

The stix package

STI Pub Companies

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1 Introduction

The mission of the *Scientific and Technical Information Exchange (STIX)* font creation project is the preparation of a comprehensive set of fonts that serve the scientific and engineering community in the process from manuscript creation through final publication, both in electronic and print formats. Toward this purpose, the STIX fonts will be made available, under royalty-free license, to anyone, including publishers, software developers, scientists, students, and the general public.

The STIX fonts are based on the Unicode standard for character representation. Not all Unicode values are included in the STIX Fonts, but there is extensive coverage of Latin alphabets, Greek, and Cyrillic. The Font contents were assembled from a list of every character/glyph required for publication in the journals of the participating STI Pub companies. Every scientific discipline is represented in this list, as well as many other fields from the arts and humanities.

Most of the glyphs in the STIX Fonts have been designed in Times-compatible style.

The `stix` package provides \LaTeX support for using STIX fonts in both text and math. The text fonts are provided in both T1 (default) and OT1 encodings, as well as TS1 symbol font encoding, which cover only a subset of Latin characters supported by STIX fonts. The math support covers nearly every mathematical symbol in STIX fonts, around 2400 symbols in 11 regular fonts, in addition to around 1950 symbols in 10 bold fonts. Section 3 lists math alphabets supported by the `stix` package, while section 4 lists all defined math symbols. There are also three fonts containing extra miscellaneous symbols, `stix-extra1`, `stix-extra2` and `stix-extra3`, provided as TFM and PFB files without support from the macro package.

2 Usage

Using STIX fonts with \LaTeX is as simple as loading the `stix` package:

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

2.1 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 <code>textcomp</code> package (provides symbols and <code>oldstyle</code> 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 4.6 on page 18 for more details.

2.2 Compatibility with other packages

amsmath

The stix 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 stix package. Older versions of amsmath must be loaded *before* the stix package, otherwise errors will arise.

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

2.3 Feedback

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

3 Math alphabets

The following table lists math alphabets defined by the stix 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>\mathbf{fit}</code>	1D468–1D481	1D482–1D49B	1D71E–1D734	1D736–1D74E	-
* <code>\mathcal</code>	•	-	-	-	-
* <code>\mathscr</code>	1D49C–1D4B5	1D4B6–1D4CF	-	-	-
* <code>\mathbf{fscr}</code>	1D4D0–1D4E9	1D4EA–1D503	-	-	-
* <code>\mathsf</code>	1D5A0–1D5B9	1D5BA–1D5D3	•	•	1D7E2–1D7EB
* <code>\mathbf{fsf}</code>	1D5D4–1D5ED	1D5EE–1D607	1D758–1D76E	1D770–1D788	1D7EC–1D7F5
* <code>\mathsf{fit}</code>	1D608–1D621	1D622–1D63B	•	•	-
* <code>\mathbf{fsfit}</code>	1D63C–1D655	1D656–1D66F	1D792–1D7A8	1D7AA–1D7C2	-
* <code>\mathbb</code>	1D538–1D551	1D552–1D56B	-	-	1D7D8–1D7E1
* <code>\mathbf{fbb}</code>	•	•	-	-	-
* <code>\mathbf{fbb}{it}</code>	•	•	-	-	-
* <code>\mathbf{fbb}{it}</code>	•	•	-	-	-
* <code>\mathfrak</code>	1D504–1D51D	1D51E–1D537	-	-	-
* <code>\mathbf{f}{frak}</code>	1D56C–1D585	1D586–1D59F	-	-	-
* <code>\mathtt</code>	1D670–1D689	1D68A–1D6A3	-	-	1D7F6–1D7FF

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

4 Math symbols

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

4.1 Alphabets

Γ	U+0393 \Gamma	μ	U+03BC \mu
Δ	U+0394 \Delta	ν	U+03BD \nu
Θ	U+0398 \Theta	ξ	U+03BE \xi
Λ	U+039B \Lambda	π	U+03C0 \pi
Ξ	U+039E \Xi	ρ	U+03C1 \rho
Π	U+03A0 \Pi	σ	U+03C3 \sigma
Σ	U+03A3 \Sigma	τ	U+03C4 \tau
Υ	U+03A5 \Upsilon	υ	U+03C5 \upsilon
Φ	U+03A6 \Phi	ϕ	U+03D5 \phi
Ψ	U+03A8 \Psi	χ	U+03C7 \chi
Ω	U+03A9 \Omega	ψ	U+03C8 \psi
α	U+03B1 \alpha	ω	U+03C9 \omega
β	U+03B2 \beta	ε	U+03F5 \varepsilon
γ	U+03B3 \gamma	ϑ	U+03D1 \vartheta
δ	U+03B4 \delta	ϖ	U+03D6 \varpi
ϵ	U+03B5 \epsilon	ϱ	U+03F1 \varrho
ζ	U+03B6 \zeta	ς	U+03C2 \varsigma
η	U+03B7 \eta	φ	U+03C6 \varphi
θ	U+03B8 \theta	∇	U+2207 \nabla
ι	U+03B9 \iota	∂	U+2202 \partial
κ	U+03BA \kappa	\imath	U+1D6A4 \imath
λ	U+03BB \lambda	j	U+1D6A5 j

4.2 Ordinary symbols







































$\#$	U+0023 \#	\eth	U+00F0 \eth
$\$$	U+0024 \\$	\mathbb{Z}	U+01B5 \mathbb{Z}
$\%$	U+0025 %	\digamma	U+03DD \digamma
$\&$	U+0026 \&	\varkappa	U+03F0 \varkappa
\cdot	U+002E \cdot	\backepsilon	U+03F6 \backepsilon
$/$	U+002F /	\upbackepsilon	U+03F6 \upbackepsilon
$?$	U+003F ?	\enleadertwodots	U+2025 \enleadertwodots
$@$	U+0040 @	$\mathit{\text{...}}$	U+2026 \mathit{\text{...}}
\backslash	U+005C \backslash	\prime	U+2032 \prime
\pounds	U+00A3 \pounds	\dprime	U+2033 \dprime
\S	U+00A7 \S	\trprime	U+2034 \trprime
\neg	U+00AC \neg	\backprime	U+2035 \backprime
\P	U+00B6 \P	\backdprime	U+2036 \backdprime








































⋈	U+2037 \backtrprime	⇩	U+21E9 \downwhitearrow
^	U+2038 \caretinsert	⇧	U+21EA \whitearrowupfrombar
!!	U+203C \Exclam	∀	U+2200 \forall
-	U+2043 \hyphenbullet*	℄	U+2201 \complement
??	U+2047 \Question	∃	U+2203 \exists
'''	U+2057 \qprime	∄	U+2204 \nexists
○	U+20DD \enclosecircle	∅	U+2205 \varnothing
□	U+20DE \enclosesquare*	∅	U+2205 \emptyset
◇	U+20DF \enclosediamond*	Δ	U+2206 \increment
△	U+20E4 \enclosetriangle	■	U+220E \QED*
ℰ	U+2107 \Eulerconst	∞	U+221E \infty
ℏ	U+210F \hbar*	⊥	U+221F \rightangle
ℏ	U+210F \hslash	∠	U+2220 \angle
ℑ	U+2111 \Im	∠	U+2221 \measuredangle
ℓ	U+2113 \ell	∠	U+2222 \sphericalangle
℘	U+2118 \wp	∴	U+2234 \therefore
ℜ	U+211C \Re	∵	U+2235 \because
ℴ	U+2127 \mho	~	U+223F \sinewave
ı	U+2129 \turnediota	⊤	U+22A4 \top
Å	U+212B \Angstrom	⊥	U+22A5 \bot
⊢	U+2132 \Finv	†	U+22B9 \hermitmatrix
ℵ	U+2135 \aleph	⊞	U+22BE \measuredrightangle
⋈	U+2136 \beth	⋈	U+22BF \varltriangleright
ג	U+2137 \gimel	⋯	U+22EF \cdots
ד	U+2138 \daleth	∅	U+2300 \diameter*
⊙	U+2141 \Game*	⊞	U+2302 \house
⌈	U+2142 \sansLturned*	⌈	U+2310 \invnot
⌋	U+2143 \sansLmirrored*	⊞	U+2311 \sqlozenge*
⋈	U+2144 \Yup*	⋈	U+2312 \proflines*
⋈	U+214A \PropertyLine*	⋈	U+2313 \profsurf*
↑	U+21A8 \updownarrowbar	⋈	U+2317 \viewdata*
↵	U+21B4 \linefeed	⌋	U+2319 \turnednot
↵	U+21B5 \carriagereturn	⋈	U+232C \varhexagonlrbonds*
↵	U+21B8 \barovernorthwestarrow	⋈	U+2332 \conictaper*
↵	U+21B9 \barleftarrowrightarrowbar	⌈	U+2336 \topbot
↻	U+21BA \acwopencirculararrow	⋈	U+2340 \APLnotbackslash*
↻	U+21BB \cwopencirculararrow	⋈	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+23E4 \strns*		U+25CA \mdlgwhtlozenge, \lozenge, \Diamond
	U+23E5 \fltns*		U+25CC \dottedcircle*
	U+23E6 \accurrent*		U+25CD \circlevertfill*
	U+23E7 \elinters*		U+25CE \bullseye*
	U+2423 \mathvisiblespace		U+25CF \mdlgblkcrcle*
	U+24C7 \circledR		U+25D0 \circlelefthalfblack*
	U+24C8 \circledS		U+25D1 \circclerighthalfblack*
	U+25A0 \mdlgblksquare*, \blacksquare		U+25D2 \circlebottomhalfblack*
	U+25A1 \mdlgwhtsquare*, \square, \Box		U+25D3 \circletophalfblack*
	U+25A2 \squoval*		U+25D4 \circleurquadblack*
	U+25A3 \blackinwhitesquare*		U+25D5 \blackcircleulquadwhite*
	U+25A4 \squarehfill*		U+25D6 \blacklefthalfcircle*
	U+25A5 \squarevfill*		U+25D7 \blackrighthalfcircle*
	U+25A6 \squarehvfill*		U+25D8 \inversebullet*
	U+25A7 \squarenwsefill*		U+25D9 \inversewhitecircle*
	U+25A8 \squareneswfill*		U+25DA \invwhiteupperhalfcircle*
	U+25A9 \squarecrossfill*		U+25DB \invwhitelowerhalfcircle*
	U+25AA \smbksquare*		U+25DC \ularc*
	U+25AB \smwhtsquare*		U+25DD \urarc*
	U+25AC \hrectangleblack*		U+25DE \lrarc*
	U+25AD \hrectangle*		U+25DF \llarc*
	U+25AE \vrectangleblack*		U+25E0 \topsemicircle*
	U+25AF \vrectangle*		U+25E1 \botsemicircle*
	U+25B0 \parallelogramblack*		U+25E2 \lrblacktriangle*
	U+25B1 \parallelogram*		U+25E3 \llblacktriangle*
	U+25B2 \bigblacktriangleup*		U+25E4 \ulblacktriangle*
	U+25B4 \blacktriangleup*		U+25E5 \urblacktriangle*
	U+25B6 \blacktriangleright*		U+25E6 \circ, \smwhtcircle
	U+25B8 \smallblacktriangleright*		U+25E7 \squareleftblack*
	U+25B9 \smalltriangleright*		U+25E8 \squarerightblack*
	U+25BA \blackpointerright*		U+25E9 \squareulblack*
	U+25BB \whitepointerright*		U+25EA \squarelrblack*
	U+25BC \bigblacktriangledown*		U+25EC \trianglecdot
	U+25BD \bigtriangledown		U+25ED \triangleleftblack*
	U+25BE \blacktriangledown*		U+25EE \trianglerightblack*
	U+25BF \triangledown*		U+25EF \lgwhtcircle*
	U+25C0 \blacktriangleleft*		U+25F0 \squareulquad*
	U+25C2 \smallblacktriangleleft*		U+25F1 \squarellquad*
	U+25C3 \smalltriangleleft*		U+25F2 \squarelrquad*
	U+25C4 \blackpointerleft*		U+25F3 \squareurquad*
	U+25C5 \whitepointerleft*		U+25F4 \circleulquad*
	U+25C6 \mdlgblkdiamond*		U+25F5 \circlellquad*
	U+25C7 \mdlgwhtdiamond*		U+25F6 \circlelrquad*
	U+25C8 \blackinwhitediamond*		U+25F7 \circleurquad*
	U+25C9 \fisheye*		U+25F8 \ultriangle*

▽ U+25F9 \urtriangle*
 △ U+25FA \lltriangle*
 □ U+25FB \mdwhtsquare*
 ■ U+25FC \mdblsquare*
 ◻ U+25FD \mdsmwhtsquare*
 ◼ U+25FE \mdsmblsquare*
 ▵ 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 \neovnwarrow*
 ↘ U+2932 \nwovnearrow*
 ↗ U+2934 \uprightcurvearrow*
 ↘ U+2935 \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 \measanglelutronw*
 ∠ U+29AA \measanglerdtose*
 ∠ U+29AB \measangleldtosw*
 ∠ U+29AC \measangleurtone*
 ∠ U+29AD \measangleultonw*

	U+29AE	\measangledrtose*
	U+29AF	\measangledltosw*
	U+29B0	\revemptyset*
	U+29B1	\emptysettoobar*
	U+29B2	\emptysettocirc*
	U+29B3	\emptysettoarr*
	U+29B4	\emptysettoarrl*
	U+29BA	\obot*
	U+29BB	\olcross*
	U+29BC	\odotslashdot*
	U+29BD	\uparrowwincircle*
	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	\iifin*
	U+29DD	\tieinfty*
	U+29DE	\nvinfty*
	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	\squarellblack
	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*

4.3 Binary operators

+	U+000B	+	÷	U+00F7	\div
±	U+00B1	\pm	†	U+2020	\dagger
·	U+00B7	\cdotp, \centerdot	‡	U+2021	\ddagger
×	U+00D7	\times	•	U+2022	\smbldcircle

/	U+2044	\fracslash	Y	U+22CE	\curlyvee
⌘	U+214B	\upand	^	U+22CF	\curlywedge
-	U+000D	-	⌌	U+22D2	\Cap, \doublecap
±	U+2213	\mp	⌍	U+22D3	\Cup, \doublecup
+	U+2214	\dotplus	⌎	U+2305	\varbarwedge*
\	U+2216	\smallsetminus	⌏	U+2306	\vardoublebarwedge*
*	U+2217	\ast	⌐	U+233D	\obar
◦	U+2218	\vysmwhtcircle	△	U+25B3	\triangle, \bigtriangleup
•	U+2219	\vysmbkcircle, \bullet	◁	U+22B2	\lhd
^	U+2227	\wedge, \land	▷	U+22B3	\rhd
∨	U+2228	\vee, \lor	◁	U+22B4	\unlhd
∩	U+2229	\cap	▷	U+22B5	\unrhd
∪	U+222A	\cup	○	U+25CB	\mdlgwhtcircle*
÷	U+2238	\dotminus	▢	U+25EB	\boxbar*
≈	U+223E	\invlazys	∇	U+27C7	\veedot*
↗	U+2240	\wr	^	U+27D1	\wedgedot*
↵	U+228C	\cupleftarrow	◊	U+27E0	\lozengeminus*
∪	U+228D	\cupdot	◊	U+27E1	\concavediamond*
⊕	U+228E	\uplus	◊	U+27E2	\concavediamondtickleft*
⊔	U+2293	\sqcap	◊	U+27E3	\concavediamondtickright*
⊔	U+2294	\sqcup	◻	U+27E4	\whitesquaretickleft*
⊕	U+2295	\oplus	◻	U+27E5	\whitesquaretickright*
⊖	U+2296	\ominus	:	U+2982	\typecolon*
⊗	U+2297	\otimes	⊖	U+29B5	\circlehbar*
⊗	U+2298	\oslash	⊕	U+29B6	\circledvert
⊙	U+2299	\odot	⊕	U+29B7	\circledparallel
⊙	U+229A	\circledcirc	⊗	U+29B8	\obslash
⊗	U+229B	\circledast	⊖	U+29B9	\operp*
⊖	U+229C	\circledequal	⊗	U+29C0	\olessthan
⊖	U+229D	\circleddash	⊗	U+29C1	\ogreaterthan
⊕	U+229E	\boxplus	▢	U+29C4	\boxdiag
⊖	U+229F	\boxminus	▢	U+29C5	\boxbslash
⊗	U+22A0	\boxtimes	⊗	U+29C6	\boxast
⊖	U+22A1	\boxdot	⊖	U+29C7	\boxcircle
⌿	U+22BA	\intercal	⊖	U+29C8	\boxbox*
∨	U+22BB	\veebar	△	U+29CD	\triangleserifs*
⌒	U+22BC	\barwedge	⌚	U+29D6	\hourglass*
∇	U+22BD	\barvee	⌚	U+29D7	\blackhourglass*
◊	U+22C4	\diamond, \smwhtdiamond	♠	U+29E2	\shuffle*
•	U+22C5	\cdot*	♠	U+29EB	\mdlgblklozenge*
★	U+22C6	\star	\	U+29F5	\setminus*
✳	U+22C7	\divideontimes	/	U+29F6	\dsol*
✕	U+22C9	\ltimes	\	U+29F7	\rsolbar*
✕	U+22CA	\rtimes	+	U+29FA	\doubleplus*
↗	U+22CB	\leftthreetimes	+	U+29FB	\tripleplus*
↘	U+22CC	\rightthreetimes	+	U+29FE	\tplus*

⚭	U+29FF	<code>\tminus*</code>
⚮	U+2A22	<code>\ringplus</code>
⚯	U+2A23	<code>\plushat</code>
⚰	U+2A24	<code>\simplus</code>
⚱	U+2A25	<code>\plusdot</code>
⚲	U+2A26	<code>\plussim</code>
⚳	U+2A27	<code>\plussubtwo</code>
⚴	U+2A28	<code>\plustrif*</code>
⚵	U+2A29	<code>\commaminus*</code>
⚶	U+2A2A	<code>\minusdot</code>
⚷	U+2A2B	<code>\minusfdots</code>
⚸	U+2A2C	<code>\minusrdots*</code>
⚹	U+2A2D	<code>\opluslhrim*</code>
⚺	U+2A2E	<code>\oplusrhrim*</code>
⚻	U+2A2F	<code>\vectimes*</code>
⚼	U+2A30	<code>\dottimes</code>
⚽	U+2A31	<code>\timesbar</code>
⚾	U+2A32	<code>\btimes</code>
⚿	U+2A33	<code>\smashtimes*</code>
Ⓚ	U+2A34	<code>\otimeslhrim*</code>
Ⓛ	U+2A35	<code>\otimesrhrim*</code>
Ⓜ	U+2A36	<code>\otimeshat*</code>
Ⓨ	U+2A37	<code>\Otimes*</code>
Ⓩ	U+2A38	<code>\odiv*</code>
ⓐ	U+2A39	<code>\triangleplus*</code>
ⓑ	U+2A3A	<code>\triangleminus*</code>
ⓒ	U+2A3B	<code>\trianglerightetimes*</code>
ⓓ	U+2A3C	<code>\intprod*</code>
ⓔ	U+2A3D	<code>\intprodr*</code>
ⓕ	U+2A3E	<code>\fcmp*</code>
ⓖ	U+2A3F	<code>\amalg</code>
ⓗ	U+2A40	<code>\capdot*</code>
ⓘ	U+2A41	<code>\uminus*</code>
ⓙ	U+2A42	<code>\barcup*</code>
ⓚ	U+2A43	<code>\barcap*</code>
ⓛ	U+2A44	<code>\capwedge*</code>
ⓜ	U+2A45	<code>\cupvee*</code>
ⓝ	U+2A46	<code>\cupovercap*</code>

ⓞ	U+2A47	<code>\capovercup*</code>
ⓟ	U+2A48	<code>\cupbarcap*</code>
ⓠ	U+2A49	<code>\capbarcup*</code>
ⓡ	U+2A4A	<code>\twocups*</code>
ⓢ	U+2A4B	<code>\twocaps*</code>
ⓣ	U+2A4C	<code>\closedvarcup*</code>
ⓤ	U+2A4D	<code>\closedvarcap*</code>
ⓦ	U+2A4E	<code>\Sqcap*</code>
ⓧ	U+2A4F	<code>\Sqcup*</code>
ⓨ	U+2A50	<code>\closedvarcupsmashprod*</code>
ⓩ	U+2A51	<code>\wedgeodot*</code>
⓪	U+2A52	<code>\veeodot*</code>
⓫	U+2A53	<code>\Wedge*</code>
⓬	U+2A54	<code>\Vee*</code>
⓭	U+2A55	<code>\wedgeonwedge*</code>
⓮	U+2A56	<code>\veeonvee*</code>
⓯	U+2A57	<code>\bigslantedvee*</code>
⓰	U+2A58	<code>\bigslantedwedge*</code>
⓱	U+2A5A	<code>\wedgemidvert*</code>
⓲	U+2A5B	<code>\veemidvert*</code>
⓳	U+2A5C	<code>\midbarwedge*</code>
⓴	U+2A5D	<code>\midbarvee*</code>
⓵	U+2A5E	<code>\doublebarwedge</code>
⓶	U+2A5F	<code>\wedgebar*</code>
⓷	U+2A60	<code>\wedgedoublebar*</code>
⓸	U+2A61	<code>\varveebar*</code>
⓹	U+2A62	<code>\doublebarvee*</code>
⓺	U+2A63	<code>\veedoublebar</code>
⓻	U+2A64	<code>\dsub*</code>
⓼	U+2A65	<code>\rsub*</code>
⓽	U+2A71	<code>\eqqplus</code>
⓿	U+2A72	<code>\pluseqq</code>
ⓠ	U+2AF4	<code>\interleave</code>
ⓡ	U+2AF5	<code>\nhVvert</code>
ⓢ	U+2AF6	<code>\threedotcolon</code>
ⓣ	U+2AFB	<code>\trslash</code>
ⓤ	U+2AFD	<code>\sslash</code>
ⓥ	U+2AFE	<code>\talloblong</code>

4.4 Relations

*	U+002A	<code>*, \ast</code>	>	U+003E	<code>>, \greater</code>
:	U+003A	<code>:</code>	⊂	U+2050	<code>\closure*</code>
<	U+003C	<code><, \less</code>	\text{|}	U+20D2	<code>\vertoverlay</code>
=	U+003D	<code>=, \equal</code>	←	U+2190	<code>\leftarrow, \gets</code>

↑	U+2191	\uparrow	⇔	U+21C4	\rightleftarrows
→	U+2192	\rightarrow, \to	↕	U+21C5	\updownarrows
↓	U+2193	\downarrow	↔	U+21C6	\leftrightharrows
↔	U+2194	\leftrightharrow	⇐	U+21C7	\leftleftarrows
↕	U+2195	\updownarrow	⇑	U+21C8	\upuparrows
↗	U+2196	\nwarrow	⇒	U+21C9	\rightrightarrows
↘	U+2197	\nearrow	⇓	U+21CA	\downdownarrows
↖	U+2198	\searrow	⇌	U+21CB	\leftrightharpoons
↗	U+2199	\swarrow	⇍	U+21CC	\rightleftharpoons
↔	U+219A	\leftarrow	⇐	U+21CD	\nLeftarrow
↔	U+219B	\rightarrow	⇐	U+21CE	\nLeftrightarrow
↔	U+219C	\leftwavedarrow	⇒	U+21CF	\nRightarrow
↔	U+219D	\rightwavedarrow	⇐	U+21D0	\Leftarrow
⇐	U+219E	\twoheadleftarrow	↑	U+21D1	\Uparrow
⇑	U+219F	\twoheaduparrow	⇒	U+21D2	\Rrightarrow
⇒	U+21A0	\twoheadrightarrow	↓	U+21D3	\Downarrow
⇓	U+21A1	\twoheaddownarrow	⇔	U+21D4	\Leftrightarrow
⇐	U+21A2	\leftarrowtail	⇕	U+21D5	\Updownarrow
⇒	U+21A3	\rightarrowtail	↗	U+21D6	\Nwarrow
⇐	U+21A4	\mapsfrom	↘	U+21D7	\Nearrow
↑	U+21A5	\mapsup	↖	U+21D8	\Searrow
→	U+21A6	\mapsto	↗	U+21D9	\Swarrow
↓	U+21A7	\mapsdown	⇐	U+21DA	\Lleftarrow*
↪	U+21A9	\hookrightarrow	⇒	U+21DB	\Rrightarrow*
↩	U+21AA	\hookleftarrow	↔	U+21DC	\leftsquigarrow
↪	U+21AB	\looparrowleft	↔	U+21DD	\rightsquigarrow, \leadsto
↩	U+21AC	\looparrowright	←	U+21E4	\barleftarrow*
↔	U+21AD	\leftrightsquigarrow	→	U+21E5	\rightarrowbar*
↔	U+21AE	\nletrightarrow	⇐	U+21F4	\circlearrowright*
↗	U+21AF	\downzigzagarrow	↑	U+21F5	\downuparrows
↗	U+21B0	\Lsh	⇒	U+21F6	\rightthreearrows*
↗	U+21B1	\Rsh	⇐	U+21F7	\nvleftarrow*
↗	U+21B2	\Ldsh	→	U+21F8	\nvrightarrow*
↗	U+21B3	\Rdsh	⇐	U+21F9	\nvletrightarrow*
↗	U+21B6	\curvearrowleft	⇐	U+21FA	\nVleftarrow*
↗	U+21B7	\curvearrowright	⇒	U+21FB	\nVrightarrow*
↗	U+21BA	\circlearrowleft	⇐	U+21FC	\nVletrightarrow*
↗	U+21BB	\circlearrowright	←	U+21FD	\leftarrowtriangle*
↗	U+21BC	\leftharpoonup	→	U+21FE	\rightarrowtriangle*
↗	U+21BD	\leftharpoondown	↔	U+21FF	\leftrightharpoonup*
↗	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

\propto	U+221D	\propto	\equiv	U+225D	\eqdef
\propto	U+221D	\varpropto	\equiv	U+225E	\measeq
|	U+2223	\mid	\equiv	U+225F	\questeq
|	U+2223	\shortmid	\neq	U+2260	\ne, \neq
†	U+2224	\nmid	\equiv	U+2261	\equiv
†	U+2224	\nshortmid*	\neq	U+2262	\nequiv
||	U+2225	\parallel	\equiv	U+2263	\Equiv
||	U+2225	\shortparallel*	\leq	U+2264	\leq, \le
||	U+2226	\nparallel	\geq	U+2265	\geq, \ge
||	U+2226	\nshortparallel*	\leq	U+2266	\leqq
::	U+2237	\Colon	\geq	U+2267	\geqq
:-	U+2239	\dashcolon	\neq	U+2268	\lneqq
::	U+223A	\dotsminusdots	\neq	U+2268	\lvertneqq
~	U+223B	\kernelcontraction	\neq	U+2269	\gneqq
~	U+223C	\sim	\neq	U+2269	\gvertneqq
~	U+223C	\thicksim	\ll	U+226A	\ll
~	U+223D	\backsim	\gg	U+226B	\gg
~	U+2241	\nsim	\oslash	U+226C	\between
~	U+2242	\eqsim	\star	U+226D	\nasymp
~	U+2243	\simeq	\star	U+226E	\nless
~	U+2244	\nsime	\star	U+226F	\ngtr
~	U+2245	\cong	\star	U+2270	\nleq
~	U+2246	\simneqq	\star	U+2271	\ngeq
~	U+2247	\ncong	\leq	U+2272	\lessssim
~	U+2248	\approx	\geq	U+2273	\gtrsim
~	U+2248	\thickapprox	\star	U+2274	\nlesssim
~	U+2249	\napprox	\star	U+2275	\ngtrsim
~	U+224A	\approxeq	\leq	U+2276	\lessgtr
~	U+224B	\approxident	\geq	U+2277	\gtrless
~	U+224C	\backcong	\star	U+2278	\nlessgtr
~	U+224D	\asymp	\star	U+2279	\ngtrless
~	U+224E	\Bumpeq	$<$	U+227A	\prec
~	U+224F	\bumpeq	$>$	U+227B	\succ
~	U+2250	\doteq	\leq	U+227C	\preccurlyeq
~	U+2251	\Doteq, \doteqdot	\geq	U+227D	\succcurlyeq
~	U+2252	\fallingdotseq	\leq	U+227E	\precsim
~	U+2253	\risingdotseq	\geq	U+227F	\succsim
~	U+2254	\coloneq	\star	U+2280	\nprec
~	U+2255	\eqcolon	\star	U+2281	\nsucc
~	U+2256	\eqcirc	\subset	U+2282	\subset
~	U+2257	\circeq	\supset	U+2283	\supset
~	U+2258	\arceq	$\not\subset$	U+2284	\nsubset
~	U+2259	\wedgeeq	$\not\supset$	U+2285	\nsupset
~	U+225A	\veeeq	\subseteq	U+2286	\subseteq
~	U+225B	\stareq	\supseteq	U+2287	\supseteq
~	U+225C	\triangleq	$\not\subseteq$	U+2288	\nsubseteq

\nsubseteq	U+2289	\nsubseteq	\npreccurlyeq	U+22E0
\subsetneq	U+228A	\subsetneq	\nsucccurlyeq	U+22E1
\varsubsetneq	U+228A	\varsubsetneq*	\nsqsubseteq	U+22E2
\supsetneq	U+228B	\supsetneq	\nsqsupseteq	U+22E3
\varsupsetneq	U+228B	\varsupsetneq*	\sqsubseteq	U+22E4
\sqsubseteq	U+228F	\sqsubseteq	\sqsupseteq	U+22E5
\sqsupseteq	U+2290	\sqsupseteq	\lnsim	U+22E6
\sqsubseteq	U+2291	\sqsubseteq	\gnsim	U+22E7
\sqsupseteq	U+2292	\sqsupseteq	\precnsim	U+22E8
\vdash	U+22A2	\vdash	\succnsim	U+22E9
\dashv	U+22A3	\dashv	\nvartriangleleft	U+22EA
\vdash	U+22A6	\vdash	\nvartriangleright	U+22EB
\models	U+22A7	\models	\ntrianglelefteq	U+22EC
\Vdash	U+22A8	\Vdash	\ntrianglerighteq	U+22ED
\Vdash	U+22A9	\Vdash	\vdots	U+22EE
\Vvdash	U+22AA	\Vvdash	\adots	U+22F0
\Vdash	U+22AB	\Vdash	\ddots	U+22F1
\nvdash	U+22AC	\nvdash	\disin^*	U+22F2
\nvDash	U+22AD	\nvDash	\varisins^*	U+22F3
\nVdash	U+22AE	\nVdash	\isins^*	U+22F4
\nVDash	U+22AF	\nVDash	\isindot^*	U+22F5
\prurel	U+22B0	\prurel	\varisinobar	U+22F6
\scurel	U+22B1	\scurel	\isinobar^*	U+22F7
\triangleleft	U+22B2	\triangleleft	\isinvb^*	U+22F8
\triangleangleright	U+22B3	\triangleangleright	\isinE^*	U+22F9
\trianglelefteq	U+22B4	\trianglelefteq	\nisd^*	U+22FA
\trianglerighteq	U+22B5	\trianglerighteq	\varnis^*	U+22FB
$\circ\bullet$	U+22B6	\origof	\nis^*	U+22FC
$\bullet\circ$	U+22B7	\imageof	\varniobar	U+22FD
\circ	U+22B8	\multimap	\niobar^*	U+22FE
\bowtie	U+22C8	\bowtie	\bagmember^*	U+22FF
\backsimeq	U+22CD	\backsimeq	\frown	U+2322
\Subset	U+22D0	\Subset	\smallfrown^*	U+2322
\Supset	U+22D1	\Supset	\smile	U+2323
\pitchfork	U+22D4	\pitchfork	\smallsmile^*	U+2323
$\#$	U+22D5	\equalparallel	\nAPlnotslash	U+233F
\lessdot	U+22D6	\lessdot	\vartriangle^*	U+25B5
\gtrdot	U+22D7	\gtrdot	\perp	U+27C2
\lll, \llless	U+22D8	\lll, \llless	\bsolhsb	U+27C8
\ggg, \gggtr	U+22D9	\ggg, \gggtr	\suphsol	U+27C9
\lesseqgtr	U+22DA	\lesseqgtr	\upin^*	U+27D2
\gtreqless	U+22DB	\gtreqless	\pullback^*	U+27D3
\eqless	U+22DC	\eqless	\pushout^*	U+27D4
\eqgtr	U+22DD	\eqgtr	\DashVDash^*	U+27DA
\curlyeqprec	U+22DE	\curlyeqprec	\dashVdash^*	U+27DB
\curlyeqsucc	U+22DF	\curlyeqsucc	\multimapinv^*	U+27DC

—	U+27DD	\vlongdash*	↵	U+291B	\leftdbltail*
—	U+27DE	\longdashv*	↶	U+291C	\rightdbltail*
⌈	U+27DF	\cirbot*	↷	U+291D	\diamondleftarrow*
⇧	U+27F0	\Uparrow*	↸	U+291E	\rightarrowdiamond*
⇩	U+27F1	\Downarrow*	↹	U+291F	\diamondleftarrowbar*
↻	U+27F2	\acwgapcirclearrow*	↻	U+2920	\barrightarrowdiamond*
↻	U+27F3	\cwgapcirclearrow*	↘	U+2921	\nwsearrow*
⊕	U+27F4	\rightarrowonoplus*	↗	U+2922	\neswarrow*
←	U+27F5	\longleftarrow*	↘	U+2923	\hknwarrow*
→	U+27F6	\longrightarrow*	↗	U+2924	\hknearrow*
↔	U+27F7	\longleftrightarrow*	↘	U+2925	\hksearrow*
⇐	U+27F8	\Longleftarrow*	↗	U+2926	\hksward*
⇒	U+27F9	\Longrightarrow*	⊗	U+2927	\tona*
⇔	U+27FA	\Longleftrightarrow*	⊗	U+2928	\toea*
←	U+27FB	\longmapsfrom*	⊗	U+2929	\tosa*
→	U+27FC	\longmapsto*	⊗	U+292A	\towa*
⇐	U+27FD	\Longmapsfrom*	↷	U+2933	\rightcurvedarrow*
⇒	U+27FE	\Longmapsto*	↶	U+2936	\leftdowncurvedarrow*
↻	U+27FF	\longrightsquigarrow*	↷	U+2937	\rightdowncurvedarrow*
⇒	U+2900	\nvtwoheadrightarrow*	↷	U+2938	\cwrightarcarrow*
⇒	U+2901	\nVtwoheadrightarrow*	↶	U+2939	\acwleftarcarrow*
⇐	U+2902	\nvLeftarrow*	↶	U+293A	\acwoverarcarrow*
⇒	U+2903	\nvRightarrow*	↶	U+293B	\acwunderarcarrow*
⇐	U+2904	\nvLefttrightarrow*	↷	U+293C	\curvearrowrightminus*
⇒	U+2905	\twoheadmapsto*	↶	U+293D	\curvearrowleftplus*
⇐	U+2906	\Mapsfrom*	↶	U+293E	\cwundercurvearrow*
⇒	U+2907	\Mapsto*	↶	U+293F	\ccwundercurvearrow*
↓	U+2908	\downarrowbarred*	↻	U+2940	\acwcirclearrow*
↑	U+2909	\uparrowbarred*	↻	U+2941	\cwcirclearrow*
⇧	U+290A	\Uparrow*	↶	U+2942	\rightarrowshortleftarrow*
⇩	U+290B	\Downarrow*	↶	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	\drbkarow*	↷	U+2948	\leftrightarrowcircle*
→	U+2911	\rightdotarrow*	↶	U+2949	\twoheaduparrowcircle*
↑	U+2912	\baruparrow*	↶	U+294A	\leftrightharpoonupdown*
↓	U+2913	\downarrowbar*	↶	U+294B	\leftrightharpoondownup*
⇒	U+2914	\nvrightarrowtail*	↶	U+294C	\updownharpoonrightleft*
⇒	U+2915	\nVrightarrowtail*	↶	U+294D	\updownharpoonleftright*
⇒	U+2916	\twoheadrightarrowtail*	↶	U+294E	\leftrightharpoonupup*
⇒	U+2917	\nvtwoheadrightarrowtail*	↶	U+294F	\updownharpoonrightright*
⇒	U+2918	\nVtwoheadrightarrowtail*	↶	U+2950	\leftrightharpoondowndown*
↵	U+2919	\lefttail*	↶	U+2951	\updownharpoonleftleft*
↵	U+291A	\righttail*	↶	U+2952	\barleftharpoonup*

\rightarrow	U+2953 \rightharpoonupbar*	\triangleleft	U+29CF \ltrivb*
\top	U+2954 \barupharpoonright*	\triangleright	U+29D0 \vbrtri*
\downarrow	U+2955 \downharpoonrightbar*	\bowtie	U+29D1 \lfbowtie*
$\bar{\leftarrow}$	U+2956 \barleftharpoonowdown*	\bowtie	U+29D2 \rfbowtie*
\rightarrow	U+2957 \rightharpoonowdownbar*	\bowtie	U+29D3 \fbowtie*
\top	U+2958 \barupharpoonleft*	\ltimes	U+29D4 \lftimes*
\downarrow	U+2959 \downharpoonleftbar*	\rtimes	U+29D5 \rftimes*
\leftarrow	U+295A \leftharpoonupbar*	$\circ\rightarrow$	U+29DF \dualmap*
\rightarrow	U+295B \barrightharpoonup*	\trianglelefteq	U+29E1 \lrtriangleeq*
\uparrow	U+295C \upharpoonrightbar*	$\#$	U+29E3 \eparsl*
\top	U+295D \bardownharpoonright*	$\#$	U+29E4 \smeparsl*
\leftarrow	U+295E \leftharpoonowdownbar*	$\#$	U+29E5 \eqvparsl*
\rightarrow	U+295F \barrightharpoonowdown*	\equiv	U+29E6 \gleichstark*
\uparrow	U+2960 \upharpoonleftbar*	\rightarrow	U+29F4 \ruledelayed*
\downarrow	U+2961 \bardownharpoonleft*	\wedge	U+2A59 \veeonwedge*
\rightleftharpoons	U+2962 \leftharpoonsupdown*	$=$	U+2A66 \eqdot
\Uparrow	U+2963 \upharpoonsleftright*	\equiv	U+2A67 \dotequiv
\Rightarrow	U+2964 \rightharpoonsupdown*	$\#$	U+2A68 \equivVert*
\Downarrow	U+2965 \downharpoonsleftright*	$\#$	U+2A69 \equivVvert*
\rightleftharpoons	U+2966 \leftrightharpoonsup*	\sim	U+2A6A \dotsim
\Rightarrow	U+2967 \leftrightharpoonsdown*	\sim	U+2A6B \simrds*
\rightleftharpoons	U+2968 \rightleftharpoonsup*	\approx	U+2A6C \siminussim*
\rightleftharpoons	U+2969 \rightleftharpoonsdown*	\cong	U+2A6D \congdot
\rightleftharpoons	U+296A \leftharpoonupdash*	\equiv	U+2A6E \asteq
\rightleftharpoons	U+296B \dashleftharpoonowdown*	\approx	U+2A6F \hatapprox
\rightleftharpoons	U+296C \rightharpoonupdash*	\approx	U+2A70 \approxeq
\Rightarrow	U+296D \dashrightharpoonowdown*	\approx	U+2A73 \eqqsim
\Updownarrow	U+296E \updownharpoonsleftright*	\equiv	U+2A74 \Coloneq*
\Updownarrow	U+296F \downupharpoonsleftright*	\equiv	U+2A75 \eqeq*
\Rightarrow	U+2970 \rightimply*	\equiv	U+2A76 \eqeqeq*
\Rightarrow	U+2971 \equalrightarrow*	\equiv	U+2A77 \ddotseq*
\Rightarrow	U+2972 \similarrightarrow*	\equiv	U+2A78 \equivDD*
\Leftarrow	U+2973 \leftarrowssimilar*	\triangleleft	U+2A79 \ltcir*
\rightarrow	U+2974 \rightarrowssimilar*	\triangleright	U+2A7A \gtcir*
\rightarrow	U+2975 \rightarrowapprox*	\nearrow	U+2A7B \ltquest*
\lessgtr	U+2976 \ltlarr*	\searrow	U+2A7C \gtquest*
\Leftarrow	U+2977 \leftarrowless*	\lessgtr	U+2A7D \leqslant
\gtrless	U+2978 \gtrarr*	\gtrless	U+2A7E \geqslant
\subsetneq	U+2979 \subrarr*	\trianglelefteq	U+2A7F \lesdot*
\subsetneq	U+297A \leftarrowsubset*	\trianglerighteq	U+2A80 \gesdot*
\supsetneq	U+297B \suplarr*	\trianglelefteq	U+2A81 \lesdoto*
\leftarrow	U+297C \leftfishtail*	\trianglerighteq	U+2A82 \gesdoto*
\rightarrow	U+297D \rightfishtail*	\trianglelefteq	U+2A83 \lesdotor*
\top	U+297E \upfishtail*	\trianglerighteq	U+2A84 \gesdoto1*
\downarrow	U+297F \downfishtail*	\lessapprox	U+2A85 \lessapprox*
∇	U+29CE \rtriltri*	\gtrapprox	U+2A86 \gtrapprox*

\nlessgtr U+2A87 \backslash lneq
 \nlessgtr U+2A88 \backslash gneq
 \nlessgtr U+2A89 \backslash lnapprox
 \nlessgtr U+2A8A \backslash gnapprox
 \nlessgtr U+2A8B \backslash lesseqqgtr*
 \nlessgtr U+2A8C \backslash gtreqqless*
 \nlessgtr U+2A8D \backslash lsime*
 \nlessgtr U+2A8E \backslash gsime*
 \nlessgtr U+2A8F \backslash lsimg*
 \nlessgtr U+2A90 \backslash gsiml*
 \nlessgtr U+2A91 \backslash lgE*
 \nlessgtr U+2A92 \backslash glE*
 \nlessgtr U+2A93 \backslash lesges*
 \nlessgtr U+2A94 \backslash gesles*
 \nlessgtr U+2A95 \backslash eqslantless
 \nlessgtr U+2A96 \backslash eqslantgtr
 \nlessgtr U+2A97 \backslash elsdot*
 \nlessgtr U+2A98 \backslash egsdot*
 \nlessgtr U+2A99 \backslash eqqless*
 \nlessgtr U+2A9A \backslash eqqgtr*
 \nlessgtr U+2A9B \backslash eqqslantless*
 \nlessgtr U+2A9C \backslash eqqslantgtr*
 \nlessgtr U+2A9D \backslash simless
 \nlessgtr U+2A9E \backslash simgtr
 \nlessgtr U+2A9F \backslash simlE*
 \nlessgtr U+2AA0 \backslash simgE*
 \nlessgtr U+2AA1 \backslash Lt*
 \nlessgtr U+2AA2 \backslash Gt*
 \nlessgtr U+2AA3 \backslash partialmeetcontraction*
 \nlessgtr U+2AA4 \backslash glj*
 \nlessgtr U+2AA5 \backslash gla*
 \nlessgtr U+2AA6 \backslash ltcc*
 \nlessgtr U+2AA7 \backslash gtcc*
 \nlessgtr U+2AA8 \backslash lescc*
 \nlessgtr U+2AA9 \backslash gescc*
 \nlessgtr U+2AAA \backslash smt*
 \nlessgtr U+2AAB \backslash lat*
 \nlessgtr U+2AAC \backslash smte*
 \nlessgtr U+2AAD \backslash late*
 \nlessgtr U+2AAE \backslash bumpeq*
 \nlessgtr U+2AAF \backslash preceq
 \nlessgtr U+XXXX \backslash npreceq*
 \nlessgtr U+2AB0 \backslash succeq
 \nlessgtr U+XXXX \backslash nsucceq*
 \nlessgtr U+2AB1 \backslash precneq*

\nlessgtr U+2AB2 \backslash succneq*
 \nlessgtr U+2AB3 \backslash preceqq*
 \nlessgtr U+2AB4 \backslash succeqq*
 \nlessgtr U+2AB5 \backslash precneqq*
 \nlessgtr U+2AB6 \backslash succneqq*
 \nlessgtr U+2AB7 \backslash precapprox*
 \nlessgtr U+2AB8 \backslash succapprox*
 \nlessgtr U+2AB9 \backslash precnapprox*
 \nlessgtr U+2ABA \backslash sucnapprox*
 \nlessgtr U+2ABB \backslash Prec*
 \nlessgtr U+2ABC \backslash Succ*
 \nlessgtr U+2ABD \backslash subsetdot
 \nlessgtr U+2ABE \backslash supsetdot
 \nlessgtr U+2ABF \backslash subsetplus*
 \nlessgtr U+2AC0 \backslash supsetplus*
 \nlessgtr U+2AC1 \backslash submult*
 \nlessgtr U+2AC2 \backslash supmult*
 \nlessgtr U+2AC3 \backslash subedot*
 \nlessgtr U+2AC4 \backslash supedot*
 \nlessgtr U+2AC5 \backslash subseteqq
 \nlessgtr U+XXXX \backslash nsubseteqq*
 \nlessgtr U+2AC6 \backslash supseteqq
 \nlessgtr U+XXXX \backslash nsupseteqq*
 \nlessgtr U+2AC7 \backslash subsim*
 \nlessgtr U+2AC8 \backslash supsim*
 \nlessgtr U+2AC9 \backslash subsetapprox*
 \nlessgtr U+2ACA \backslash supsetapprox*
 \nlessgtr U+2ACB \backslash subsetneqq
 \nlessgtr U+2ACB \backslash varsubsetneqq*
 \nlessgtr U+2ACC \backslash supsetneqq
 \nlessgtr U+2ACC \backslash varsupsetneqq*
 \nlessgtr U+2ACD \backslash lsqhook
 \nlessgtr U+2ACE \backslash rsqhook
 \nlessgtr U+2ACF \backslash csub
 \nlessgtr U+2AD0 \backslash csup
 \nlessgtr U+2AD1 \backslash csube
 \nlessgtr U+2AD2 \backslash csupe
 \nlessgtr U+2AD3 \backslash subsup
 \nlessgtr U+2AD4 \backslash supsub
 \nlessgtr U+2AD5 \backslash subsub
 \nlessgtr U+2AD6 \backslash supsup
 \nlessgtr U+2AD7 \backslash suphsub
 \nlessgtr U+2AD8 \backslash supdsub
 \nlessgtr U+2AD9 \backslash forkv
 \nlessgtr U+2ADA \backslash topfork
 \nlessgtr U+2ADB \backslash mlcp

\urcorner U+2ADC \forks
 \urcorner U+2ADD \forksnot
 \dashleftarrow U+2ADE \shortlefttack
 \dashrightarrow U+2ADF \shortdowntack
 \dashv U+2AE0 \shortuptack
 \Vdash U+2AE2 \vDdash
 \dashv U+2AE3 \dashV
 \Dashv U+2AE4 \Dashv
 \DashV U+2AE5 \DashV
 \varVdash U+2AE6 \varVdash
 \Barv U+2AE7 \Barv
 \vBar U+2AE8 \vBar
 \vBarv U+2AE9 \vBarv
 \barV U+2AEA \barV
 \Vbar U+2AEB \Vbar
 \neg U+2AEC \Not
 \neg U+2AED \bNot
 \upharpoonright U+2AEE \revnmid
 \upharpoonright U+2AEF \cirmid
 \circ U+2AF0 \midcir
 \parallel U+2AF2 \nhpar
 \parallel U+2AF3 \parsim
 \lll U+2AF7 \lllnest
 \ggg U+2AF8 \gggnest
 \leqslant U+2AF9 \leqqlslant
 \geqslant U+2AFA \geqqlslant
 \circlearrowleft U+2B30 \circleonleftarrow*
 \leftleftarrows U+2B31 \leftthreearrows*
 \leftarrow U+2B32 \leftarrowonoplus*
 \longleftsquigarrow U+2B33 \longleftsquigarrow*
 \nrightarrow U+2B34 \nvtwoheadleftarrow*
 \nrightarrow U+2B35 \nVtwoheadleftarrow*
 \twoheadmapsfrom U+2B36 \twoheadmapsfrom*
 \twoheadleftdbkarrow U+2B37 \twoheadleftdbkarrow*
 \leftarrow U+2B38 \leftdotarrow*
 \leftarrow U+2B39 \nvleftarrowtail*
 \leftarrow U+2B3A \nVleftarrowtail*
 \leftarrow U+2B3B \twoheadleftarrowtail*
 \leftarrow U+2B3C \nvtwoheadleftarrowtail*
 \leftarrow U+2B3D \nVtwoheadleftarrowtail*

\leftarrow U+2B3E \leftarrowx*
 \curvearrowleft U+2B3F \leftcurvedarrow*
 \leftrightsquigarrow U+2B40 \equalleftarrow*
 \backsim U+2B41 \bsimilarleftarrow*
 \leftarrow U+2B42 \leftarrowbackapprox*
 \rightarrow U+2B43 \rightarrowgtr*
 \rightarrow U+2B44 \rightarrowsupset*
 \Leftarrow U+2B45 \LLeftarrow*
 \Rightarrow U+2B46 \Rrightarrow*
 \rightarrow U+2B47 \bsimilarrightarrow*
 \rightarrow U+2B48 \rightarrowbackapprox*
 \rightarrow U+2B49 \similarleftarrow*
 \rightarrow U+2B4A \leftarrowapprox*
 \rightarrow U+2B4B \leftarrowbsimilar*
 \rightarrow U+2B4C \rightarrowbsimilar*
 \ngeqq U+XXXX \ngeqq
 \ngeqslant U+XXXX \ngeqslant
 \nleqslant U+XXXX \nleqslant
 \nleqq U+XXXX \nleqq
 \ncong U+XXXX \ncongdot
 \napprox U+XXXX \napproxeqq
 \nll U+XXXX \nll
 \ngg U+XXXX \ngg
 \subset U+XXXX \nsqsubset
 \supset U+XXXX \nsqsupset
 \nbumpeq U+XXXX \nBumpeq
 \bumpeq U+XXXX \nbumpeq
 \neqsim U+XXXX \neqsim
 \nvarisinobar U+XXXX \nvarisinobar
 \nvarniobar U+XXXX \nvarniobar
 \neqslantless U+XXXX \neqslantless
 \neqslantgtr U+XXXX \neqslantgtr
 \hookleftarrow U+XXXX \hookleftarrow
 \hookrightarrow U+XXXX \hookrightarrow
 \relbar U+XXXX \relbar
 \relbar U+XXXX \Relbar
 \relbar U+XXXX \Rrelbar
 \relbar U+XXXX \RRelbar
 \mapsto U+XXXX \mapsfromchar
 \mapsto U+XXXX \mapstochar

4.5 Punctuation

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

4.6 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 `sl` 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	\smallnopolint
\oiint	U+2230	\smalloiint	\int	U+2A15	\smallpointint
\int	U+2231	\smallintclockwise	\int	U+2A16	\smallsqint
\int	U+2232	\smallvarointclockwise	\int	U+2A17	\smallintlarhk
\int	U+2233	\smallointctrclockwise	\int	U+2A18	\smallintx
\int	U+2A0B	\smallsumint	\int	U+2A19	\smallintcap
\int	U+2A0C	\smalliiiint	\int	U+2A1A	\smallintcup
\int	U+2A0D	\smallintbar	\int	U+2A1B	\smallupint
\int	U+2A0E	\smallintBar	\int	U+2A1C	\smallllowint
\int	U+2A0F	\smallfint			
\int	\int	U+222B \int	\oint	\oint	U+2233 \ointctrclockwise
\iint	\iint	U+222C \iint	\int	\int	U+2A0B \sumint
\iiint	\iiint	U+222D \iiint	\int	\int	U+2A0C \iiiint
\oint	\oint	U+222E \oint	\int	\int	U+2A0D \intbar
\oiint	\oiint	U+222F \oiint	\int	\int	U+2A0E \intBar
\oiint	\oiint	U+2230 \oiint	\int	\int	U+2A0F \fint
\int	\int	U+2231 \intclockwise	\int	\int	U+2A10 \cirfnint
\oint	\oint	U+2232 \varointclockwise	\int	\int	U+2A11 \awint

\int	\int	U+2A12	<code>\rppolint</code>
\int	\int	U+2A13	<code>\scpolint</code>
\int	\int	U+2A14	<code>\npolint</code>
\int	\int	U+2A15	<code>\pointint</code>
\int	\int	U+2A16	<code>\sqint</code>
\int	\int	U+2A17	<code>\intlarhk</code>

\int	\int	U+2A18	<code>\intx</code>
\int	\int	U+2A19	<code>\intcap</code>
\int	\int	U+2A1A	<code>\intcup</code>
\int	\int	U+2A1B	<code>\upint</code>
\int	\int	U+2A1C	<code>\lowint</code>

4.7 Big operators






\sum	\sum	U+2140	<code>\Bbbsum</code>
\prod	\prod	U+220F	<code>\prod</code>
\coprod	\coprod	U+2210	<code>\coprod</code>
\sum	\sum	U+2211	<code>\sum</code>
\wedge	\wedge	U+22C0	<code>\bigwedge</code>
\vee	\vee	U+22C1	<code>\bigvee</code>
\cap	\cap	U+22C2	<code>\bigcap</code>
\cup	\cup	U+22C3	<code>\bigcup</code>
\Join	\Join	U+27D5	<code>\leftouterjoin*</code>
\Join	\Join	U+27D6	<code>\rightouterjoin*</code>
\Join	\Join	U+27D7	<code>\fullouterjoin*</code>
\bot	\bot	U+27D8	<code>\bigbot*</code>
\top	\top	U+27D9	<code>\bigtop*</code>
$/$	$/$	U+29F8	<code>\xsol*</code>
\backslash	\backslash	U+29F9	<code>\xbsol*</code>
\odot	\odot	U+2A00	<code>\bigodot*</code>





\oplus	\oplus	U+2A01	<code>\bigoplus*</code>
\otimes	\otimes	U+2A02	<code>\bigotimes*</code>
\cup	\cup	U+2A03	<code>\bigcupdot*</code>
\oplus	\oplus	U+2A04	<code>\biguplus*</code>
\sqcap	\sqcap	U+2A05	<code>\bigsqcap*</code>
\sqcup	\sqcup	U+2A06	<code>\bigsqcup*</code>
\Join	\Join	U+2A07	<code>\conjquant*</code>
\Join	\Join	U+2A08	<code>\disjquant*</code>
\times	\times	U+2A09	<code>\bigtimes*</code>
\sum	\sum	U+2A0A	<code>\modtwosum*</code>
\Join	\Join	U+2A1D	<code>\Join*</code>
\triangleleft	\triangleleft	U+2A1E	<code>\bigtriangleleftleft*</code>
\Join	\Join	U+2A1F	<code>\zcmp*</code>
\gg	\gg	U+2A20	<code>\zpipe*</code>
\uparrow	\uparrow	U+2A21	<code>\zproject*</code>
\Join	\Join	U+2AFC	<code>\biginterleave</code>
\Join	\Join	U+2AFF	<code>\bigtalloblong*</code>





4.8 Delimiters





$///$	U+002F	<code>/</code>
$((((($	U+0028	<code>(</code>
$[[[[[$	U+005B	<code>[</code>

$\{\{\{\{\{$	U+007B	<code>\lbrace</code>
$\\$	U+005C	<code>\backslash</code>
$))))$	U+0029	<code>)</code>






U+27F1 \DDownarrow*





U+XXXX \arrowvert





U+XXXX \Arrowvert





U+XXXX \bracevert*

4.9 Other braces

⌈ U+231C \ulcorner*
 ⌋ U+231D \urcorner*
 ⌌ U+231E \llcorner*
 ⌍ U+231F \lrcorner*
 ⌐ U+27EC \Lbrak*
 ⌑ U+27ED \Rbrak*
 ⌒ U+2987 \llparenthesis*
 ⌓ U+2988 \rrparenthesis*
 ⌔ U+2989 \llangle*
 ⌕ U+298A \rrangle*
 ⌖ U+298B \lbrackubar*
 ⌗ U+298C \rbrackubar*
 ⌘ U+298D \lbrackultick*
 ⌙ U+298E \rbracklrtick*
 ⌚ U+298F \lbracklltick*
 ⌛ U+2990 \rbrackurtick*
 ⌜ U+2991 \langedot*
 ⌝ U+2992 \rangedot*

⌞ U+2993 \lparenless*
 ⌟ U+2994 \rparenltr*
 ⌠ U+2995 \Lparenltr*
 ⌡ U+2996 \Rparenless*
 ⌢ U+2997 \lblkbrak*
 ⌣ U+2998 \rblkbrak*
 ⌤ U+29D8 \lvzigzag*
 ⌥ U+29D9 \rvzigzag*
 ⌦ U+29DA \Lvzigzag*
 ⌧ U+29DB \Rvzigzag*
 ⌨ U+29FC \lcurvyangle*
 〈 U+29FD \rcurvyangle*
 〉 U+2772 \lbrbrak*
 ⌫ U+2773 \rbrbrak*
 ⌬ U+27C5 \lbag*
 ⌭ U+27C6 \rbag*
 ⌮ U+27EC \Lbrbrak*
 ⌯ U+27ED \Rbrbrak*

4.10 Accents

̀ U+0300 \grave
 ´ U+0301 \acute
 ˆ U+0302 \hat
 ˜ U+0303 \tilde
 ¯ U+0304 \bar
 ˘ U+0306 \breve
 ˙ U+0307 \dot
 ¨ U+0308 \ddot
 ˇ U+0309 \ovhook
 ˆ U+030A \mathring
 ˇ U+030C \check
 ˘ U+0310 \candra
 ˆ U+0312 \oturnedcomma

ˆ U+0315 \ocommatopright
 ˆ U+031A \droang
 ˆ U+20D0 \leftharpoonaccent
 ˆ U+20D1 \rightharpoonaccent
 ˆ U+20D6 \leftarrowaccent
 ˆ U+20D7 \vec, \rightarrowaccent
 ˆ U+20E1 \leftrightarrowaccent
 ˆ U+20DB \dddots
 ˆ U+20DC \ddddots
 ˆ U+20E7 \annuity
 ˆ U+20E9 \widebridgeabove
 ˆ U+20F0 \asteraccent

\widehat{xxx}	U+0302	<code>\widehat*</code>	\overleftrightarrow{xxx}	U+20E1	<code>\overleftrightharpoonarrow</code>
\widetilde{xxx}	U+0303	<code>\widetilde*</code>	$\underline{\overleftrightarrow{xxx}}$	U+034D	<code>\underleftrightharpoonarrow</code>
\widecheck{xxx}	U+030C	<code>\widecheck*</code>	\overleftarrow{xxx}	U+20D0	<code>\overleftharpoonup</code>
\overleftarrow{xxx}	U+20D6	<code>\overleftarrow*</code>	\overrightarrow{xxx}	U+20D1	<code>\overrightharpoonup</code>
\overrightarrow{xxx}	U+20D7	<code>\overrightarrow*</code>	\underleftarrow{xxx}	U+20EC	<code>\underleftharpoonup</code>
\underleftarrow{xxx}	U+20EF	<code>\underleftarrow*</code>	\underrightarrow{xxx}	U+20ED	<code>\underrightharpoonup</code>
\underrightarrow{xxx}	U+20EE	<code>\underrightarrow*</code>			

OpenType STIX fonts include a number of under accents that can be used in math mode, but \TeX 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 $\underset{\sim}{X}$. The undertilde package provides `\utilde` for extensible under tilde accent.

4.11 Over and under brackets

\overbrace{xxxxxx}	U+23B4	<code>\overbracket</code>	\underbrace{xxxxxx}	U+23B5	<code>\underbracket</code>
\overparen{xxxxxx}	U+23DC	<code>\overparen</code>	\underparen{xxxxxx}	U+23DD	<code>\underparen</code>
\overbrace{xxxxxx}	U+23DE	<code>\overbrace</code>	\underbrace{xxxxxx}	U+23DF	<code>\underbrace</code>

4.12 Radicals

\sqrt{b}	U+221A	<code>\sqrt</code>	\overline{b}	U+27CC	<code>\longdivision*</code>
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5 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).

Note that STIX fonts have no real smallcaps, the smallcaps below are synthesized (scaled down upper case letters).

5.1 Text fonts

ot1-stixgeneral

	'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	ı	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-stixgeneralasc

	'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	ı	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-stixgeneral

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	`	´	^	~	¨	ˆ	°	˘	"0x
'01x	˘	ˉ	˙	˚	˛	˜	◁	▷	
'02x	“	”	„	«	»	–	—		"1x
'03x	◊	ı	Ј	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	Đ	Ŏ	Ř	
'22x	Ř	Ś	Š	Ş	Ť	Ţ	Ů	Ű	"9x
'23x	Ÿ	Ž	Ž	Ž	IJ	İ	đ	§	
'24x	ǻ	ą	ć	č	ď	ě	ɛ	ǧ	"Ax
'25x	í	ı	ı	ń	ň	ŋ	ő	í	
'26x	ř	ś	š	ş	ť	ţ	ů	ű	"Bx
'27x	ÿ	ž	ž	ž	ij	i	đ	£	
'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	ß	
	"8	"9	"A	"B	"C	"D	"E	"F	

*"18 and "DF do not exist in STIX OpenType fonts, they were added as part of this package for compatability with T1 encoding.

t1-stixgeneralsc

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	`	´	^	~	¨	˝	°	˘	"0x
'01x	˘	ˉ	˙	˚	˛	˜	◁	▷	
'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	Ę	Ǧ	"8x
'21x	Ł	Ł	Ł	Ń	Ň	Đ	Ŏ	Ŕ	
'22x	Ř	Ś	Š	Ş	Ť	Ŧ	Ũ	Ŭ	"9x
'23x	Ỳ	Ẑ	Ẓ	Ẕ	И	İ	Đ	§	
'24x	Ǻ	Ą	Ć	Č	Ď	Ě	Ę	Ǧ	"Ax
'25x	Ł	Ł	Ł	Ń	Ň	Đ	Ŏ	Ŕ	
'26x	Ř	Ś	Š	Ş	Ť	Ŧ	Ũ	Ŭ	"Bx
'27x	Ỳ	Ẑ	Ẓ	Ẕ	И	İ	Đ	§	
'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	Š	
	"8	"9	"A	"B	"C	"D	"E	"F	

ot2-stixgeneral

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	Ѓ	Ѕ	Ї	Э	Ї	Є	Ѓ	Ѓ	"0x
'01x	њ	љ	џ	э	і	є	ђ	ћ	
'02x	Ю	Ж	Й	Ё	У	Ө	Ѕ	Я	"1x
'03x	ю	ж	й	ё	у	ө	ѕ	я	
'04x	„	!	”	Ѓ	”	%	’	’	"2x
'05x	(	)	*	Ѓ	,	-	.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	«	ı	»	?	
'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	Ѓ	
'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	џ	
'22x			Ѓ						"9x
'23x									
'26x			Ѓ						"Bx
'27x									
	"8	"9	"A	"B	"C	"D	"E	"F	

*" 24 does not exist in STIX OpenType fonts, it was added as part of this package for compatability with OT2 encoding.

ot2-stixgeneralasc

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	Ъ	Ь	Ц	Э	І	Є	Ђ	Ћ	"0x
'01x	њ	љ	џ	э	і	є	ђ	ћ	
'02x	Ю	Ж	Й	Ё	Ѵ	Ө	Š	Я	"1x
'03x	ю	ж	й	ё	ѵ	ө	š	я	
'04x	„	!	”	Ђ	Ѓ	%	’	’	"2x
'05x	(	)	*	Ђ	,	-	.	/	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	:	;	«	й	»	?	
'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-stixgeneral

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	`	´	^	~	¨	“	°	˘	"0x
'01x	˘	-	·	‚	˙	,			
'02x			”						"1x
'03x	←	→							
'04x					\$			'	"2x
'05x			*		,		.	/	
'06x	o	1	2	3	4	5	6	7	"3x
'07x	8	9			<	—	>		
'10x									"4x
'11x						∅		○	
'12x								Ω	"5x
'13x				∥		∥	↑	↓	
'14x	`								"6x
'15x							♪		
'16x									"7x
'17x							~		
'20x	˘	˘	“	”	†	‡	∥	‰	"8x
'21x	•		\$	¢	f				
'22x			£	℞				™	"9x
'23x	‰			№	ℓ	€	◊		
'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	

5.2 Math fonts

stix-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	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"9x
'23x	*	&	@	ˆ	ˆ	×	≤	÷	
'24x	Z	/	ə	†	‡	•	..	...	"Ax
'25x	!	"	'''	ˆ	ˆ	ˆ	ˆ	!!	
'26x	ˆ	/	??	ˆ	ˆ	ˆ	ˆ	ˆ	"Bx
'27x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'30x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"Cx
'31x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'32x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"Dx
'33x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'34x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"Ex
'35x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'36x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"Fx
'37x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix-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	∇	∂	\Re	\beth	λ	\daleth	\triangleright	\triangleleft	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	.	,	<	\hbar	>	★	
'10x	\lesseqgtr	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	\geq	\ll	⌈	
'20x	`	'	^	~	-	˘	·	..	"8x
'21x	ˆ	˚	˘	˙	˚	˙	˚	˙	
'22x	-	+	→	...	....	↔	⌊	⌋	"9x
'23x	*	-	^	~	˘	˘	˘	˘	
'24x	⌈	⌊	⌋	⌈	⌊	⌋	⌈	⌊	"Ax
'25x	⌊	⌈	⌊	⌈	⌊	⌈	⌊	⌈	
'26x	⌈	⌊	⌈	⌊	⌈	⌊	⌈	⌊	"Bx
'27x	\gg	\emptyset	\neq	\neq	\neq	\neq	\neq	\approx	
'30x	\gtrsim	\nless	\nless	\lessgtr	\gtrless	\nless	\nless	\prec	"Cx
'31x	\succ	\lessgtr	\gtrless	\lessgtr	\gtrless	\nless	\nless	\subset	
'32x	\supset	\nless	\nless	\subseteq	\supseteq	\nless	\nless	\subsetneq	"Dx
'33x	\nless	\nless	\nless	\nless	\nless	\nless	\nless	\nless	
'34x	\sqcap	\sqcup	\oplus	\ominus	\otimes	\oslash	\odot	\odot	"Ex
'35x	\oplus	\ominus	\ominus	\boxplus	\boxminus	\boxtimes	\boxdot	\vdash	
'36x	\dashv	\top	\perp	\vdash	\models	\models	\Vdash	\Vdash	"Fx
'37x	\models	\nless	\nless	\nless	\nless	\nless	\nless	\nless	
	"8	"9	"A	"B	"C	"D	"E	"F	

stix-mathsf

	'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	ϙ	ς	φ	"2x
'05x	∇	∂	ϸ	ϣ	-	=	≡	≡	
'06x	0	1	2	3	4	5	6	7	"3x
'07x	8	9	ι	ι	ι	ι	ι	ι	
'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	ι	ι	ι	ι	ι	
'20x	`	ˆ	ˆ	ˆ	-	ˆ	ˆ	ˆ	"8x
'21x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'22x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"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	

*"28, "3A, "7B and "7C do not exist in STIX OpenType fonts.

stix-mathsf

	'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	∇	∂	\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	\Leftarrow	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	\rightarrow	
'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	˘	˙	˚	˛	˜	˝	˝	˝	
'22x	˝	˝	˝	˝	˝	˝	˝	˝	"9x
'23x	*	\Rightarrow	\Rightarrow	\Leftarrow	\Rightarrow	\Leftarrow	\Rightarrow	\Leftarrow	
'24x	\Rightarrow	\downarrow	\uparrow	\Leftarrow	\Leftarrow	\leftarrow	\rightarrow	\leftarrow	"Ax
'25x	\rightarrow	\rightarrow	\rightarrow	\uparrow	\downarrow	\rightarrow	\rightarrow	\rightarrow	
'26x	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	"Bx
'27x	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	
'30x	\times	\times	\times	\times	\times	\times	\times	\times	"Cx
'31x	\times	\times	\times	\times	\times	\times	\times	\times	
'32x	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	"Dx
'33x	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	\hookrightarrow	
'34x	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	"Ex
'35x	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	
'36x	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	"Fx
'37x	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	
	"8	"9	"A	"B	"C	"D	"E	"F	

*"28, "7B and "7C do not exist in STIX OpenType fonts.

stix-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	2	3	4	5	
'20x	o	o	✓	✕	✕	*	*		"8x
'21x									
'22x									"9x
'23x									
'24x	☆	×	×	×	×	×	×	×	"Ax
'25x									
'26x	∪	∩	∪	∩	∪	∩	∪	∩	"Bx
'27x	∪	∩							
	"8	"9	"A	"B	"C	"D	"E	"F	

*"7B and "7C do not exist in STIX OpenType fonts.

stix-mathbb

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	ℓ					ℓ			"0x
'01x						ℓ			
'02x									"1x
'03x		ℓ							
'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	

*"7B and "7C do not exist in STIX OpenType fonts.

stix-mathbbbit

	'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	ı	ſ	£		(
'20x	`	´	^	~	-	˘	·	¨	"8x
'21x	´	ˆ	˘	˙	˚	˛	˜	˚	
'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	

*"7B and "7C do not exist in STIX OpenType fonts.

stix-mathscr

































	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	\sqsupseteq	\circlearrowleft	\circlearrowright	\circlearrowright	\div	\top	\vee	$\bar{\wedge}$	"0x
'01x	∇	\lrcorner	\triangleleft	\diamond	\cdot	\ast	\boxtimes	\boxtimes	
'02x	\times	λ	\lt	\leq	γ	\wedge	\in	\ni	"1x
'03x	\mathfrak{m}	\mathfrak{u}	\mathfrak{m}	$\#$	\ll	\gg	\lll	\ggg	
'04x	\leq	\geq	\leq	\geq	\leq	\geq	\neq	\neq	"2x
'05x	∇	∇	∇	∇	∇	∇	∇	∇	
'06x	\mathfrak{A}	\mathfrak{B}	\mathfrak{A}	\mathfrak{B}	\vdots	\dots	\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{D}	\mathfrak{D}	\mathfrak{D}	\mathfrak{D}	
'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{z}	\mathfrak{z}	\mathfrak{z}	\mathfrak{z}	\mathfrak{z}	
'20x	\backslash	\prime	\wedge	\sim	$-$	\sim	\cdot	\cdot	"8x
'21x	\cdot	\circ	\vee	\vee	\cdot	\cdot	\cdot	\cdot	
'22x	\rightarrow	\rightarrow	\rightarrow	\dots	\dots	\rightarrow	\rightarrow	\rightarrow	"9x
'23x	\ast	$\bar{\wedge}$	$\bar{\wedge}$	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	
'24x	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	\lrcorner	"Ax
'25x	\oplus	\dagger	\ddagger	\boxtimes	\boxtimes	\boxtimes	\boxtimes	\boxtimes	
'26x	\square	\odot	\square	\square	\square	\square	\square	\square	"Bx
'27x	\square	\square	\square	\square	\square	\square	\square	\square	
'30x	\blacksquare	\blacksquare	\blacksquare	\blacksquare	\blacksquare	\blacksquare	\blacksquare	\blacksquare	"Cx
'31x	\square	\blacktriangle	\triangle	\blacktriangle	\triangle	\blacktriangle	\triangle	\blacktriangle	
'32x	\blacktriangleright	\blacktriangleright	\blacktriangleright	\blacktriangledown	\blacktriangledown	\blacktriangledown	\blacktriangledown	\blacktriangledown	"Dx
'33x	\blacktriangleleft	\blacktriangleleft	\blacktriangleleft	\blacktriangleleft	\blacktriangleleft	\blacktriangleleft	\blacktriangleleft	\blacktriangleleft	
'34x	\odot	\diamond	\circ	\odot	\odot	\odot	\odot	\odot	"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	

*"7B and "7C do not exist in STIX OpenType fonts.

stix-mathcal

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	\int	\iint	\iiint	\oint	\oint	\oint	\int	\oint	"0x
'01x	\oint	\oint	\oint	\int	\int	\int	\int	\int	
'02x	\int	\int	\int	\int	\int	\int	\int	\int	"1x
'03x	\int	\int	\int	\int	\int	\int	\int	\int	
'04x	\oint	\oint	\oint	\oint	\oint	\oint	\int	\int	"2x
'05x	\int	\int	\int	\int	\int	\int	\int	\int	
'06x	\int	\int	\int	\int	\int	\int			"3x
'07x			\otimes	\otimes	\setminus	\setminus	∂	\cap	
'10x	\cup	\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}	\geq	\leq	\dagger	\ddagger	\dagger	
'14x	\parallel	\nsubseteq	\supsetneq	\nsubseteq	\supsetneq	\equiv	\leq	\geq	"6x
'15x	\leq	\geq							
'16x									"7x
'17x			\times	F	ϑ	\forall	α	\cap	
'20x	\simeq	\doteq	\doteq	\doteq	\doteq	\doteq	\doteq	\doteq	"8x
'21x	\doteq	\doteq	\doteq	\doteq	\doteq	\doteq	\doteq	\doteq	
'22x	\doteq	\neq	\equiv	\neq	\int	\iint	\iiint	\oint	"9x
'23x	\oint	\oint	\int	\oint	\oint	\oint	\oint	\int	
'24x	\int	\int	\int	\int	\int	\int	\int	\int	"Ax
'25x	\int	\int	\int	\int	\int	\int	\int	\int	
'26x	\int	\int	\oint	\oint	\oint	\int	\oint	\oint	"Bx
'27x	\oint	\oint	\int	\int	\int	\int	\int	\int	
'30x	\int	\int	\oint	\oint	\oint	\int	\int	\int	"Cx
'31x	\int	\int	\int	\int	\int	\oint	\oint	\oint	
'32x	\int	\oint	\oint	\oint	\oint	\int	\int	\int	"Dx
'33x	\int	\int	\int	\int	\int	\int	\int	\int	

*"09, "24, "9D, "B8, "D3 and "EE do not exist in **bold** STIX OpenType fonts.

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

stix-mathfrak

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	\odot	\rightarrow	\nwarrow	\triangle	\perp	\oslash	\oslash	\wr	"0x
'01x	\int	∇	∇	∇	\diamond	∇	∇	∇	
'02x	∇	∇	∇	∇	\perp	\top	∇	∇	"1x
'03x	\circ	\top	\top	\top	\diamond	\diamond	\diamond	\diamond	
'04x	\square	\square	\square	\square	\bullet	\circ	\square	\square	"2x
'05x	\square	\square	\square	\square	\square	\square	\square	\square	
'06x	\langle	\rangle	\langle	\rangle	∇	∇	∇	∇	"3x
'07x	\vdots	\vdots	∇	∇	∇	∇	∇	∇	
'10x	∇	∇	∇	∇	∇	∇	∇	∇	"4x
'11x	∇	∇	∇	∇	∇	∇	∇	∇	
'12x	∇	∇	∇	∇	∇	∇	∇	∇	"5x
'13x	∇	∇	∇	∇	∇	∇	∇	∇	
'14x	∇	∇	∇	∇	∇	∇	∇	∇	"6x
'15x	∇	∇	∇	∇	∇	∇	∇	∇	
'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	

*"7B and "7C do not exist in STIX OpenType fonts.

stix-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	⊔	⋈	⋈	×	Σ	⌈	Σ	Π	"Cx
'31x	Π	Σ	∧	∨	∩	∪	/	\	
'32x	⊙	⊕	⊗	⊔	⊕	⊔	⊔	⋈	"Dx
'33x	⋈	×	Σ	⌈	()	()	
'34x	⌈	⌈	⌈	⌈	⌈	⌈	⌈	⌈	"Ex
'35x	⌈	⌈	⌈	⌈	⌈	⌈	⌈	⌈	
'36x	⌈	⌈	⌈	⌈	⌈	⌈			"Fx
'37x		√	⌈						
	"8	"9	"A	"B	"C	"D	"E	"F	

stix-extra1

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	≡	≡	≈	≈	≠	≠	≠	≠	"0x
'01x	≠	≠	≈	≈	≠	≠	≠	≠	
'02x	≈	≈	≈	≈	≈	≈	≈	≈	"1x
'03x	≈	≈	≈	≈	≈	≈	≈	≈	
'04x	≠	≠	≠	≠	≠	≠	≠	≠	"2x
'05x	≠	≠	≠	≠	≠	≠	≠	≠	
'06x	∇	()	()				g	l	"3x
'07x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'10x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	fj	ˆ	"4x
'11x	√2	√3	≠	×	f	f ^T	≠	≠	
'12x	≠	≠	≠	≠	≠	≠	≠	≠	"5x
'13x	≠	≠	≠	≠	≠	≠	≠	≠	
'14x	≠	≠	≠	≠	≠	≠	○	○	"6x
'15x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	m	P	
'16x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"7x
'17x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'20x	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	"8x
'21x	CTRL	RET	ESC	CMD	TAB	SPACE	DEL	ALT	
'22x	OPTION	▪	ENTER	SHIFT	MOD1	MOD2	{	}	"9x
'23x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'24x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"Ax
'25x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'26x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	"Bx
'27x	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	ˆ	
'30x	√	√	√	√	√	√	√	A	"Cx
'31x	B	E	Z	H	I	K	M	N	
'32x	O	P	Θ	T	X	o			"Dx
'33x									
	"8	"9	"A	"B	"C	"D	"E	"F	

stix-extra2

	'0	'1	'2	'3	'4	'5	'6	'7	
'04x				✓	^	≠	-	—	"2x
'05x	-	ΣΣ	ΣΣ						
'22x				ℵ		℔		ℓ	"9x
'23x		ℵ		℔		ℤ		ℋ	
'24x		∅		ℓ		℔		ℵ	"Ax
'25x		ℋ		℔		ℤ		∅	
'26x		ℋ		ℓ		ℤ		ℓ	"Bx
'27x		ℓ		∅		℔		℔	
'30x		∅							"Cx
'31x									
'36x									"Fx
'37x				ℤ					
	"8	"9	"A	"B	"C	"D	"E	"F	

stix-extra3

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	ℓ				℔				"0x
'01x	℔								
'04x									"2x
'05x					≠	≠	≠		
'06x		---	---						"3x
'07x									
	"8	"9	"A	"B	"C	"D	"E	"F	