

Samples of common T_EX font encodings

Scott Pakin
scott+pkfh@pakin.org

April 19, 2020

The `pkfix-helper` program occasionally needs help from the user in selecting an appropriate TFM file to match a Type 3 font found in a PostScript document. This document assists with the task of identifying fonts by presenting character-by-character comparisons of all 256 character positions in a selection of common T_EX fonts. The following encodings are represented:

- T_EX text (e.g., *cmr10*)
- T_EX math italic (e.g., *cmi10*)
- T_EX math symbols (e.g., *cmsy10*, *msam10*, and *msbm10*—each of which provides different symbols)
- L^AT_EX symbols (e.g., *las10*)
- T_EX math extension (e.g., *cmex10*)
- T_EX base 1 encoding (e.g., *ptmr8r*)
- Adobe standard encoding (e.g., *ptmr*)
- Adobe symbol encoding (e.g., *psyr*)
- T_EX extended ASCII (e.g., *cmte10*)
- extended T_EX font encoding (e.g., *ecrm1000*)
- T_EX text companion symbols (e.g., *trcm1000*)
- T_EX text subset (e.g., *eufm10*, which provides fraktur letters for mathematical typesetting)
- unspecified (e.g., *stmary10*; *wasy10* is also included here although it erroneously claims to be T_EX text)

The following encodings are not shown in this document because the glyphs they provide exhibit little variety and are therefore relatively easy to identify:

- L^AT_EX line (e.g., *line10*)—line segments and arrowheads in different lengths and orientations

- L^AT_EX circle (e.g., *lcircle10*)—circles and 90° arcs in different sizes
- X_Y line segments (e.g., *xyline10*)—line segments in different orientations
- X_Y miscellaneous (e.g., *xymisc*)—90° arcs in different sizes
- X_Y quarter circles (e.g., *xyqc10*)—small 90° arcs in different orientations
- X_Y-pic 1/8 circles (e.g., *xyqc10*)—45° arcs in different sizes
- X_Y-pic directional (e.g., *xyatip10*, *xybsql10*, *xybtip10*, and many others)—small-degree arcs in different orientations
- X_Y-pic semidirectional (e.g., *xydash10*)—short line segments in different orientations

To use the tables that appear below, first produce “before” and “after” font sheets using `pkfix-helper`’s `--ps` and `--tex` options. (See the `pkfix-helper` documentation for details.) For each font in which the “after” characters are completely different from the “before” characters—as opposed to merely the wrong selection of font size, weight, or slant—make a note of the font that `pkfix-helper` announced it had selected. Find the table and column in which the “before” symbol exists and the “after” symbol is associated with the font selected by `pkfix-helper`. The font associated with the “before” symbol is what should be specified in a `--force` option to `pkfix-helper`. For example, consider the observations shown in Figure 1. We find that the “after” character, “ η ”, is associated with *cmi10* (the same typeface used for *cmib10* but in book weight) at character position 17. The “before” character, “ \equiv ”, is also present in position 17 and is associated with *cmsy10*. Therefore, we should re-run `pkfix-helper` with the `--force="Fj=cmsy10 @ 1.2X"` option to force it to associate document font *Fj* with *cmsy10* instead of *cmib10*.

Once the correct typeface is identified, the font size may need adjusting. In the preceding example, `--force="Fj=cmsy9"` may produce less mismatch for `cmmib10 @ 1.2X` than does `--force="Fj=cmsy10 @ 1.2X"`. Making such a determination requires human involvement. A suggested approach is first to let

`pkfix-helper` identify the size and scale automatically by specifying `--force="Fj=cmsy*@"`. If doing so produces a poor match or selects an unlikely scale factor, then the user should manually adjust the font size and/or scale factor.

```
pkfix-helper: Processing Fj ... done (cmmib10 @ 1.2X, mismatch=0.00073)
--ps file:    Fj:    ≡
--tex file:   Fj:    η
```

Figure 1: Sample observations of `pkfix-helper` output and output files

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>cmr10</i>	Γ	Δ	Θ	Λ	Ξ	Π	Σ	Υ	Φ	Ψ	Ω	ff	fi	fl	ffi	ffl
<i>cmmi10</i>	Γ	Δ	Θ	Λ	Ξ	Π	Σ	Υ	Φ	Ψ	Ω	α	β	γ	δ	ϵ
<i>cmsy10</i>	$-$	\cdot	\times	$*$	\div	\diamond	\pm	\mp	\oplus	\ominus	\otimes	\oslash	\odot	\bigcirc	\circ	\bullet
<i>msam10</i>	\boxminus	\boxplus	\boxtimes	\boxdot	\blacksquare	\cdot	\diamond	\blacklozenge	\circ	\ominus	\parallel	\rightrightarrows	\square	\Vdash	\equiv	\vDash
<i>msbm10</i>	\nless	\ngtr	\nlessdot	\ngtrdot	\nlessgtr	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot	\nlessgtrdot
<i>lasy10</i>		\triangleleft	\trianglelefteq	\triangleright	\trianglerighteq											
<i>cmex10</i>	$($	$)$	$[$	$]$	\lfloor	\rfloor	\lceil	\rceil	$\{$	$\}$	\langle	\rangle	$ $	\parallel	$/$	\backslash
<i>ptmr8r</i>		\cdot	fi	fl	$/$	\sim	L	I	$\{$	$\}$	\langle	\rangle	$ $	\parallel	$/$	\backslash
<i>ptmr</i>	Γ	Δ	Θ	Λ	Ξ	Π	Σ	Υ	Φ	Ψ	Ω	\uparrow	\downarrow	$'$;	;
<i>psyr</i>																
<i>cmtex10</i>	\cdot	\downarrow	α	β	\wedge	\neg	ϵ	π	λ	γ	δ	\uparrow	\pm	\oplus	∞	∂
<i>ecrm1000</i>	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot
<i>tcrm1000</i>	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot
<i>eufm10</i>	\mathfrak{d}	\mathfrak{d}	\mathfrak{f}	\mathfrak{f}	\mathfrak{g}	\mathfrak{t}	\mathfrak{t}	\mathfrak{u}	γ	λ	ϕ	ϕ	\parallel	\parallel	\pm	\otimes
<i>stmary10</i>	\leftarrow	\rightarrow	\uparrow	\downarrow	\nearrow	\searrow	\nwarrow	\swarrow	Υ	λ	ϕ	ϕ	\parallel	\parallel	\pm	\otimes
<i>wasy10</i>	\triangle	\triangleleft	\trianglelefteq	\triangleright	\trianglerighteq	\therefore	\oslash	☎	\checkmark	\diamond	\clubsuit	\clubsuit	\clubsuit	\clubsuit	\circ	\clubsuit

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<i>cmr10</i>	$\mathbb{1}$	\mathbb{J}	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$	$\mathbb{1}$
<i>cmmi10</i>	ζ	η	θ	ι	κ	λ	μ	ν	ξ	π	ρ	σ	τ	υ	ϕ	χ
<i>cmsy10</i>	\propto	\equiv	\subseteq	\supseteq	\leq	\geq	\lceil	\rfloor	\sim	\approx	\subset	\supset	\ll	\gg	\prec	\succ
<i>msam10</i>	\rightarrow	\leftarrow	\rightrightarrows	\leftrightsquigarrow	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons	\rightleftharpoons
<i>msbm10</i>	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless	\gtrless
<i>lasy10</i>																
<i>cmex10</i>	$($	$)$	$($	$)$	$[$	$]$	$[$	$]$	$[$	$]$	$\{$	$\}$	\langle	\rangle	$/$	\backslash
<i>ptmr8r</i>	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot
<i>ptmr</i>	$\mathbb{1}$	$\mathbb{1}$	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\cdot	\mathbb{B}	\mathbb{B}	\mathbb{B}	\mathbb{B}	\mathbb{B}	\mathbb{B}	\mathbb{B}
<i>psyr</i>																
<i>cmtex10</i>	\subset	\supset	\cap	\cup	\forall	\exists	\otimes	†	\leftarrow	\rightarrow	\neq	\diamond	\leq	\geq	\equiv	∇
<i>ecrm1000</i>	“	”	”	«	»	$-$	$-$		\circ	1	J	ff	fi	fl	ffi	ffl
<i>tcrm1000</i>			”	’		$-$	$-$		\leftarrow	\rightarrow	J	ff	fi	fl		
<i>eufm10</i>																
<i>stmary10</i>	\oplus	\ominus	\odot	\oslash	\oslash	\odot	\oplus	\ominus	\boxtimes	\boxminus	\boxdot	\boxtimes	\boxtimes	\boxtimes	\boxtimes	\boxtimes
<i>wasy10</i>	\blacktriangleleft	\blacktriangleright	⚡	\oslash	\oslash	\oslash	\oplus	\ominus	⚡	\boxminus	\boxdot	\boxtimes	\boxtimes	\boxtimes	⚡	\oslash

	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
<i>cmr10</i>	-	!	"	#	\$	%	&	'	()	*	+	,	-	.	/
<i>cmmi10</i>	ψ	ω	ε	ϑ	\mathcal{B}	ϱ	ς	\wp	\leftarrow	\rightarrow	\mapsto	\mapsto	\circ	\circ	\triangle	\triangle
<i>cmsy10</i>	\leftarrow	\rightarrow	\uparrow	\downarrow	\leftrightarrow	\nearrow	\searrow	\approx	\leftarrow	\rightarrow	\uparrow	\downarrow	\leftrightarrow	\nearrow	\searrow	\propto
<i>msam10</i>	\rightsquigarrow	\rightsquigarrow	\updownarrow	\updownarrow	\equiv	\rightsquigarrow	\rightsquigarrow	\rightsquigarrow	\circ	\therefore	\therefore	\div	\triangleq	\rightsquigarrow	\rightsquigarrow	\rightsquigarrow
<i>msbm10</i>	\nsubseteq	\supsetneq	\nsubseteq	\nsubseteq	\nsubseteq	\nsubseteq	\nsubseteq	\nsubseteq	\subsetneq	\supsetneq	\nsubseteq	\nsubseteq	\nsubseteq	\nsubseteq	\nsubseteq	\nsubseteq
<i>lasy10</i>	\prec								\prec	\succ	\wedge	\vee				
<i>cmex10</i>	()	[]					{	}	<	>	/	\	/	\
<i>ptmr8r</i>		!	"	#	\$	%	&	'	()	*	+	,	-	.	/
<i>ptmr</i>		!	"	#	\$	%	&	'	()	*	+	,	-	.	/
<i>psyr</i>		!	\forall	#	\exists	%	&	\exists	()	*	+	,	-	.	/
<i>cmtex10</i>		!	"	#	\$	%	&	'	()	*	+	,	-	.	/
<i>ecrm1000</i>	\sim	!	"	#	\$	%	&	'	()	*	+	,	-	.	/
<i>tcrm1000</i>	\mathfrak{b}				\$			'	()	*	+	,	-	.	/
<i>eufm10</i>		!					&	'	()	*	+	,	-	.	/
<i>stmary10</i>	$\text{\textcircled{z}}$	$\text{\textcircled{M}}$	$\text{\textcircled{X}}$	$\text{\textcircled{9}}$	$\text{\textcircled{v}}$	$\text{\textcircled{v}}$	$\text{\textcircled{\scriptsize A}}$	$\text{\textcircled{\scriptsize A}}$	$\text{\textcircled{/}}$	$\text{\textcircled{\backslash}}$	$\text{\textcircled{z}}$	$\text{\textcircled{f}}$	$\text{\textcircled{O}}$	$\text{\textcircled{H}}$	$\text{\textcircled{Y}}$	$\text{\textcircled{Y}}$
<i>wasy10</i>	\bullet	\circ	\circ	\circ	\circ	\circ	\circ	\circ	\circ	\circ	\circ	\circ	\circ	\circ	\circ	\circ

	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
<i>cmr10</i>	0	1	2	3	4	5	6	7	8	9	:	;	i	=	i	?
<i>cmmi10</i>	o	1	2	3	4	5	6	7	8	9	.	,	<	/	>	*
<i>cmsy10</i>	/	∞	\in	\ni	\triangle	∇	/	\vee	\exists	\exists	\lceil	\emptyset	\Re	\Im	\top	\perp
<i>msam10</i>	\leq	\geq	\leq	\geq	\leq	\leq	\leq	\leq	\backslash	-	\equiv	\equiv	\approx	\geq	\geq	\geq
<i>msbm10</i>	\nless	\ngtr	\nless	\ngtr	\nless	\nless	\nless	\nless	\nless	\nless	\nless	\nless	\nless	\nless	\nless	\nless
<i>lasy10</i>	\cup	\cap	\square	\diamond					\leftarrow	\rightarrow	\sim	\rightsquigarrow	\square	\square		
<i>cmex10</i>	()	[]					()	()	{	}	'	
<i>ptmr8r</i>	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
<i>ptmr</i>	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
<i>psyr</i>	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
<i>cmtex10</i>	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
<i>ecrm1000</i>	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
<i>tcrm1000</i>	o	1	2	3	4	5	6	7	8	9			<	=	>	
<i>eufm10</i>	o	1	2	3	4	5	6	7	8	9	:	;		=		?
<i>stmary10</i>	$\text{\textcircled{v}}$	$\text{\textcircled{f}}$	$\text{\textcircled{v}}$	$\text{\textcircled{v}}$	$\text{\textcircled{O}}$	$\text{\textcircled{O}}$	$\text{\textcircled{O}}$	$\text{\textcircled{O}}$	$\text{\textcircled{I}}$	$\text{\textcircled{III}}$	$\text{\textcircled{O}}$	$\text{\textcircled{O}}$	$\text{\textcircled{O}}$	$\text{\textcircled{O}}$	$\text{\textcircled{O}}$	$\text{\textcircled{O}}$
<i>wasy10</i>	\cup	\cap	\square	\diamond	\boxtimes	\boxtimes	\star	\circ	\circ	\circ	\sim	\rightsquigarrow	\square	\square	\leq	\geq

	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
<i>cmr10</i>	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
<i>cmmi10</i>	∂	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>I</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>M</i>	<i>N</i>	<i>O</i>
<i>cmsy10</i>	\aleph	\mathcal{A}	\mathcal{B}	\mathcal{C}	\mathcal{D}	\mathcal{E}	\mathcal{F}	\mathcal{G}	\mathcal{H}	\mathcal{I}	\mathcal{J}	\mathcal{K}	\mathcal{L}	\mathcal{M}	\mathcal{N}	\mathcal{O}
<i>msam10</i>	\sqsubset	\sqsupset	\triangleright	\triangleleft	\trianglerighteq	\trianglelefteq	★	Ⅎ	▼	►	◄	↗	↖	△	▲	▽
<i>msbm10</i>	‡	A	B	C	D	E	F	G	H	I	J	K	L	M	N	⊙
<i>lasy10</i>																
<i>cmex10</i>	\	/	'	''	<	>	⌈	⌋	ℳ	ℴ	⊙	⊙	⊕	⊕	⊗	⊗
<i>ptmr8r</i>	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
<i>ptmr</i>	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
<i>psyr</i>	≅	A	B	X	Δ	E	Φ	Γ	H	I	⊖	K	Λ	M	N	O
<i>cmtex10</i>	⊙	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
<i>ecrm1000</i>	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
<i>tcrm1000</i>																
<i>eufm10</i>		ℒ	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔
<i>stmary10</i>	□	€	⊕	⊕	⊕	⊕	⊕	⊕	℔	℔	℔	℔	℔	℔	℔	℔
<i>wasy10</i>	≈	*	*	☆	☆	*	▽	◐	◑	◒	◓	◔	◕	◖	◗	◘

	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
<i>cmr10</i>	P	Q	R	S	T	U	V	W	X	Y	Z	[“]	^	·
<i>cmmi10</i>	<i>P</i>	<i>Q</i>	<i>R</i>	<i>S</i>	<i>T</i>	<i>U</i>	<i>V</i>	<i>W</i>	<i>X</i>	<i>Y</i>	<i>Z</i>	<i>[</i>	<i>“</i>	<i>]</i>	<i>^</i>	<i>·</i>
<i>cmsy10</i>	\mathcal{P}	\mathcal{Q}	\mathcal{R}	\mathcal{S}	\mathcal{T}	\mathcal{U}	\mathcal{V}	\mathcal{W}	\mathcal{X}	\mathcal{Y}	\mathcal{Z}	$\mathcal{[}$	$\mathcal{“}$	$\mathcal{]}$	$\mathcal{^}$	$\mathcal{\cdot}$
<i>msam10</i>	=	≠	≠	≠	≠	≠	⇒	⇐	✓	√	√	√	√	√	√	α
<i>msbm10</i>	P	Q	R	S	T	U	V	W	X	Y	Z	⌈	⌈	⌈	⌈	
<i>lasy10</i>																
<i>cmex10</i>	Σ	Π	∫	U	∩	⊕	Λ	V	Σ	Π	∫	U	∩	⊕	Λ	V
<i>ptmr8r</i>	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	-
<i>ptmr</i>	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	-
<i>psyr</i>	Π	Θ	P	Σ	T	Y	ς	Ω	Ξ	Ψ	Z	[\]	⊥	-
<i>cmtex10</i>	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	⊥	-
<i>ecrm1000</i>	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	⊥	-
<i>tcrm1000</i>																
<i>eufm10</i>	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔	℔
<i>stmary10</i>	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
<i>wasy10</i>	δ	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕

	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
<i>cmr10</i>	‘	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<i>cmmi10</i>	ℓ	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<i>cmsy10</i>	\vdash	\dashv	\lfloor	\rfloor	\lceil	\rceil	$\{$	$\}$	\langle	\rangle	$ $	\parallel	\updownarrow	\updownarrow	\backslash	\wr
<i>msam10</i>	\smile	\frown	\in	\ni	\mathfrak{U}	\mathfrak{M}	\wedge	Υ	\succ	\prec	\subseteq	\supseteq	\approx	\approx	\ll	\gg
<i>msbm10</i>	\mathfrak{F}	\mathfrak{G}					\mathfrak{U}	\mathfrak{D}	\approx	\sqsubset	\sqsupset	\sqsubset	\sqsupset	\approx	\times	\times
<i>lasy10</i>																
<i>cmex10</i>	Π	Π	\wedge	\wedge	\wedge	\sim	\sim	\sim	\lceil	\rceil	\lfloor	\rfloor	\lceil	\rfloor	$\{$	$\}$
<i>ptmr8r</i>	‘	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<i>ptmr</i>	‘	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<i>psyr</i>	α	β	χ	δ	ε	ϕ	γ	η	ι	φ	κ	λ	μ	ν	ω	ω
<i>cmtex10</i>	‘	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<i>ecrm1000</i>	‘	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<i>tcrm1000</i>	‘	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<i>eufm10</i>		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<i>stmary10</i>	∇	Δ	Υ	\wedge	\sqcap	\square	\parallel	\parallel	∇	Δ	Υ	\wedge	\sqcap	\square	\parallel	\parallel
<i>wasy10</i>	\mathfrak{M}	\mathfrak{N}	\mathfrak{M}	\mathfrak{N}	\mathfrak{M}	\mathfrak{N}	\mathfrak{M}	\mathfrak{N}	\mathfrak{M}	\mathfrak{N}	\mathfrak{M}	\mathfrak{N}	\mathfrak{M}	\mathfrak{N}	\mathfrak{M}	\mathfrak{N}

	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
<i>cmr10</i>	p	q	r	s	t	u	v	w	x	y	z	-	-	"	~	..
<i>cmmi10</i>	p	q	r	s	t	u	v	w	x	y	z	ι	j	\wp	\rightarrow	\leftarrow
<i>cmsy10</i>	Π	Π	∇	f	\sqcap	\sqcap	\sqcap	\sqcap	\S	\dagger	\ddagger	\clubsuit	\clubsuit	\diamond	\heartsuit	\spadesuit
<i>msam10</i>	$\sqrt{}$	$\sqrt{}$	\mathbb{R}	\mathbb{S}	\mathfrak{h}	\dagger	\S	\S	\L	\J	\mathfrak{F}	\mathfrak{C}	\mathfrak{T}	\mathfrak{H}	\mathfrak{H}	\ominus
<i>msbm10</i>	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}	\mathfrak{h}
<i>lasy10</i>																
<i>cmex10</i>	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
<i>ptmr8r</i>	p	q	r	s	t	u	v	w	x	y	z	{		}	~	..
<i>ptmr</i>	p	q	r	s	t	u	v	w	x	y	z	{		}	~	..
<i>psyr</i>	π	θ	ρ	σ	τ	υ	\mathfrak{O}	ω	ξ	ψ	ζ	{		}	~	..
<i>cmtex10</i>	p	q	r	s	t	u	v	w	x	y	z	{		}	~	..
<i>ecrm1000</i>	p	q	r	s	t	u	v	w	x	y	z	{		}	~	..
<i>tcrm1000</i>	p	q	r	s	t	u	v	w	x	y	z	{		}	~	..
<i>eufm10</i>	p	q	r	s	t	u	v	w	x	y	z	{		}	~	..
<i>stmary10</i>	\mathfrak{P}	\mathfrak{Q}	\mathfrak{R}	\mathfrak{S}	\mathfrak{T}	\mathfrak{U}	\mathfrak{V}	\mathfrak{W}	\mathfrak{X}	\mathfrak{Y}	\mathfrak{Z}	\mathfrak{A}	\mathfrak{B}	\mathfrak{C}	\mathfrak{D}	\mathfrak{E}
<i>wasy10</i>	\mathfrak{P}	\mathfrak{Q}	\mathfrak{R}	\mathfrak{S}	\mathfrak{T}	\mathfrak{U}	\mathfrak{V}	\mathfrak{W}	\mathfrak{X}	\mathfrak{Y}	\mathfrak{Z}	\mathfrak{A}	\mathfrak{B}	\mathfrak{C}	\mathfrak{D}	\mathfrak{E}

	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
<i>cmr10</i>																
<i>cmmi10</i>																
<i>cmsy10</i>																
<i>msam10</i>																
<i>msbm10</i>																
<i>lasy10</i>																
<i>cmex10</i>																
<i>ptmr8r</i>																
<i>ptmr</i>	^	~	, Ç	f Í	” Î	... ã	† ë	‡ è	^ š	‰ ž	Š Đ	<	Œ			
<i>psyr</i>																
<i>cmtex10</i>																
<i>ecrm1000</i>	Ä	Å	Ć	Č	Ď	Ě	Ě	Ǧ	Ĺ	Ł	Ł	Ň	Ň	Đ	Ů	Ř
<i>tcrm1000</i>	˘	˘	”	”	†	‡	‖	‰	•	°C	\$	¢	f	©	W	ℕ
<i>eufm10</i>																
<i>stmary10</i>																
<i>wasy10</i>																

	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
<i>cmr10</i>																
<i>cmmi10</i>																
<i>cmsy10</i>																
<i>msam10</i>																
<i>msbm10</i>																
<i>lasy10</i>																
<i>cmex10</i>																
<i>ptmr8r</i>				“	”	•	—	—	˜ Ÿ	™	š Ž	>	œ			ÿ
<i>ptmr</i>			Š													
<i>psyr</i>																
<i>cmtex10</i>																
<i>ecrm1000</i>	Ř	Š	Š	Š	Ť	Ť	Ů	Ů	Ÿ	Ž	Ž	Ž	IJ	ı	đ	§
<i>tcrm1000</i>	G	P	£	R	†	‡	đ	™	‰	¶	B	№	‰	e	o	SM
<i>eufm10</i>																
<i>stmary10</i>																
<i>wasy10</i>																

	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
<i>cmr10</i>																
<i>cmmi10</i>																
<i>cmsy10</i>																
<i>msam10</i>																
<i>msbm10</i>																
<i>lasy10</i>																
<i>cmex10</i>																
<i>ptmr8r</i>		ı	¢	£	¤	¥	¦	§	¨	©	ª	«	¬	­	®	¯
<i>ptmr</i>		Ÿ	€	£	/	¥	f	§	¤	©	“	«	<	>	fi	fl
<i>psyr</i>		Ÿ	'	≤	/	∞	f	♣	♦	♥	♠	↔	←	↑	→	↓
<i>cmtex10</i>																
<i>ecrm1000</i>	ă	ą	ć	č	d'	ě	ę	ğ	í	ĺ	ł	ń	ň	ŋ	ő	ř
<i>tcrm1000</i>	{	}	¢	£	¤	¥	¦	§	¨	©	ª	«	¬	®	®	—
<i>eufm10</i>																
<i>stmary10</i>																
<i>wasy10</i>																

	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
<i>cmr10</i>																
<i>cmmi10</i>																
<i>cmsy10</i>																
<i>msam10</i>																
<i>msbm10</i>																
<i>lasy10</i>																
<i>cmex10</i>																
<i>ptmr8r</i>	°	±	²	³	´	μ	¶	·	¸	¹	º	»	¼	½	¾	¿
<i>ptmr</i>	°	–	‡	‡	·		¶	•	,	”	”	»	...	‰	—	
<i>psyr</i>	°	±	”	≥	×	∞	∂	•	÷	≠	≡	≈	...		—	↵
<i>cmtex10</i>																
<i>ecrm1000</i>	ř	ś	š	š	ť	ť	ů	ů	ÿ	ž	ž	ž	ij	ı	ı	£
<i>tcrm1000</i>	°	±	²	³	´	μ	¶	·	¸	¹	º	√	¼	½	¾	€
<i>eufm10</i>																
<i>stmary10</i>																
<i>wasy10</i>																

	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
<i>cmr10</i>																
<i>cmmi10</i>																
<i>cmsy10</i>																
<i>msam10</i>																
<i>msbm10</i>																
<i>lasy10</i>																
<i>cmex10</i>																
<i>ptmr8r</i>	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
<i>ptmr</i>	À	Á	Â	Ã	Ä	Å		·	È	É	Ê	Ë	Ì	Í	Î	Ï
<i>psyr</i>	⌘	ℑ	℔	℔	⊗	⊕	∅	∩	∪	⊃	⊇	⊈	⊂	⊆	∈	∉
<i>cmtex10</i>																
<i>ecrm1000</i>	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
<i>tcrm1000</i>																
<i>eufm10</i>																
<i>stmary10</i>																
<i>wasy10</i>																

	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
<i>cmr10</i>																
<i>cmmi10</i>																
<i>cmsy10</i>																
<i>msam10</i>																
<i>msbm10</i>																
<i>lasy10</i>																
<i>cmex10</i>																
<i>ptmr8r</i>	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
<i>ptmr</i>	—	Ñ	Ò	Ó	Ô	Õ	Ö			Ù	Ú	Û	Ü	Ý	Þ	
<i>psyr</i>	∠	∇	®	©	™	Π	√	·	¬	^	∨	⇔	⇐	↑	⇒	↓
<i>cmtex10</i>																
<i>ecrm1000</i>	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	Œ	Ø	Ù	Ú	Û	Ü	Ý	Þ	SS
<i>tcrm1000</i>							×									
<i>eufm10</i>																
<i>stmary10</i>																
<i>wasy10</i>																

	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
<i>cmr10</i>																
<i>cmmi10</i>																
<i>cmsy10</i>																
<i>msam10</i>																
<i>msbm10</i>																
<i>lasy10</i>																
<i>cmex10</i>																
<i>ptmr8r</i>	à	á	â	ã ^a	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï
<i>ptmr</i>	à	á	â	ã ^a	ä	å		ç	È	é	ê	ë	ì	í	î	ï
<i>psyr</i>	◊	◊	®	©	™	Σ	(⌈	⌈		⌈		⌈		
<i>cmtex10</i>																
<i>ecrm1000</i>	à	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï
<i>tcrm1000</i>																
<i>eufm10</i>																
<i>stmary10</i>																
<i>wasy10</i>																

	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
<i>cmr10</i>																
<i>cmmi10</i>																
<i>cmsy10</i>																
<i>msam10</i>																
<i>msbm10</i>																
<i>lasy10</i>																
<i>cmex10</i>																
<i>ptmr8r</i>	ð	ñ	ò	ó	ô	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ
<i>ptmr</i>		ñ	ò	ó	ô	õ	ö		ı	ù	ú	û	ü	ý	þ	ÿ
<i>psyr</i>		›	ƒ	ƒ		J	\)	⌋		⌋	⌋	⌋	⌋	
<i>cmtex10</i>																
<i>ecrm1000</i>	ð	ñ	ò	ó	ô	õ	ö	œ	ø	ù	ú	û	ü	ý	þ	ß
<i>tcrm1000</i>							÷									
<i>eufm10</i>																
<i>stmary10</i>																
<i>wasy10</i>																