 \coloneq U+2254 \coloneq
 \eqcolon U+2255 \eqcolon
 \eqcirc U+2256 \eqcirc
 \circeq U+2257 \circeq
 \arceq U+2258 \arceq
 \wedgeq U+2259 \wedgeq
 \veeeq U+225A \veeeq
 \stareq U+225B \stareq
 \triangleq U+225C \triangleq
 \eqdef U+225D \eqdef
 \measeq U+225E \measeq
 \questeq U+225F \questeq
 \neq U+2260 \ne, \neq
 \equiv U+2261 \equiv
 \nequiv U+2262 \nequiv
 \Equiv U+2263 \Equiv
 \leq U+2264 \leq, \le
 \geq U+2265 \geq, \ge
 \leqq U+2266 \leqq
 \geqq U+2267 \geqq
 \lneqq U+2268 \lneqq
 \lvertneqq U+2268 \lvertneqq
 \gneqq U+2269 \gneqq
 \gvertneqq U+2269 \gvertneqq
 \ll U+226A \ll
 \gg U+226B \gg
 \between U+226C \between
 \nasympt U+226D \nasympt
 \nless U+226E \nless
 \ngtr U+226F \ngtr
 \nleq U+2270 \nleq
 \ngeq U+2271 \ngeq
 \lesssim U+2272 \lesssim
 \gtrsim U+2273 \gtrsim
 \nlesssim U+2274 \nlesssim
 \ngtrsim U+2275 \ngtrsim
 \lessgtr U+2276 \lessgtr
 \gtrless U+2277 \gtrless
 \nlessgtr U+2278 \nlessgtr

\ngtrless U+2279 \ngtrless
 \prec U+227A \prec
 \succ U+227B \succ
 \preccurlyeq U+227C \preccurlyeq
 \succcurlyeq U+227D \succcurlyeq
 \precsim U+227E \precsim
 \succsim U+227F \succsim
 \nprec U+2280 \nprec
 \nsucc U+2281 \nsucc
 \subset U+2282 \subset
 \supset U+2283 \supset
 \subsetneq U+2284 \subsetneq
 \supsetneq U+2285 \supsetneq
 \subseteq U+2286 \subseteq
 \supseteq U+2287 \supseteq
 \subsetneq U+2288 \subsetneq
 \supsetneq U+2289 \supsetneq
 \subsetneq U+228A \subsetneq
 \varsubsetneq U+228A \varsubsetneq*
 \supsetneq U+228B \supsetneq
 \varsupsetneq U+228B \varsupsetneq*
 \sqsubset U+228F \sqsubset
 \sqsupset U+2290 \sqsupset
 \sqsubseteq U+2291 \sqsubseteq
 \sqsupseteq U+2292 \sqsupseteq
 \vdash U+22A2 \vdash
 \dashv U+22A3 \dashv
 \vDash U+22A6 \vDash
 \models U+22A7 \models
 \Vdash U+22A8 \Vdash
 \Vdash U+22A9 \Vdash
 \Vdash U+22AA \Vdash
 \Vdash U+22AB \Vdash
 \nvDash U+22AC \nvDash
 \nvDash U+22AD \nvDash
 \nVdash U+22AE \nVdash
 \nVdash U+22AF \nVdash
 \prurel U+22B0 \prurel
 \scurel U+22B1 \scurel
 \vartriangleleft U+22B2 \vartriangleleft
 \vartriangleright U+22B3 \vartriangleright
 \trianglelefteq U+22B4 \trianglelefteq
 \trianglerighteq U+22B5 \trianglerighteq
 \origof U+22B6 \origof
 \imageof U+22B7 \imageof
 \multimap U+22B8 \multimap

⌘	U+22C8 \bowtie	⊞	U+22FF \bagmember*
⋈	U+22CD \backsimeq	☹	U+2322 \frown
⊆	U+22D0 \Subset	☺	U+2322 \smallfrown*
⊇	U+22D1 \Supset	☺	U+2323 \smile
⌋	U+22D4 \pitchfork	☺	U+2323 \smallsmile*
≡	U+22D5 \equalparallel	⧸	U+233F \APLnotslash
⋖	U+22D6 \lessdot	△	U+25B5 \vartriangle*
⋗	U+22D7 \gtrdot	⊥	U+27C2 \perp*
⋘	U+22D8 \lll, \llless	⊂	U+27C8 \bsolhsb
⋙	U+22D9 \ggg, \gggtr	⊃	U+27C9 \suphsol
⋚	U+22DA \lesseqgtr	⤵	U+27D2 \upin*
⋛	U+22DB \gtreqless	⤵	U+27D3 \pullback*
⋜	U+22DC \eqless	⤵	U+27D4 \pushout*
⋝	U+22DD \eqgtr	⊞	U+27DA \DashVDash*
⋞	U+22DE \curlyeqprec	⊞	U+27DB \dashVdash*
⋟	U+22DF \curlyeqsucc	↻	U+27DC \multimapinv*
⋠	U+22E0 \nprec curlyeq	⊞	U+27DD \vlongdash*
⋡	U+22E1 \nsucc curlyeq	⊞	U+27DE \longdashv*
⋢	U+22E2 \nsqsubseteq	⤵	U+27DF \cirbot*
⋣	U+22E3 \nsqsupseteq	⤵	U+27F0 \Uparrow*
⋤	U+22E4 \sqsubsetneq*	⤵	U+27F1 \Downarrow*
⋥	U+22E5 \sqsupsetneq*	⤵	U+27F2 \acwgapcirclearrow*
⋦	U+22E6 \lnsim	⤵	U+27F3 \cwgapcirclearrow*
⋧	U+22E7 \gnsim	⊞	U+27F4 \rightarrowonoplus*
⋨	U+22E8 \precnsim	←	U+27F5 \longleftarrow*
⋩	U+22E9 \succnsim	→	U+27F6 \longrightarrow*
⋪	U+22EA \nvartriangleleft	↔	U+27F7 \longleftrightarrow*
⋫	U+22EB \nvartriangleright	⇐	U+27F8 \Longleftarrow*
⋬	U+22EC \ntrianglelefteq	⇒	U+27F9 \Longrightarrow*
⋭	U+22ED \ntrianglerighteq	⇔	U+27FA \Longleftrightarrow*
⋮	U+22EE \vdots	↔	U+27FB \longmapsfrom*
⋯	U+22F0 \adots	↔	U+27FC \longmapsto*
⋰	U+22F1 \ddots	⇐	U+27FD \Longmapsfrom*
⋱	U+22F2 \disin*	⇒	U+27FE \Longmapsto*
⋲	U+22F3 \varisins*	↔	U+27FF \longrightsquigarrow*
⋳	U+22F4 \isins*	⇒	U+2900 \nvtwoheadrightarrow*
⋴	U+22F5 \isindot*	⇒	U+2901 \nVtwoheadrightarrow*
⋵	U+22F6 \varisinobar	⇐	U+2902 \nvLeftarrow*
⋶	U+22F7 \isinobar*	⇒	U+2903 \nvrightarrow*
⋷	U+22F8 \isinvb*	⇐	U+2904 \nvLeftrightarrow*
⋸	U+22F9 \isinE*	⇒	U+2905 \twoheadmapsto*
⋹	U+22FA \nisd*	⇐	U+2906 \Mapsfrom*
⋺	U+22FB \varnis*	⇒	U+2907 \Mapsto*
⋻	U+22FC \nis*	↓	U+2908 \downarrowbarred*
⋼	U+22FD \varniobar	↑	U+2909 \uparrowbarred*
⋽	U+22FE \niobar*	⤵	U+290A \Uparrow*

⇓	U+290B \Ddownarrow*	↔	U+2943 \leftarrowshortrightarrow*
←-	U+290C \leftbkarrow*	↔	U+2944 \shortrightarrowleftarrow*
-→	U+290D \rightbkarrow*	→+	U+2945 \rightarrowplus*
←-	U+290E \leftdbkarrow*, \dashleftarrow	←+	U+2946 \leftarrowplus*
-→	U+290F \dbkarrow*, \dashrightarrow	↔	U+2947 \rightarrowx*
↔→	U+2910 \drbkarrow*	↔	U+2948 \leftrightharpoonupcircle*
→→	U+2911 \rightdotarrow*	⤿	U+2949 \twoheaduparrowcircle*
↑	U+2912 \baruparrow*	↔	U+294A \leftrightharpoonupdown*
↓	U+2913 \downarrowbar*	↔	U+294B \leftrightharpoonupdown*
↗	U+2914 \nvrightharrowtail*	↓	U+294C \updownharpoonrightleft*
↘	U+2915 \nvRightharrowtail*	↓	U+294D \updownharpoonleftright*
↗	U+2916 \twoheadrightarrowtail*	↔	U+294E \leftrightharpoonupup*
↗	U+2917 \nvtwoheadrightarrowtail*	↓	U+294F \updownharpoonrightright*
↗	U+2918 \nVtwoheadrightarrowtail*	↔	U+2950 \leftrightharpoonupdowndown*
↖	U+2919 \lefttail*	↓	U+2951 \updownharpoonleftleft*
↖	U+291A \righttail*	↖	U+2952 \barleftharpoonup*
↖	U+291B \leftdbltail*	↖	U+2953 \rightharpoonupbar*
↖	U+291C \rightdbltail*	↓	U+2954 \barupharpoonright*
↖	U+291D \diamondleftarrow*	↓	U+2955 \downharpoonrightbar*
↖	U+291E \rightarrowdiamond*	↖	U+2956 \barleftharpoonupdown*
↖	U+291F \diamondleftarrowbar*	↖	U+2957 \rightharpoonupdownbar*
↖	U+2920 \barrightrightarrowdiamond*	↓	U+2958 \barupharpoonleft*
↖	U+2921 \nwsearrow*	↓	U+2959 \downharpoonleftbar*
↖	U+2922 \neswarrow*	↖	U+295A \leftharpoonupbar*
↖	U+2923 \hknwarrow*	↖	U+295B \barrightharpoonup*
↖	U+2924 \hknearrow*	↓	U+295C \upharpoonrightbar*
↖	U+2925 \hksearrow*	↓	U+295D \bardownharpoonright*
↖	U+2926 \hkswarrow*	↖	U+295E \leftharpoonupdownbar*
↖	U+2927 \tona*	↖	U+295F \barrightharpoonupdown*
↖	U+2928 \toea*	↓	U+2960 \upharpoonleftbar*
↖	U+2929 \tosa*	↓	U+2961 \bardownharpoonleft*
↖	U+292A \towa*	↖	U+2962 \leftharpoonupsupdown*
↖	U+2933 \rightcurvedarrow*	↖	U+2963 \upharpoonleftright*
↖	U+2936 \leftdowncurvedarrow*	↖	U+2964 \rightharpoonupsupdown*
↖	U+2937 \rightdowncurvedarrow*	↖	U+2965 \downharpoonleftright*
↖	U+2938 \cwrightarcarrow*	↖	U+2966 \leftrightharpoonupsup*
↖	U+2939 \acwleftarcarrow*	↖	U+2967 \leftrightharpoonupdown*
↖	U+293A \acwoverarcarrow*	↖	U+2968 \rightleftharpoonupsup*
↖	U+293B \acwunderarcarrow*	↖	U+2969 \rightleftharpoonupdown*
↖	U+293C \curvearrowrightminus*	↖	U+296A \leftharpoonupdash*
↖	U+293D \curvearrowleftplus*	↖	U+296B \dashleftharpoonupdown*
↖	U+293E \cwundercurvearrow*	↖	U+296C \rightharpoonupdash*
↖	U+293F \ccwundercurvearrow*	↖	U+296D \dashrightharpoonupdown*
↖	U+2940 \acwcirclearrow*	↖	U+296E \updownharpoonleftright*
↖	U+2941 \cwcirclearrow*	↖	U+296F \downupharpoonleftright*
↖	U+2942 \rightarrowshortleftarrow*	↖	U+2970 \rightarrowimply*

\Rightarrow U+2971 \equalrightarrow*
 \rightarrow U+2972 \similarrightarrow*
 \leftarrow U+2973 \leftarrowssimilar*
 \rightarrow U+2974 \rightarrowssimilar*
 \approx U+2975 \rightarrowapprox*
 \leftarrow U+2976 \ltlarr*
 \leftarrow U+2977 \leftarrowless*
 \rightarrow U+2978 \gtrarr*
 \subset U+2979 \subrarr*
 \subsetneq U+297A \leftarrowsubset*
 \supset U+297B \suplarr*
 \dashv U+297C \leftfishtail*
 \dashv U+297D \rightfishtail*
 \Uparrow U+297E \upfishtail*
 \Downarrow U+297F \downfishtail*
 \Rrightarrow U+29CE \rtriltri*
 \triangleleft U+29CF \ltrivb*
 \triangleright U+29D0 \vbrtri*
 \bowtie U+29D1 \lfbowtie*
 \bowtie U+29D2 \rfbowtie*
 \bowtie U+29D3 \fbowtie*
 \ltimes U+29D4 \lftimes*
 \rtimes U+29D5 \rftimes*
 \circlearrowright U+29DF \dualmap*
 \trianglelefteq U+29E1 \lrtriangleeq*
 $\#$ U+29E3 \eparsl*
 $\#$ U+29E4 \smeparsl*
 $\#$ U+29E5 \eqvparsl*
 \mathbb{H} U+29E6 \gleichstark*
 \rightarrow U+29F4 \ruledelayed*
 \wedge U+2A59 \veeonwedge*
 $=$ U+2A66 \eqdot
 \equiv U+2A67 \dotequiv
 \equiv U+2A68 \equivVert*
 \equiv U+2A69 \equivVvert*
 \sim U+2A6A \dotsim
 \sim U+2A6B \simrdots*
 \approx U+2A6C \simminussim*
 \cong U+2A6D \congdot
 \vDash U+2A6E \asteq
 $\hat{\approx}$ U+2A6F \hatapprox
 \approx U+2A70 \approxeqq
 \approx U+2A73 \eqqsim
 \coloneqq U+2A74 \Coloneq*
 $=$ U+2A75 \eqeq*
 $=$ U+2A76 \eqeqeq*

$\ddot{=}$ U+2A77 \ddot{=}\seq*
 \equiv U+2A78 \equivDD*
 \triangleleft U+2A79 \ltcir*
 \triangleright U+2A7A \gtcir*
 \curvearrowleft U+2A7B \ltquest*
 \curvearrowright U+2A7C \gtquest*
 \leq U+2A7D \leqslant
 \geq U+2A7E \geqslant
 \leq U+2A7F \lesdot*
 \geq U+2A80 \gesdot*
 \leq U+2A81 \lesdoto*
 \geq U+2A82 \gesdoto*
 \leq U+2A83 \lesdotor*
 \geq U+2A84 \gesdotor*
 \lesssim U+2A85 \lessapprox*
 \gtrsim U+2A86 \gtrapprox*
 \neq U+2A87 \lneq
 \neq U+2A88 \gneq
 \approx U+2A89 \lnapprox
 \approx U+2A8A \gnapprox
 \lesseqgtr U+2A8B \lesseqgtr*
 \gtreqless U+2A8C \gtreqless*
 \simeq U+2A8D \lsime*
 \simeq U+2A8E \gsime*
 \sim U+2A8F \lsimg*
 \sim U+2A90 \gsiml*
 \lg U+2A91 \lgE*
 \gl U+2A92 \glE*
 \lesgtr U+2A93 \lesges*
 \lesgtr U+2A94 \gesles*
 \leq U+2A95 \eqslantless
 \geq U+2A96 \eqslantgtr
 \leq U+2A97 \elsdot*
 \geq U+2A98 \egsdot*
 \leq U+2A99 \eqqless*
 \leq U+2A9A \eqqgtr*
 \leq U+2A9B \eqqslantless*
 \leq U+2A9C \eqqslantgtr*
 \lesssim U+2A9D \simless
 \gtrsim U+2A9E \simgtr
 \sim U+2A9F \simle*
 \sim U+2AA0 \simge*
 \Lt U+2AA1 \Lt*
 \Gt U+2AA2 \Gt*
 \leq U+2AA3 \partialmeetcontraction*

\times U+2AA4 \glj*
 \times U+2AA5 \gla*
 \triangleleft U+2AA6 \ltcc*
 \triangleright U+2AA7 \gtcc*
 \trianglelefteq U+2AA8 \lescc*
 \trianglerighteq U+2AA9 \gescc*
 \triangleleft U+2AAA \smt*
 \triangleright U+2AAB \lat*
 \trianglelefteq U+2AAC \smt*
 \trianglerighteq U+2AAD \late*
 \equiv U+2AAE \bumpeq*
 \triangleleft U+2AAF \preceq*
 \ntriangleleft U+XXXX \npreceq*
 \succ U+2AB0 \succeq*
 $\n\succ$ U+XXXX \nsucceq*
 \prec U+2AB1 \preceq*
 \succ U+2AB2 \succeq*
 \preceq U+2AB3 \preceq*
 \succeq U+2AB4 \succeq*
 \preceq U+2AB5 \preceq*
 \succeq U+2AB6 \succeq*
 \preceq U+2AB7 \precapprox*
 \succeq U+2AB8 \succapprox*
 \preceq U+2AB9 \precnapprox*
 \succeq U+2ABA \succnapprox*
 \prec U+2ABB \Prec*
 \succ U+2ABC \Succ*
 \subset U+2ABD \subsetdot*
 \supset U+2ABE \supsetdot*
 \subset U+2ABF \subsetplus*
 \supset U+2AC0 \supsetplus*
 \subset U+2AC1 \subsetmult*
 \supset U+2AC2 \supsetmult*
 \cdot U+2AC3 \subedot*
 \cdot U+2AC4 \supedot*
 \subset U+2AC5 \subseteqq*
 $\n\subset$ U+XXXX \nsubseteqq*
 \supset U+2AC6 \supseteqq*
 $\n\supset$ U+XXXX \nsupseteqq*
 \subset U+2AC7 \subset\sim*
 \supset U+2AC8 \sup\sim*
 \subset U+2AC9 \subset\approx*
 \supset U+2ACA \sup\approx*
 \subset U+2ACB \subset\neqq*
 $\n\subset$ U+2ACC \subset\neqq*

\supsetneqq U+2ACC \varsupsetneqq*
 \lrcorner U+2ACD \lsqhook*
 \llcorner U+2ACE \rsqhook*
 \subset U+2ACF \subset*
 \supset U+2AD0 \sup*
 \subset U+2AD1 \subseteq*
 \supset U+2AD2 \supseteq*
 \subset U+2AD3 \subset\sup*
 \supset U+2AD4 \sup\sup*
 \subset U+2AD5 \subset\sub*
 \supset U+2AD6 \sup\sup*
 \subset U+2AD7 \subset\phsub*
 \supset U+2AD8 \sup\dsup*
 \pitchfork U+2AD9 \forkv*
 \pitchfork U+2ADA \topfork*
 \pitchfork U+2ADB \mlcp*
 \pitchfork U+2ADC \forks*
 \pitchfork U+2ADD \forksnot*
 \dashleftarrow U+2ADE \shortleftarrow*
 \dashrightarrow U+2ADF \shortrightarrow*
 \dashv U+2AE0 \shortuparrow*
 \Vdash U+2AE2 \vdashdash*
 \dashv U+2AE3 \dashV*
 \Dashv U+2AE4 \Dashv*
 \dashv U+2AE5 \dashV*
 \Vdash U+2AE6 \varVdash*
 $\bar{\vdash}$ U+2AE7 \Barv*
 \pm U+2AE8 \vBar*
 \pm U+2AE9 \vBarv*
 $\bar{\vdash}$ U+2AEA \bar{\vdash}V*
 $\bar{\vdash}$ U+2AEB \bar{\vdash}V*
 \Rightarrow U+2AEC \Not*
 \models U+2AED \bNot*
 \vdash U+2AEE \revnmid*
 \circ U+2AEF \circirmid*
 \circ U+2AF0 \midcir*
 $\#$ U+2AF2 \nhpar*
 $\#$ U+2AF3 \parsim*
 \lll U+2AF7 \lll\lll*
 \ggg U+2AF8 \ggg\ggg*
 \leq U+2AF9 \leqq\slant*
 \geq U+2AFA \geqq\slant*
 \circlearrowleft U+2B30 \circlearrowleft*
 \leftleftarrows U+2B31 \leftleftarrows*
 \leftarrowplus U+2B32 \leftarrowplus*
 \rightsquigarrow U+2B33 \rightsquigarrow*

\nleftrightarrow	U+2B34	\nvtwoheadleftarrow*	\nrightarrow	U+XXXX	\ngeqq
\nVleftrightarrow	U+2B35	\nVtwoheadleftarrow*	\ngeqslant	U+XXXX	\ngeqslant
\twoheadmapsfrom	U+2B36	\twoheadmapsfrom*	\nleqslant	U+XXXX	\nleqslant
\twoheadleftdbkarrow	U+2B37	\twoheadleftdbkarrow*	\nleqq	U+XXXX	\nleqq
\leftarrowdot	U+2B38	\leftarrowdot*	\ncongdot	U+XXXX	\ncongdot
\nrightarrowtail	U+2B39	\nrightarrowtail*	\napproxeqq	U+XXXX	\napproxeqq
\nVrightarrowtail	U+2B3A	\nVrightarrowtail*	\nll	U+XXXX	\nll
\twoheadrightarrowtail	U+2B3B	\twoheadrightarrowtail*	\ngg	U+XXXX	\ngg
\nvtwoheadrightarrowtail	U+2B3C	\nvtwoheadrightarrowtail*	\nsqsubset	U+XXXX	\nsqsubset
\nVtwoheadrightarrowtail	U+2B3D	\nVtwoheadrightarrowtail*	\nsqsupset	U+XXXX	\nsqsupset
\rightarrowtail	U+2B3E	\rightarrowtail*	\nbumpeq	U+XXXX	\nbumpeq
\rightarrowcurvedarrow	U+2B3F	\rightarrowcurvedarrow*	\nbumpeq	U+XXXX	\nbumpeq
\rightarrowtail	U+2B40	\rightarrowtail*	\neqsim	U+XXXX	\neqsim
\rightarrowtail	U+2B41	\rightarrowtail*	\nvarisinobar	U+XXXX	\nvarisinobar
\rightarrowtail	U+2B42	\rightarrowtail*	\nvarniobar	U+XXXX	\nvarniobar
\rightarrowtail	U+2B43	\rightarrowtail*	\neqslantless	U+XXXX	\neqslantless
\rightarrowtail	U+2B44	\rightarrowtail*	\neqslantgtr	U+XXXX	\neqslantgtr
\rightarrowtail	U+2B45	\rightarrowtail*	\lhook	U+XXXX	\lhook
\rightarrowtail	U+2B46	\rightarrowtail*	ρok	U+XXXX	\rhook
\rightarrowtail	U+2B47	\rightarrowtail*	\relbar	U+XXXX	\relbar
\rightarrowtail	U+2B48	\rightarrowtail*	\Relbar	U+XXXX	\Relbar
\rightarrowtail	U+2B49	\rightarrowtail*	\Rrelbar	U+XXXX	\Rrelbar*
\rightarrowtail	U+2B4A	\rightarrowtail*	\RRelbar	U+XXXX	\RRelbar*
\rightarrowtail	U+2B4B	\rightarrowtail*	\mapstochar	U+XXXX	\mapstochar
\rightarrowtail	U+2B4C	\rightarrowtail*	\mapstochar	U+XXXX	\mapstochar

5.5 Punctuation

,	U+002C	,	:	U+003A	\colon
.	U+002E	\ldotp	;	U+003B	;

5.6 Integrals

Integrals come in two styles, the slanted versions shown below (\int , etc.) and upright versions such as \int . By default, the symbol names listed below will give you the slanted style, but if you specify the `upint` package option, they will give you the corresponding upright symbols.

It is highly recommended that authors stick to the names below and use the `upint` package option to choose a style globally for their document. However, in recognition of the fact that it might occasionally be necessary to mix the two styles, alternative names have been provided for all integrals. Append `s1` or `up` to the names below to request either the *slanted* or the *upright* variant. Thus, `\ints1` will always yield \int and `\intup` will always yield \int , and similarly for the other integrals.

\int	U+222B	\smallint	\int	U+2A10	\smallcirfnint
\iint	U+222C	\smalliiint	\int	U+2A11	\smallawint
\iiint	U+222D	\smalliiiint	\int	U+2A12	\smallrrppolint
\oint	U+222E	\smalloint	\int	U+2A13	\smallscpolint
\oiint	U+222F	\smalloiint	\int	U+2A14	\smallnpolint
\oiiint	U+2230	\smalloiiint	\int	U+2A15	\smallpointint
\intclockwise	U+2231	\smallintclockwise	\int	U+2A16	\smallsqint
\intvarclockwise	U+2232	\smallvarointclockwise	\int	U+2A17	\smallintlarhk
\intctrclockwise	U+2233	\smallointctrclockwise	\int	U+2A18	\smallintx
\sumint	U+2A0B	\smallsumint	\int	U+2A19	\smallintcap
\iiint	U+2A0C	\smalliiiint	\int	U+2A1A	\smallintcup
\intbar	U+2A0D	\smallintbar	\int	U+2A1B	\smallupint
\intBar	U+2A0E	\smallintBar	\int	U+2A1C	\smallllowint
\fint	U+2A0F	\smallfint			
\int			\oint	U+2232	\varointclockwise
\iint			\oint	U+2233	\ointctrclockwise
\iiint			\sumint	U+2A0B	\sumint
\oint			\iiint	U+2A0C	\iiiint
\oiint			\intbar	U+2A0D	\intbar
\oiiint			\intBar	U+2A0E	\intBar
\intclockwise			\fint	U+2A0F	\fint

\oint	\oint	U+2A10	\cirfnint
\int	\int	U+2A11	\awint
\int	\int	U+2A12	\rppolint
\int	\int	U+2A13	\scpolint
\int	\int	U+2A14	\npolint
\oint	\oint	U+2A15	\pointint
\int	\int	U+2A16	\sqint

\int	\int	U+2A17	\intlarhk
\int	\int	U+2A18	\intx
\int	\int	U+2A19	\intcap
\int	\int	U+2A1A	\intcup
\int	\int	U+2A1B	\upint
\int	\int	U+2A1C	\lowint

5.7 Big operators


\sum	\sum	U+2140	\Bbbsum
\prod	\prod	U+220F	\prod
\coprod	\coprod	U+2210	\coprod
\sum	\sum	U+2211	\sum
\bigwedge	\bigwedge	U+22C0	\bigwedge
\bigvee	\bigvee	U+22C1	\bigvee
\bigcap	\bigcap	U+22C2	\bigcap
\bigcup	\bigcup	U+22C3	\bigcup
\leftthreetimes	\leftthreetimes	U+27D5	\leftthreetimes*
\rightthreetimes	\rightthreetimes	U+27D6	\rightthreetimes*
\fullthreetimes	\fullthreetimes	U+27D7	\fullthreetimes*
\bot	\bot	U+27D8	\bigbot*
\top	\top	U+27D9	\bigtop*
$/$	$/$	U+29F8	\xsol*
\backslash	\backslash	U+29F9	\xbsol*
\odot	\odot	U+2A00	\bigodot*

\oplus	\oplus	U+2A01	\bigoplus*
\otimes	\otimes	U+2A02	\bigotimes*
$\dot{\cup}$	$\dot{\cup}$	U+2A03	\bigcupdot*
$\dot{+}$	$\dot{+}$	U+2A04	\bigplus*
\sqcap	\sqcap	U+2A05	\bigsqcap*
\sqcup	\sqcup	U+2A06	\bigsqcup*
\bigwedge	\bigwedge	U+2A07	\conjquant*
\bigvee	\bigvee	U+2A08	\disjquant*
\times	\times	U+2A09	\bigtimes*
\sum	\sum	U+2A0A	\modtwosum*
\Join	\Join	U+2A1D	\Join*
\triangleleft	\triangleleft	U+2A1E	\bigtriangleleftleft*
\zcmp	\zcmp	U+2A1F	\zcmp*
\gg	\gg	U+2A20	\zpipe*
\uparrow	\uparrow	U+2A21	\zproject*
\parallel	\parallel	U+2AFC	\biginterleave
\parallel	\parallel	U+2AFF	\bigtalloblong*

5.8 Delimiters

$((((())))))$	U+0028, U+0029	(,)
$[[[[[]]]]]$	U+005B, U+005D	[,]

$\{\{\{\{\}\}\}\}$	U+007B, U+007D	\backslash lbrace, \backslash rbrace		
$\left\lceil \left\lceil \left\lceil \left\lceil \right\rceil \right\rceil \right\rceil \right\rceil$	U+2308, U+2309	\backslash lceil, \backslash rceil		
$\left\lfloor \left\lfloor \left\lfloor \left\lfloor \right\rfloor \right\rfloor \right\rfloor \right\rfloor$	U+230A, U+230B	\backslash lfloor, \backslash rfloor		
$\left(\left(\left(\left(\left(\right) \right) \right) \right) \right)$	U+23B0, U+23B1	\backslash lmoustache*, \backslash rmoustache*		
$\llbracket \llbracket \llbracket \llbracket \llbracket \rrbracket \rrbracket \rrbracket \rrbracket$	U+2772, U+2773	\backslash lbrbrak*, \backslash rbrbrak*		
$\llbracket \llbracket \llbracket \llbracket \llbracket \rrbracket \rrbracket \rrbracket \rrbracket$	U+27E6, U+27E7	\backslash lBrack*, \backslash rBrack*		
$\langle \langle \langle \langle \rangle \rangle \rangle \rangle$	U+27E8, U+27E9	\backslash langle, \backslash rangle (<, >)		
$\langle \langle \langle \langle \langle \rangle \rangle \rangle \rangle \rangle \rangle$	U+27EA, U+27EB	\backslash lAngle*, \backslash rAngle*		
$\left(\left(\left(\left(\left(\right) \right) \right) \right) \right)$	U+27EE, U+27EF	\backslash lgroup*, \backslash rgroup*		
$\{\{\{\{\{ B \}\}\}\}\}$	U+2983, U+2984	\backslash lBrace*, \backslash rBrace*		
$\left(\left(\left(\left(\left(\right) \right) \right) \right) \right)$	U+2985, U+2986	\backslash lParen*, \backslash rParen*		
$\backslash \backslash \backslash \backslash$	U+005C	\backslash backslash	$\Uparrow \Uparrow \Uparrow \Uparrow$	U+21D1 \backslash Uparrow
$/ / / /$	U+002F	/	$\Downarrow \Downarrow \Downarrow \Downarrow$	U+21D3 \backslash Downarrow
$| | | |$	U+007C	\backslash vert, |	$\Updownarrow \Updownarrow \Updownarrow \Updownarrow$	U+21D5 \backslash Updownarrow
$\Vdash \Vdash \Vdash \Vdash$	U+2016	\backslash Vert*, \backslash	$\Uparrow \Uparrow \Uparrow \Uparrow$	U+290A \backslash Uparrow*
$\Vdash \Vdash \Vdash \Vdash$	U+2980	\backslash Vvert	$\Downarrow \Downarrow \Downarrow \Downarrow$	U+290B \backslash Ddownarrow*
$\Uparrow \Uparrow \Uparrow \Uparrow$	U+2191	\backslash uparrow	$\Uparrow \Uparrow \Uparrow \Uparrow$	U+27F0 \backslash UUparrow*
$\Downarrow \Downarrow \Downarrow \Downarrow$	U+2193	\backslash downarrow	$\Downarrow \Downarrow \Downarrow \Downarrow$	U+27F1 \backslash DDownarrow*
$\Updownarrow \Updownarrow \Updownarrow \Updownarrow$	U+2195	\backslash updownarrow	$\Uparrow \Uparrow \Uparrow \Uparrow$	U+XXXX \backslash arrowvert


U+XXXX \Arrowvert


U+XXXX \bracevert*

5.9 Other braces

\ulcorner U+231C \ulcorner*
 \urcorner U+231D \urcorner*
 \llcorner U+231E \llcorner*
 \lrcorner U+231F \lrcorner*
 \lfloor U+27EC \Lbrbrak*
 \rfloor U+27ED \Rbrbrak*
 \lparen U+2987 \llparenthesis*
 \rrparen U+2988 \rrparenthesis*
 \langle U+2989 \llangle*
 \rangle U+298A \rrangle*
 \lbrack U+298B \lbrackubar*
 \rbrack U+298C \rbrackubar*
 \lbrack U+298D \lbrackultick*
 \rbrack U+298E \rbracklrtick*
 \lbrack U+298F \lbracklltick*
 \rbrack U+2990 \rbrackurtick*
 \langle U+2991 \langedot*
 \rangle U+2992 \rangedot*

\lparenless U+2993 \lparenless*
 \rparen U+2994 \rparen*
 \lparen U+2995 \lparen*
 \rparenless U+2996 \rparenless*
 \lbrack U+2997 \lbrackbrak*
 \rbrack U+2998 \rbrackbrak*
 \lvzigzag U+29D8 \lvzigzag*
 \rvzigzag U+29D9 \rvzigzag*
 \Lvzigzag U+29DA \Lvzigzag*
 \Rvzigzag U+29DB \Rvzigzag*
 \lcurvyangle U+29FC \lcurvyangle*
 \rcurvyangle U+29FD \rcurvyangle*
 \lbrbrak U+2772 \lbrbrak*
 \rbrbrak U+2773 \rbrbrak*
 \lbag U+27C5 \lbag*
 \rbag U+27C6 \rbag*
 \Lbrbrak U+27EC \Lbrbrak*
 \Rbrbrak U+27ED \Rbrbrak*

5.10 Accents

\grave{b} U+0300 \grave*
 \acute{b} U+0301 \acute*
 \hat{b} U+0302 \hat*
 \tilde{b} U+0303 \tilde*
 \bar{b} U+0304 \bar*
 \breve{b} U+0306 \breve*
 \dot{b} U+0307 \dot*
 \ddot{b} U+0308 \ddot*
 $\overset{\circ}{b}$ U+0309 \ovhook*
 \mathring{b} U+030A \mathring*
 \check{b} U+030C \check*
 \candra{b} U+0310 \candra*
 \oturnedcomma{b} U+0312 \oturnedcomma*

\widehat{xxx} U+0302 \widehat*
 \widetilde{xxx} U+0303 \widetilde*
 \widecheck{xxx} U+030C \widecheck*
 \overleftarrow{xxx} U+20D6 \overleftarrow*
 \overrightarrow{xxx} U+20D7 \overrightarrow*

\acute{b} U+0315 \ocommatoprightright*
 \breve{b} U+031A \droang*
 \bar{b} U+20D0 \leftharpoonaccent*
 \bar{b} U+20D1 \rightharpoonaccent*
 \bar{b} U+20D6 \leftarrowaccent*
 \bar{b} U+20D7 \vec, \rightarrowaccent*
 \bar{b} U+20E1 \leftrightarrowaccent*
 \bar{b} U+20DB \dddot*
 \bar{b} U+20DC \ddddot*
 \bar{b} U+20E7 \annuity*
 \bar{b} U+20E9 \widebridgeabove*
 \bar{b} U+20F0 \asteraccent*

$\underline{\underline{xxx}}$ U+20EF \underrightarrow*
 $\underline{\underline{xxx}}$ U+20EE \underleftarrow*
 \overleftrightarrow{xxx} U+20E1 \overleftrightarrow*
 $\underline{\underline{xxx}}$ U+034D \underleftrightharpoon*
 $\overleftarrow{\overleftarrow{xxx}}$ U+20D0 \overleftharpoon*

\overrightarrow{xxx} U+20D1 `\overrightarrow{xxx}`
 \underleftarrow{xxx} U+20EC `\underleftarrow{xxx}`

\underrightarrow{xxx} U+20ED `\underrightarrow{xxx}`

OpenType STIX Two fonts include a number of under accents that can be used in math mode, but T_EX does not support under accents natively so such glyphs can not be used directly. Under accents can be set using regular accents and commands like `\underaccent` from the accents package, for example `\underaccent{\hat}{X}` gives \hat{X} . The undertilde package provides `\utilde` for extensible under tilde accent.

5.11 Over and under brackets

\overbrace{xxxxxx} U+23B4 `\overbrace{xxxxxx}`
 \overparen{xxxxxx} U+23DC `\overparen{xxxxxx}`
 \overbrace{xxxxxx} U+23DE `\overbrace{xxxxxx}`

\underbrace{xxxxxx} U+23B5 `\underbrace{xxxxxx}`
 \underparen{xxxxxx} U+23DD `\underparen{xxxxxx}`
 \underbrace{xxxxxx} U+23DF `\underbrace{xxxxxx}`

5.12 Radicals

\sqrt{b} U+221A `\sqrt{b}`

$\overline{)b}$ U+27CC `\overline{)b}`

6 Font tables

The rest of this document shows glyph tables for all STIX fonts. The name before each table is the \TeX font name (i.e. TFM file name).

6.1 Text fonts

ot1-stix2text

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	Γ	Δ	Θ	Λ	Ξ	Π	Σ	Υ	"0x
'01x	Φ	Ψ	Ω	ff	fi	fl	ffi	ffl	
'02x	ı	ı	`	'	˘	˙	-	°	"1x
'03x	,	ß	æ	œ	ø	Æ	Œ	Ø	
'04x		!	”	#	\$	%	&	,	"2x
'05x	()	*	+	,	-	.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	i	=	ı	?	
'10x	@	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	[“]	^	·	
'14x	‘	a	b	c	d	e	f	g	"6x
'15x	h	i	j	k	l	m	n	o	
'16x	p	q	r	s	t	u	v	w	"7x
'17x	x	y	z	-	—	”	~	..	
	"8	"9	"A	"B	"C	"D	"E	"F	

ot1-stix2textsc

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	Γ	Δ	Θ	Λ	Ξ	Π	Σ	Υ	"0x
'01x	Φ	Ψ	Ω	ff	fi	fl	ffi	ffl	
'02x	I	J	`	'	˘	˙	-	°	"1x
'03x	,	ss	Æ	œ	ø	Æ	œ	Ø	
'04x		!	”	#	\$	%	&	'	"2x
'05x	()	*	+	,	-	.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	i	=	ı	?	
'10x	@	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	[“]	^	·	
'14x	‘	A	B	C	D	E	F	G	"6x
'15x	H	I	J	K	L	M	N	O	
'16x	P	Q	R	S	T	U	V	W	"7x
'17x	X	Y	Z	-	—	”	~	..	
	"8	"9	"A	"B	"C	"D	"E	"F	

t1-stix2text

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	`	'	^	~	..	"	°	˘	"0x
'01x	˘	-	·	‚	€	,	<	>	
'02x	“	”	„	«	»	–	—		"1x
'03x	◦	ı	ı	ff	fi	fl	ffi	ffl	
'04x	⌒	!	"	#	\$	%	&	'	"2x
'05x	()	*	+	,	-	.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	<	=	>	?	
'10x	@	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	[\]	^	_	
'14x	‘	a	b	c	d	e	f	g	"6x
'15x	h	i	j	k	l	m	n	o	
'16x	p	q	r	s	t	u	v	w	"7x
'17x	x	y	z	{	|	}	~	-	
'20x	Ǻ	Ą	Ć	Č	Ď	Ě	Ɛ	Ǧ	"8x
'21x	Ł	Ł	Ł	Ń	Ň	Ŋ	Ŏ	Ŕ	
'22x	Ř	Ś	Š	Ş	Ţ	Ŧ	Ũ	Ű	"9x
'23x	Ÿ	Ž	Ž	Ž	IJ	İ	đ	§	
'24x	ă	ą	ć	č	d'	ě	ę	ğ	"Ax
'25x	Í	Ĭ	ı	ń	ň	ŋ	ő	í	
'26x	ř	ś	š	ş	ţ	ț	ű	ű	"Bx
'27x	ÿ	ž	ž	ž	ij	i	ı	£	
'30x	À	Á	Â	Ã	Ä	Å	Æ	Ç	"Cx
'31x	È	É	Ê	Ë	Ì	Í	Î	Ï	
'32x	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	Œ	"Dx
'33x	Ø	Ù	Ú	Û	Ü	Ý	Þ	Š	
'34x	à	á	â	ã	ä	å	æ	ç	"Ex
'35x	è	é	ê	ë	ì	í	î	ï	
'36x	ð	ñ	ò	ó	ô	õ	ö	œ	"Fx
'37x	ø	ù	ú	û	ü	ý	þ	ß	
	"8	"9	"A	"B	"C	"D	"E	"F	

t1-stix2textsc

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	`	'	^	~	..	"	°	˘	"0x
'01x	˘	-	·	‚	€	,	<	>	
'02x	“	”	„	«	»	–	—		"1x
'03x	◦	I	J	ff	fi	fl	ffi	ffl	
'04x	⌒	!	"	#	\$	%	&	'	"2x
'05x	()	*	+	,	-	.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	<	=	>	?	
'10x	@	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	[\]	^	_	
'14x	‘	A	B	C	D	E	F	G	"6x
'15x	H	I	J	K	L	M	N	O	
'16x	P	Q	R	S	T	U	V	W	"7x
'17x	X	Y	Z	{	|	}	~	-	
'20x	Ǻ	Ą	Ć	Č	Ď	Ě	Ė	Ǧ	"8x
'21x	Ł	Ł	Ł	Ń	Ň	Ŋ	Ŏ	Ŕ	
'22x	Ř	Ś	Š	Ş	Ť	Ŧ	Ũ	Ű	"9x
'23x	Ỳ	Ž	Ž	Ž	IJ	İ	Đ	§	
'24x	Ǻ	Ą	Ć	Č	Ď	Ě	Ė	Ǧ	"Ax
'25x	Ł	Ł	Ł	Ń	Ň	Ŋ	Ŏ	Ŕ	
'26x	Ř	Ś	Š	Ş	Ť	Ŧ	Ũ	Ű	"Bx
'27x	Ỳ	Ž	Ž	Ž	IJ	ı	ı	£	
'30x	À	Á	Â	Ã	Ä	Å	Æ	Ç	"Cx
'31x	È	É	Ê	Ë	Ì	Í	Î	Ï	
'32x	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	Œ	"Dx
'33x	Ø	Ù	Ú	Û	Ü	Ý	Þ	ŠS	
'34x	À	Á	Â	Ã	Ä	Å	Æ	Ç	"Ex
'35x	È	É	Ê	Ë	Ì	Í	Î	Ï	
'36x	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	Œ	"Fx
'37x	Ø	Ù	Ú	Û	Ü	Ý	Þ	ŠS	
	"8	"9	"A	"B	"C	"D	"E	"F	

ot2-stix2text

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	Ѓ	Ѕ	Ї	Э	Ї	Є	Ђ	Ѓ	"0x
'01x	њ	љ	џ	э	і	є	ђ	ѓ	
'02x	Ю	Ж	Й	Ё	У	Ө	Ѕ	Я	"1x
'03x	ю	ж	й	ё	у	ө	ѕ	я	
'04x	„	!	”	Ђ	“	%	’	’	"2x
'05x	(	)	*	Ѓ	,	-	.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	«	1	»	?	
'10x	˘	А	Б	Ц	Д	Е	Ф	Г	"4x
'11x	Х	И	Ј	К	Л	М	Н	О	
'12x	П	Ч	Р	С	Т	У	В	Щ	"5x
'13x	Ш	Ы	З	[	“	]	Ь	Ђ	
'14x	‘	а	б	ц	д	е	ф	г	"6x
'15x	х	и	ј	к	л	м	н	о	
'16x	п	ч	р	с	т	у	в	щ	"7x
'17x	ш	ы	з	–	—	№	ь	ђ	
'22x			Ѓ						"9x
'23x									
'26x			Ѓ						"Bx
'27x									
	"8	"9	"A	"B	"C	"D	"E	"F	

ot2-stix2textsc

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	Ѓ	Ѕ	Ї	Э	І	Є	Ђ	Ћ	"0x
'01x	Ѓ	Ѕ	Ї	Э	І	Є	Ђ	Ћ	
'02x	Ю	Ж	Й	Ё	Ѵ	Ө	Ѕ	Я	"1x
'03x	Ю	Ж	Й	Ё	Ѵ	Ө	Ѕ	Я	
'04x	„	!	”	Ђ	ˆ	%	'	,	"2x
'05x	(	)	*	Ђ	,	-	.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	«	І	»	?	
'10x	˘	А	Б	Ц	Д	Е	Ф	Г	"4x
'11x	Х	И	Ј	К	Л	М	Н	О	
'12x	П	Ч	Р	С	Т	У	В	Щ	"5x
'13x	Ш	Ы	З	[	“	]	Ь	Ъ	
'14x	‘	А	Б	Ц	Д	Е	Ф	Г	"6x
'15x	Х	И	Ј	К	Л	М	Н	О	
'16x	П	Ч	Р	С	Т	У	В	Щ	"7x
'17x	Ш	Ы	З	–	—	№	Ь	Ъ	
'22x			Ў						"9x
'23x									
'26x			Ў						"Bx
'27x									
	"8	"9	"A	"B	"C	"D	"E	"F	

ts1-stix2text

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	`	´	^	~	¨	˘	°	˘	"0x
'01x	˘	ˉ	˙	˚	˛	˙			
'02x			”						"1x
'03x									
'04x	₪				\$			'	"2x
'05x					,		.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9				—			
'10x									"4x
'11x						Ů			
'12x								Ω	"5x
'13x									
'14x	`								"6x
'15x									
'16x									"7x
'17x									
'20x	˘	˘	˘	˘	‡	‡	‖	‰	"8x
'21x	•		\$	¢					
'22x			£	℞				™	"9x
'23x	‰	¶		№	∕	€			
'24x			¢	£	¤	¥	¦	§	"Ax
'25x	¨	©	a		¬		®	–	
'26x	°	±	2	3	´	μ	¶	·	"Bx
'27x	※	1	o		¼	½	¾	€	
'32x							×		"Dx
'33x									
'36x							÷		"Fx
'37x									
	"8	"9	"A	"B	"C	"D	"E	"F	

6.2 Math fonts

stix2-mathrm

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	Γ	Δ	Θ	Λ	Ξ	Π	Σ	Υ	"0x
'01x	Φ	Ψ	Ω	α	β	γ	δ	ϵ	
'02x	ζ	η	θ	ι	κ	λ	μ	ν	"1x
'03x	ξ	π	ρ	σ	τ	υ	ϕ	χ	
'04x	ψ	ω	ε	ϑ	ϖ	ϱ	ς	φ	"2x
'05x	∇	∂	$-$	$+$	\pm	\mp	$($	$)$	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	*	=	\$?	
'10x	!	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	[\]	{	/	
'14x	}	a	b	c	d	e	f	g	"6x
'15x	h	i	j	k	l	m	n	o	
'16x	p	q	r	s	t	u	v	w	"7x
'17x	x	y	z	ı	j	#	%	,	
'20x	`	'	^	~	-	˘	˙	¨	"8x
'21x	˚	°	˘	˙	˚	˛	˜	˜	
'22x	←	→	↔	...	....	↔	⌊	⌋	"9x
'23x	*	&	@	¬	·	×	≤	÷	
'24x	Z	/	ə	†	‡	•	..	...	"Ax
'25x	/	//	///	////	\	\	^	!!	
'26x	•	/	??	○	≡	|	○	□	"Bx
'27x	◇	△	ε	ϕ	ı	Å	Ⓕ	ⓐ	
'30x	⌈	⌋	⌌	⌍	⌎	⌏	⌐	⌑	"Cx
'31x	⌒	∅	Δ	∈	∉	∈	∋	∌	
'32x	∋	■	‡	≥	≤	◦	•	α	"Dx
'33x	∞	⊥	∠	⋈	⋉	|	†	||	
'34x	‡	∧	∨	∩	∪	∴	∵	∅	"Ex
'35x	∴	÷	∴	∴	≈	≈	≈	≈	
'36x	≈	≈	≈	≈	≈	≈	≈	≈	"Fx
'37x	≠	≈	≈	≈	≈	≈	≈	≈	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathit

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	Γ	Δ	Θ	Λ	Ξ	Π	Σ	Υ	"0x
'01x	Φ	Ψ	Ω	α	β	γ	δ	ϵ	
'02x	ζ	η	θ	ι	κ	λ	μ	ν	"1x
'03x	ξ	π	ρ	σ	τ	υ	ϕ	χ	
'04x	ψ	ω	ε	ϑ	ϖ	ϱ	ς	φ	"2x
'05x	∇	∂	\aleph	\beth	λ	\daleth	\triangleright	\triangleleft	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	.	,	<	\hbar	>	★	
'10x	\leqneq	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	b	q	#	—	—	
'14x	\hbar	a	b	c	d	e	f	g	"6x
'15x	h	i	j	k	l	m	n	o	
'16x	p	q	r	s	t	u	v	w	"7x
'17x	x	y	z	ι	J	\geqneq	\ll	—	
'20x	`	'	^	~	-	˘	.	..	"8x
'21x	˙	◦	˘	˙	˙	˙	˙	˙	
'22x	←	←	→	...	...	↔	⌊	⌋	"9x
'23x	*	—	^	~	˘	^	~	˘	
'24x	—	—	—	—	—	—	—	—	"Ax
'25x	—	—	—	—	—	—	—	—	
'26x	—	—	—	—	—	—	—	—	"Bx
'27x	\gg	\emptyset	\neq	\neq	\neq	\neq	\neq	\lesssim	
'30x	\gtrsim	\neq	\neq	\leq	\geq	\neq	\neq	\prec	"Cx
'31x	\succ	\leq	\geq	\lesssim	\gtrsim	\neq	\neq	\subset	
'32x	\supset	$\not\subset$	$\not\subset$	\subseteq	\supseteq	$\not\subset$	$\not\subset$	\subsetneq	"Dx
'33x	\supsetneq	$\not\subset$	$\not\subset$	$\not\subset$	$\not\subset$	$\not\subset$	$\not\subset$	$\not\subset$	
'34x	\sqcap	\sqcup	\oplus	\ominus	\otimes	\oslash	\odot	\odot	"Ex
'35x	\otimes	\ominus	\ominus	\oplus	\oplus	\boxtimes	\boxtimes	\vdash	
'36x	\dashv	\top	\perp	\vdash	\vDash	\vDash	\Vdash	\Vdash	"Fx
'37x	\Vdash	\nVdash	\nVdash	\nVdash	\nVdash	\nVdash	\nVdash	\nVdash	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathsf

	'0	'1	'2	'3	'4	'5	'6	'7	
'04x									"2x
'05x			‘	’	—	=	≡	≡	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	⋮	⋮	⋮	⋮	⋮	⋮	
'10x	↯	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	↵	↵	↵	↵	↵	
'14x	↯	a	b	c	d	e	f	g	"6x
'15x	h	i	j	k	l	m	n	o	
'16x	p	q	r	s	t	u	v	w	"7x
'17x	x	y	z	ı	j	←	↑	⌋	
'20x	˘	˙	ˆ	˜	ˉ	˘	˙	˚	"8x
'21x	˘	˙	ˆ	˜	ˉ	˘	˙	˚	
'22x	→	←	→	...	...	↔	⌊	⌋	"9x
'23x	*	→	↓	↔	↔	↗	↖	↘	
'24x	↗	↖	↗	↖	↖	↖	↖	↖	"Ax
'25x	↘	↙	↘	↙	↙	↙	↙	↙	
'26x	↖	↗	↖	↗	↗	↗	↗	↗	"Bx
'27x	↗	↘	↗	↘	↘	↘	↘	↘	
'30x	↖	↗	↖	↗	↗	↗	↗	↗	"Cx
'31x	↗	↘	↗	↘	↘	↘	↘	↘	
'32x	↘	↙	↘	↙	↙	↙	↙	↙	"Dx
'33x	↙	↘	↙	↘	↘	↘	↘	↘	
'34x	↘	↙	↘	↙	↙	↙	↙	↙	"Ex
'35x	↙	↘	↙	↘	↘	↘	↘	↘	
'36x	↘	↙	↘	↙	↙	↙	↙	↙	"Fx
'37x	↙	↘	↙	↘	↘	↘	↘	↘	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathsf1t

	'0	'1	'2	'3	'4	'5	'6	'7	
'04x									"2x
'05x			\oplus	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	
'10x	∞	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	
'14x	\Rightarrow	a	b	c	d	e	f	g	"6x
'15x	h	i	j	k	l	m	n	o	
'16x	p	q	r	s	t	u	v	w	"7x
'17x	x	y	z	l	J	\Leftarrow	\Rightarrow)	
'20x	`	'	^	~	-	^	.	::	"8x
'21x	?	°	v	°	^	^	^	^	
'22x	^	^	^	...	...	^	^	^	"9x
'23x	*	\Rightarrow	\Rightarrow	\Rightarrow	\Rightarrow	\Rightarrow	\Rightarrow	\Rightarrow	
'24x	\Rightarrow	\downarrow	\uparrow	\oplus	\Rightarrow	\leftarrow	\rightarrow	\leftarrow	"Ax
'25x	\rightarrow	\rightarrow	\rightarrow	\uparrow	\downarrow	\Rightarrow	\Rightarrow	\Rightarrow	
'26x	\Rightarrow	\Rightarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\rightarrow	"Bx
'27x	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	
'30x	\times	\times	\times	\times	\times	\times	\times	\times	"Cx
'31x	\times	\times	\times	\times	\times	\times	\times	\times	
'32x	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	"Dx
'33x	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	
'34x	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	"Ex
'35x	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	
'36x	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	"Fx
'37x	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	\leftarrow	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathtt

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x									"0x
'01x									
'02x									"1x
'03x									
'04x									"2x
'05x									
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9							
'10x		A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z						
'14x		a	b	c	d	e	f	g	"6x
'15x	h	i	j	k	l	m	n	o	
'16x	p	q	r	s	t	u	v	w	"7x
'17x	x	y	z	1	j	O			
'20x	o	q							"8x
'21x									
'22x									"9x
'23x									
'24x									"Ax
'25x									
'26x									"Bx
'27x									
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathbb

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	ℓ					ℓ			"0x
'01x						ℓ			
'02x									"1x
'03x		π							
'04x							ℓ	ℓ	"2x
'05x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
'10x	ℓ	A	B	C	D	E	F	G	"4x
'11x	H	I	J	K	L	M	N	O	
'12x	P	Q	R	S	T	U	V	W	"5x
'13x	X	Y	Z	ℓ	ℓ	ℓ	ℓ	ℓ	
'14x	ℓ	a	b	c	d	e	f	g	"6x
'15x	h	i	j	k	l	m	n	o	
'16x	p	q	r	s	t	u	v	w	"7x
'17x	x	y	z	ℓ	ℓ	ℓ	ℓ	ℓ	
'20x	·	·	·	·	·	·	·	·	"8x
'21x	·	·	·	·	·	·	·	·	
'22x	·	·	·	·	·	·	·	·	"9x
'23x	*	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
'24x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	"Ax
'25x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
'26x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	"Bx
'27x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
'30x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	"Cx
'31x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
'32x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	"Dx
'33x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
'34x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	"Ex
'35x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
'36x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	"Fx
'37x	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	ℓ	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathbbbit

































	'0	'1	'2	'3	'4	'5	'6	'7	
'00x									"0x
'01x									
'02x									"1x
'03x									
'04x									"2x
'05x									
'16x									"7x
'17x									
'20x									"8x
'21x									
'22x									"9x
'23x									
'24x									"Ax
'25x									
'26x									"Bx
'27x									
'30x									"Cx
'31x									
'32x									"Dx
'33x									
'34x									"Ex
'35x									
'36x									"Fx
'37x									
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathscr

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	∇	\circ	\bullet	\circ	\div	\top	\vee	$\bar{\wedge}$	"0x
'01x	∇	\triangleleft	\triangle	\diamond	\cdot	\ast	\boxtimes	\boxtimes	
'02x	\times	λ	\angle	\leq	γ	\wedge	\in	\ni	"1x
'03x	\ni	\mathfrak{U}	\mathfrak{M}	$\#$	\lessgtr	\gtrless	\lll	\ggg	
'04x	\lessgtr	\lessgtr	\lessgtr	\lessgtr	\lessgtr	\lessgtr	\lessgtr	\lessgtr	"2x
'05x	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	
'06x	\mathfrak{A}	\mathfrak{B}	\mathfrak{C}	\mathfrak{D}	\vdots	\cdots	\ddots	\ddots	"3x
'07x	\in	\in	\in	\in	\in	\in	\in	\in	
'10x	\ni	\mathcal{A}	\mathcal{B}	\mathcal{C}	\mathcal{D}	\mathcal{E}	\mathcal{F}	\mathcal{G}	"4x
'11x	\mathcal{H}	\mathcal{I}	\mathcal{J}	\mathcal{K}	\mathcal{L}	\mathcal{M}	\mathcal{N}	\mathcal{O}	
'12x	\mathcal{P}	\mathcal{Q}	\mathcal{R}	\mathcal{S}	\mathcal{T}	\mathcal{U}	\mathcal{V}	\mathcal{W}	"5x
'13x	\mathcal{X}	\mathcal{Y}	\mathcal{Z}	\mathfrak{D}	\mathfrak{B}	\mathfrak{E}	\mathfrak{E}	\mathfrak{E}	
'14x	\emptyset	\mathfrak{a}	\mathfrak{b}	\mathfrak{c}	\mathfrak{d}	\mathfrak{e}	\mathfrak{f}	\mathfrak{g}	"6x
'15x	\mathfrak{h}	\mathfrak{i}	\mathfrak{j}	\mathfrak{k}	\mathfrak{l}	\mathfrak{m}	\mathfrak{n}	\mathfrak{o}	
'16x	\mathfrak{p}	\mathfrak{q}	\mathfrak{r}	\mathfrak{s}	\mathfrak{t}	\mathfrak{u}	\mathfrak{v}	\mathfrak{w}	"7x
'17x	\mathfrak{x}	\mathfrak{y}	\mathfrak{z}	\mathfrak{t}	\mathfrak{t}	\mathfrak{p}	\mathfrak{p}	\mathfrak{p}	
'20x	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	"8x
'21x	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	
'22x	\rightarrow	\leftarrow	\rightarrow	\dots	\dots	\leftrightarrow	\lrcorner	\lrcorner	"9x
'23x	\ast	$\bar{\wedge}$	$\bar{\wedge}$	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	
'24x	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	"Ax
'25x	Φ	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	\nlessgtr	
'26x	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	"Bx
'27x	\square	\square	\square	\square	\square	\square	\square	\square	
'30x	\square	\square	\square	\square	\square	\square	\square	\square	"Cx
'31x	\square	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	
'32x	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	"Dx
'33x	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	
'34x	\odot	\diamond	\circ	\circ	\circ	\circ	\circ	\circ	"Ex
'35x	\odot	\odot	\odot	\odot	\odot	\odot	\odot	\odot	
'36x	\odot	\odot	\odot	\odot	\odot	\odot	\odot	\odot	"Fx
'37x	\odot	\odot	\odot	\odot	\odot	\odot	\odot	\odot	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathcal

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	\mathcal{f}	\mathcal{ff}	\mathcal{fff}	\mathcal{f}	\mathcal{ff}	\mathcal{fff}	\mathcal{f}	\mathcal{f}	"0x
'01x	\mathcal{f}	\mathcal{f}	\mathcal{fff}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	
'02x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	"1x
'03x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{ff}	\mathcal{fff}	\mathcal{f}	\mathcal{ff}	
'04x	\mathcal{fff}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{fff}	\mathcal{f}	\mathcal{f}	"2x
'05x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	
'06x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}			"3x
'07x			\mathcal{R}	\mathcal{S}	\mathcal{L}	\mathcal{M}	\mathcal{D}	\mathcal{C}	
'10x	\mathcal{C}	\mathcal{A}	\mathcal{B}	\mathcal{C}	\mathcal{D}	\mathcal{E}	\mathcal{F}	\mathcal{G}	"4x
'11x	\mathcal{H}	\mathcal{I}	\mathcal{J}	\mathcal{K}	\mathcal{L}	\mathcal{M}	\mathcal{N}	\mathcal{O}	
'12x	\mathcal{P}	\mathcal{Q}	\mathcal{R}	\mathcal{S}	\mathcal{T}	\mathcal{U}	\mathcal{V}	\mathcal{W}	"5x
'13x	\mathcal{X}	\mathcal{Y}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	
'14x	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	"6x
'15x	\mathcal{Z}	\mathcal{Z}							
'16x									"7x
'17x			\mathcal{K}	\mathcal{F}	\mathcal{D}	\mathcal{Y}	\mathcal{A}	\mathcal{C}	
'20x	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	"8x
'21x	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	
'22x	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	\mathcal{Z}	"9x
'23x	\mathcal{ff}	\mathcal{fff}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	
'24x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	"Ax
'25x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	
'26x	\mathcal{ff}	\mathcal{fff}	\mathcal{f}	\mathcal{ff}	\mathcal{fff}	\mathcal{f}	\mathcal{f}	\mathcal{f}	"Bx
'27x	\mathcal{f}	\mathcal{fff}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	
'30x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	"Cx
'31x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	
'32x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	"Dx
'33x	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	\mathcal{f}	

'34x									"Ex
'35x									
'36x									"Fx
'37x									
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathfrak

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	\otimes	\rightarrow	\nwarrow	\triangleleft	\perp	$\@$	$\@$	\wr	"0x
'01x	\int	\vee	$\setminus C$	\supset	\diamond	\wedge	\cup	\lrcorner	
'02x	\vdash	\bowtie	\bowtie	\bowtie	\perp	\top	\neq	\neq	"1x
'03x	\circ	\top	\top	\top	\diamond	\diamond	\diamond	\diamond	
'04x	\square	\square	\lrcorner	\rceil	\bullet	\circ	\lrcorner	\rceil	"2x
'05x	\lrcorner	\rceil	\lrcorner	\rceil	\lrcorner	\rceil	\lrcorner	\rceil	
'06x	\langle	\rangle	\leftarrow	\rightarrow	\bowtie	\bowtie	$($	$)$	"3x
'07x	\vdots	\vdots	\bowtie	\bowtie	\bowtie	\bowtie	\angle	\bowtie	
'10x	\forall	\mathfrak{A}	\mathfrak{B}	\mathfrak{C}	\mathfrak{D}	\mathfrak{E}	\mathfrak{F}	\mathfrak{G}	"4x
'11x	\mathfrak{H}	\mathfrak{I}	\mathfrak{J}	\mathfrak{K}	\mathfrak{L}	\mathfrak{M}	\mathfrak{N}	\mathfrak{O}	
'12x	\mathfrak{P}	\mathfrak{Q}	\mathfrak{R}	\mathfrak{S}	\mathfrak{T}	\mathfrak{U}	\mathfrak{V}	\mathfrak{W}	"5x
'13x	\mathfrak{X}	\mathfrak{Y}	\mathfrak{Z}	\mathfrak{A}	\mathfrak{B}	\mathfrak{C}	\mathfrak{D}	\mathfrak{E}	
'14x	\mathfrak{F}	\mathfrak{a}	\mathfrak{b}	\mathfrak{c}	\mathfrak{d}	\mathfrak{e}	\mathfrak{f}	\mathfrak{g}	"6x
'15x	\mathfrak{h}	\mathfrak{i}	\mathfrak{j}	\mathfrak{k}	\mathfrak{l}	\mathfrak{m}	\mathfrak{n}	\mathfrak{o}	
'16x	\mathfrak{p}	\mathfrak{q}	\mathfrak{r}	\mathfrak{s}	\mathfrak{t}	\mathfrak{u}	\mathfrak{v}	\mathfrak{w}	"7x
'17x	\mathfrak{x}	\mathfrak{y}	\mathfrak{z}	\mathfrak{t}	\mathfrak{J}	\mathfrak{A}	\mathfrak{B}	\mathfrak{C}	
'20x	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	"8x
'21x	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	
'22x	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	"9x
'23x	$*$	∇	∇	∇	∇	∇	∇	∇	
'24x	\emptyset	\emptyset	\emptyset	\emptyset	\emptyset	\emptyset	\emptyset	\emptyset	"Ax
'25x	\oplus	\oplus	\oplus	\oplus	\oplus	\oplus	\oplus	\oplus	
'26x	\otimes	\otimes	\otimes	\otimes	\otimes	\otimes	\otimes	\otimes	"Bx
'27x	\boxplus	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	\triangle	
'30x	\bowtie	\bowtie	\bowtie	\bowtie	\bowtie	\bowtie	\bowtie	\bowtie	"Cx
'31x	\bowtie	\bowtie	\bowtie	\bowtie	\bowtie	\bowtie	\bowtie	\bowtie	
'32x	\neq	\neq	\neq	\neq	\neq	\neq	\neq	\neq	"Dx
'33x	∇	∇	∇	∇	∇	∇	∇	∇	
'34x	∇	∇	∇	∇	∇	∇	∇	∇	"Ex
'35x	$\#$	\langle	\rangle	$+$	$-$	\boxtimes	\triangleleft	\circ	
'36x	\gg	\uparrow	\uparrow	\uparrow	\uparrow	\uparrow	\uparrow	\uparrow	"Fx
'37x	\div	\div	\div	\div	\div	\div	\div	\div	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix2-mathex

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	(	)	(	)	[	]	⌈	⌋	"0x
'01x	⌊	⌋	⌈	⌋	{	}	⌈	⌋	
'02x	⟨	⟩	⟨⟨	⟩⟩	(	)	/	\	"1x
'03x	()	()	[]	⌈	⌋	
'04x	⌊	⌋	⌈	⌋	{	}	⌈	⌋	"2x
'05x	⟨	⟩	⟨⟨	⟩⟩	()	/	\	
'06x	(	)	(	)	[	]	⌈	⌋	"3x
'07x	⌊	⌋	⌈	⌋	{	}	⌈	⌋	
'10x	⟨	⟩	⟨⟨	⟩⟩	(	)	/	\	"4x
'11x	()	()	[]	⌈	⌋	
'12x	⌊	⌋	⌈	⌋	{	}	⌈	⌋	"5x
'13x	⟨	⟩	⟨⟨	⟩⟩	()	/	\	
'14x	(	)	⌈	⌋	⌊	⌋	⌊	⌊	"6x
'15x	()	⌊	⌋	{	}	⌊	⌊	

'16x	⌊	⌋	⌈	⌉	√	√	√	√	"7x
'17x	⌊	⌋							
'26x	Σ	Π	Π	Σ	∧	∨	∩	∪	"Bx
'27x	/	\	⊙	⊕	⊗	⊔	⊕	⊖	
'30x	⊔	⊗	⊕	⊖	⊗	⊔	⊕	⊖	"Cx
'31x	⊕	⊖	⊗	⊔	⊕	⊖	⊗	⊔	
'32x	⊙	⊕	⊗	⊔	⊕	⊖	⊗	⊔	"Dx
'33x	⊖	⊗	⊔	⊕	()	()	
'34x	⌈	⌉	⌊	⌋	⌈	⌉	⌊	⌋	"Ex
'35x	⌈	⌉	⌊	⌋	⌈	⌉	⌊	⌋	
'36x	⌈	⌉	⌊	⌋	⌈	⌉			"Fx
'37x		√	⌊						
	"8	"9	"A	"B	"C	"D	"E	"F	