APPENDIX D

Character Sets and Encodings

THIS APPENDIX LISTS the character sets and encodings that are assumed to be predefined in any PDF viewer application. Only simple fonts, encompassing Latin text and some symbols, are described here. See "Predefined CMaps" on page 343 for a list of predefined CMaps for CID-keyed fonts.

Section D.1, "Latin Character Set and Encodings," describes the entire character set for Adobe's standard Latin-text fonts. This is the character set supported by the Times, Helvetica, and Courier font families, which are among the standard 14 predefined fonts (see "Standard Type 1 Fonts" on page 319). For each named character, an octal character code is given in four different encodings: **StandardEncoding**, **MacRomanEncoding**, **WinAnsiEncoding**, and **PDFDocEncoding** (see Table D.1). Unencoded characters are indicated by a dash (—).

Section D.2, "Expert Set and MacExpertEncoding," describes the so-called "expert" character set, which contains additional characters useful for sophisticated typography, such as small capitals, ligatures, and fractions. For each named character, an octal character code is given in **MacExpertEncoding**. Note that the built-in encoding in an expert font program is usually different from **MacExpertEncoding**.

Sections D.3, "Symbol Set and Encoding," and D.4, "ZapfDingbats Set and Encoding," describe the character sets and built-in encodings for the Symbol and ZapfDingbats (ITC Zapf Dingbats) font programs, which are among the standard 14 predefined fonts. These fonts have built-in encodings that are unique to each font. (The characters for ZapfDingbats are ordered by code instead of by name, since the names in that font are meaningless.)

TABLE D.1 Latin-text encodings

ENCODING	DESCRIPTION
StandardEncoding	Adobe standard Latin-text encoding. This is the built-in encoding defined in Type 1 Latin-text font programs (but generally not in TrueType font programs). PDF does not have a predefined encoding named **StandardEncoding**. However, it is useful to describe this encoding, since a font's built-in encoding can be used as the base encoding from which differences are specified in an encoding dictionary.
MacRomanEncoding	Mac OS standard encoding for Latin text in Western writing systems. PDF has a predefined encoding named **MacRomanEncoding** that can be used with both Type 1 and TrueType fonts.
WinAnsiEncoding	Windows Code Page 1252, often called the "Windows ANSI" encoding. This is the standard Windows encoding for Latin text in Western writing systems. PDF has a predefined encoding named **WinAnsiEncoding** that can be used with both Type 1 and TrueType fonts.
PDFDocEncoding	Encoding for text strings in a PDF document *outside* the document's content streams. This is one of two encodings (the other being Unicode) that can be used to represent text strings; see Section 3.8.1, "Text Strings." PDF does not have a predefined encoding named **PDFDocEncoding**; it is not customary to use this encoding to show text from fonts.
MacExpertEncoding	An encoding for use with expert fonts—ones containing the expert character set. PDF has a predefined encoding named **MacExpertEncoding**. Despite its name, it is not a platform-specific encoding; however, only certain fonts have the appropriate character set for use with this encoding. No such fonts are among the standard 14 predefined fonts.

D.1 Latin Character Set and Encodings

CHAR	NAME	CHAR CODE (OCTAL) STD	MAC	WIN	PDF	CHAR	NAME	CHAR CODE (OCTAL) STD	MAC	WIN	PDF
A	A	101	101	101	101	Œ	OE	352	316	214	226
Æ	AE	341	256	306	306	Ó	Oacute	—	356	323	323
Á	Aacute	—	347	301	301	Ô	Ocircumflex	—	357	324	324
Â	Acircumflex	—	345	302	302	Ö	Odieresis	—	205	326	326
Ä	Adieresis	—	200	304	304	Ò	Ograve	—	361	322	322
À	Agrave	—	313	300	300	Ø	Oslash	351	257	330	330
Å	Aring	—	201	305	305	Õ	Otilde	—	315	325	325
Ã	Atilde	—	314	303	303	P	P	120	120	120	120
B	B	102	102	102	102	Q	Q	121	121	121	121
C	C	103	103	103	103	R	R	122	122	122	122
Ç	Ccedilla	—	202	307	307	S	S	123	123	123	123
D	D	104	104	104	104	Š	Scaron	—	—	212	227
E	E	105	105	105	105	T	T	124	124	124	124
É	Eacute	—	203	311	311	Þ	Thorn	—	—	336	336
Ê	Ecircumflex	—	346	312	312	U	U	125	125	125	125
Ë	Edieresis	—	350	313	313	Ú	Uacute	—	362	332	332
È	Egrave	—	351	310	310	Û	Ucircumflex	—	363	333	333
Ð	Eth	—	—	320	320	Ü	Udieresis	—	206	334	334
€	Euro[1]	—	—	200	240	Ù	Ugrave	—	364	331	331
F	F	106	106	106	106	V	V	126	126	126	126
G	G	107	107	107	107	W	W	127	127	127	127
H	H	110	110	110	110	X	X	130	130	130	130
I	I	111	111	111	111	Y	Y	131	131	131	131
Í	Iacute	—	352	315	315	Ý	Yacute	—	—	335	335
Î	Icircumflex	—	353	316	316	Ÿ	Ydieresis	—	331	237	230
Ï	Idieresis	—	354	317	317	Z	Z	132	132	132	132
Ì	Igrave	—	355	314	314	Ž	Zcaron[2]	—	—	216	231
J	J	112	112	112	112	a	a	141	141	141	141
K	K	113	113	113	113	á	aacute	—	207	341	341
L	L	114	114	114	114	â	acircumflex	—	211	342	342
Ł	Lslash	350	—	—	225	´	acute	302	253	264	264
M	M	115	115	115	115	ä	adieresis	—	212	344	344
N	N	116	116	116	116	æ	ae	361	276	346	346
Ñ	Ntilde	—	204	321	321	à	agrave	—	210	340	340
O	O	117	117	117	117	&	ampersand	046	046	046	046

CHAR	NAME	CHAR CODE (OCTAL) STD	MAC	WIN	PDF	CHAR	NAME	CHAR CODE (OCTAL) STD	MAC	WIN	PDF
å	aring	—	214	345	345	ê	ecircumflex	—	220	352	352
^	asciicircum	136	136	136	136	ë	edieresis	—	221	353	353
~	asciitilde	176	176	176	176	è	egrave	—	217	350	350
*	asterisk	052	052	052	052	8	eight	070	070	070	070
@	at	100	100	100	100	…	ellipsis	274	311	205	203
ã	atilde	—	213	343	343	—	emdash	320	321	227	204
b	b	142	142	142	142	–	endash	261	320	226	205
\	backslash	134	134	134	134	=	equal	075	075	075	075
|	bar	174	174	174	174	ð	eth	—	—	360	360
{	braceleft	173	173	173	173	!	exclam	041	041	041	041
}	braceright	175	175	175	175	¡	exclamdown	241	301	241	241
[	bracketleft	133	133	133	133	f	f	146	146	146	146
]	bracketright	135	135	135	135	fi	fi	256	336	—	223
˘	breve	306	371	—	030	5	five	065	065	065	065
¦	brokenbar	—	—	246	246	fl	fl	257	337	—	224
•	bullet[3]	267	245	225	200	*f*	florin	246	304	203	206
c	c	143	143	143	143	4	four	064	064	064	064
ˇ	caron	317	377	—	031	/	fraction	244	332	—	207
ç	ccedilla	—	215	347	347	g	g	147	147	147	147
¸	cedilla	313	374	270	270	ß	germandbls	373	247	337	337
¢	cent	242	242	242	242	`	grave	301	140	140	140
ˆ	circumflex	303	366	210	032	>	greater	076	076	076	076
:	colon	072	072	072	072	«	guillemotleft[4]	253	307	253	253
,	comma	054	054	054	054	»	guillemotright[4]	273	310	273	273
©	copyright	—	251	251	251	‹	guilsinglleft	254	334	213	210
¤	currency[1]	250	333	244	244	›	guilsinglright	255	335	233	211
d	d	144	144	144	144	h	h	150	150	150	150
†	dagger	262	240	206	201	˝	hungarumlaut	315	375	—	034
‡	daggerdbl	263	340	207	202	-	hyphen[5]	055	055	055	055
°	degree	—	241	260	260	i	i	151	151	151	151
¨	dieresis	310	254	250	250	í	iacute	—	222	355	355
÷	divide	—	326	367	367	î	icircumflex	—	224	356	356
$	dollar	044	044	044	044	ï	idieresis	—	225	357	357
˙	dotaccent	307	372	—	033	ì	igrave	—	223	354	354
ı	dotlessi	365	365	—	232	j	j	152	152	152	152
e	e	145	145	145	145	k	k	153	153	153	153
é	eacute	—	216	351	351	l	l	154	154	154	154

CHAR	NAME	CHAR CODE (OCTAL) STD	MAC	WIN	PDF	CHAR	NAME	CHAR CODE (OCTAL) STD	MAC	WIN	PDF
<	less	074	074	074	074	q	q	161	161	161	161
¬	logicalnot	—	302	254	254	?	question	077	077	077	077
ł	lslash	370	—	—	233	¿	questiondown	277	300	277	277
m	m	155	155	155	155	"	quotedbl	042	042	042	042
¯	macron	305	370	257	257	„	quotedblbase	271	343	204	214
−	minus	—	—	—	212	“	quotedblleft	252	322	223	215
µ	mu	—	265	265	265	”	quotedblright	272	323	224	216
×	multiply	—	—	327	327	‘	quoteleft	140	324	221	217
n	n	156	156	156	156	’	quoteright	047	325	222	220
9	nine	071	071	071	071	,	quotesinglbase	270	342	202	221
ñ	ntilde	—	226	361	361	'	quotesingle	251	047	047	047
#	numbersign	043	043	043	043	r	r	162	162	162	162
o	o	157	157	157	157	®	registered	—	250	256	256
ó	oacute	—	227	363	363	˚	ring	312	373	—	036
ô	ocircumflex	—	231	364	364	s	s	163	163	163	163
ö	odieresis	—	232	366	366	š	scaron	—	—	232	235
œ	oe	372	317	234	234	§	section	247	244	247	247
˛	ogonek	316	376	—	035	;	semicolon	073	073	073	073
ò	ograve	—	230	362	362	7	seven	067	067	067	067
1	one	061	061	061	061	6	six	066	066	066	066
½	onehalf	—	—	275	275	/	slash	057	057	057	057
¼	onequarter	—	—	274	274		space[6]	040	040	040	040
¹	onesuperior	—	—	271	271	£	sterling	243	243	243	243
ª	ordfeminine	343	273	252	252	t	t	164	164	164	164
º	ordmasculine	353	274	272	272	þ	thorn	—	—	376	376
ø	oslash	371	277	370	370	3	three	063	063	063	063
õ	otilde	—	233	365	365	¾	threequarters	—	—	276	276
p	p	160	160	160	160	³	threesuperior	—	—	263	263
¶	paragraph	266	246	266	266	˜	tilde	304	367	230	037
(	parenleft	050	050	050	050	™	trademark	—	252	231	222
)	parenright	051	051	051	051	2	two	062	062	062	062
%	percent	045	045	045	045	²	twosuperior	—	—	262	262
.	period	056	056	056	056	u	u	165	165	165	165
·	periodcentered	264	341	267	267	ú	uacute	—	234	372	372
‰	perthousand	275	344	211	213	û	ucircumflex	—	236	373	373
+	plus	053	053	053	053	ü	udieresis	—	237	374	374
±	plusminus	—	261	261	261	ù	ugrave	—	235	371	371

CHAR	NAME	CHAR CODE (OCTAL) STD	MAC	WIN	PDF	CHAR	NAME	CHAR CODE (OCTAL) STD	MAC	WIN	PDF
_	underscore	137	137	137	137	ÿ	ydieresis	—	330	377	377
v	v	166	166	166	166	¥	yen	245	264	245	245
w	w	167	167	167	167	z	z	172	172	172	172
x	x	170	170	170	170	ž	zcaron[2]	—	—	236	236
y	y	171	171	171	171	0	zero	060	060	060	060
ý	yacute	—	—	375	375						

1. In PDF 1.3, the euro character was added to the Adobe standard Latin character set. It is encoded as 200 in **WinAnsiEncoding** and 240 in **PDFDocEncoding**, assigning codes that were previously unused. Apple changed the Mac OS Latin-text encoding for code 333 from the currency character to the euro character. However, this incompatible change has *not* been reflected in PDF's **MacRomanEncoding**, which continues to map code 333 to currency. If the euro character is desired, an encoding dictionary can be used to specify this single difference from **MacRomanEncoding**.
2. In PDF 1.3, the existing Zcaron and zcaron characters were added to **WinAnsiEncoding** as the previously unused codes 216 and 236.
3. In **WinAnsiEncoding**, all unused codes greater than 40 map to the bullet character. However, only code 225 is specifically assigned to the bullet character; other codes are subject to future reassignment.
4. The character names guillemotleft and guillemotright are misspelled. The correct spelling for this punctuation character is *guillemet*. However, the misspelled names are the ones actually used in the fonts and encodings containing these characters.
5. The hyphen character is also encoded as 255 in **WinAnsiEncoding**. The meaning of this duplicate code is "soft hyphen," but it is typographically the same as hyphen.
6. The space character is also encoded as 312 in **MacRomanEncoding** and as 240 in **WinAnsiEncoding**. The meaning of this duplicate code is "nonbreaking space," but it is typographically the same as space.

D.2 Expert Set and MacExpertEncoding

CHAR	NAME	CODE	CHAR	NAME	CODE
Æ	AEsmall	276	J	Jsmall	152
Á	Aacutesmall	207	K	Ksmall	153
Â	Acircumflexsmall	211	Ł	Lslashsmall	302
´	Acutesmall	047	L	Lsmall	154
Ä	Adieresissmall	212	¯	Macronsmall	364
À	Agravesmall	210	M	Msmall	155
Å	Aringsmall	214	N	Nsmall	156
A	Asmall	141	Ñ	Ntildesmall	226
Ã	Atildesmall	213	Œ	OEsmall	317
˘	Brevesmall	363	Ó	Oacutesmall	227
B	Bsmall	142	Ô	Ocircumflexsmall	231
ˇ	Caronsmall	256	Ö	Odieresissmall	232
Ç	Ccedillasmall	215	˛	Ogoneksmall	362
¸	Cedillasmall	311	Ò	Ogravesmall	230
ˆ	Circumflexsmall	136	Ø	Oslashsmall	277
C	Csmall	143	O	Osmall	157
¨	Dieresissmall	254	Õ	Otildesmall	233
˙	Dotaccentsmall	372	P	Psmall	160
D	Dsmall	144	Q	Qsmall	161
É	Eacutesmall	216	°	Ringsmall	373
Ê	Ecircumflexsmall	220	R	Rsmall	162
Ë	Edieresissmall	221	Š	Scaronsmall	247
È	Egravesmall	217	S	Ssmall	163
E	Esmall	145	Þ	Thornsmall	271
Ð	Ethsmall	104	˜	Tildesmall	176
F	Fsmall	146	T	Tsmall	164
`	Gravesmall	140	Ú	Uacutesmall	234
G	Gsmall	147	Û	Ucircumflexsmall	236
H	Hsmall	150	Ü	Udieresissmall	237
˝	Hungarumlautsmall	042	Ù	Ugravesmall	235
Í	Iacutesmall	222	U	Usmall	165
Î	Icircumflexsmall	224	V	Vsmall	166
Ï	Idieresissmall	225	W	Wsmall	167
Ì	Igravesmall	223	X	Xsmall	170
I	Ismall	151	Ý	Yacutesmall	264

CHAR	NAME	CODE	CHAR	NAME	CODE
Ÿ	Ydieresissmall	330	4	fouroldstyle	064
Y	Ysmall	171	⁴	foursuperior	335
Ž	Zcaronsmall	275	⁄	fraction	057
Z	Zsmall	172	-	hyphen	055
&	ampersandsmall	046	₋	hypheninferior	137
ª	asuperior	201	⁻	hyphensuperior	321
ᵇ	bsuperior	365	ⁱ	isuperior	351
¢	centinferior	251	ˡ	lsuperior	361
¢	centoldstyle	043	ᵐ	msuperior	367
¢	centsuperior	202	9	nineinferior	273
:	colon	072	9	nineoldstyle	071
₡	colonmonetary	173	⁹	ninesuperior	341
,	comma	054	ⁿ	nsuperior	366
,	commainferior	262	.	onedotenleader	053
’	commasuperior	370	⅛	oneeighth	112
$	dollarinferior	266	1	onefitted	174
$	dollaroldstyle	044	½	onehalf	110
$	dollarsuperior	045	₁	oneinferior	301
ᵈ	dsuperior	353	1	oneoldstyle	061
₈	eightinferior	245	¼	onequarter	107
8	eightoldstyle	070	¹	onesuperior	332
⁸	eightsuperior	241	⅓	onethird	116
ᵉ	esuperior	344	º	osuperior	257
¡	exclamdownsmall	326	(	parenleftinferior	133
!	exclamsmall	041	⁽	parenleftsuperior	050
ff	ff	126	)	parenrightinferior	135
ffi	ffi	131	⁾	parenrightsuperior	051
ffl	ffl	132	.	period	056
fi	fi	127	.	periodinferior	263
–	figuredash	320	·	periodsuperior	371
⅝	fiveeighths	114	¿	questiondownsmall	300
₅	fiveinferior	260	?	questionsmall	077
5	fiveoldstyle	065	ʳ	rsuperior	345
⁵	fivesuperior	336	Rp	rupiah	175
fl	fl	130	;	semicolon	073
₄	fourinferior	242	⅞	seveneighths	115

CHAR	NAME	CODE	CHAR	NAME	CODE
₇	seveninferior	246	—	threequartersemdash	075
7	sevenoldstyle	067	³	threesuperior	334
⁷	sevensuperior	340	ᵗ	tsuperior	346
₆	sixinferior	244	..	twodotenleader	052
6	sixoldstyle	066	₂	twoinferior	252
⁶	sixsuperior	337	2	twooldstyle	062
	space	040	²	twosuperior	333
ˢ	ssuperior	352	⅔	twothirds	117
⅜	threeeighths	113	₀	zeroinferior	274
₃	threeinferior	243	0	zerooldstyle	060
3	threeoldstyle	063	⁰	zerosuperior	342
¾	threequarters	111			

D.3 Symbol Set and Encoding

CHAR	NAME	CODE	CHAR	NAME	CODE
Α	Alpha	101	↔	arrowboth	253
Β	Beta	102	⇔	arrowdblboth	333
Χ	Chi	103	⇓	arrowdbldown	337
Δ	Delta	104	⇐	arrowdblleft	334
Ε	Epsilon	105	⇒	arrowdblright	336
Η	Eta	110	⇑	arrowdblup	335
€	Euro	240	↓	arrowdown	257
Γ	Gamma	107	—	arrowhorizex	276
ℑ	Ifraktur	301	←	arrowleft	254
Ι	Iota	111	→	arrowright	256
Κ	Kappa	113	↑	arrowup	255
Λ	Lambda	114	⏐	arrowvertex	275
Μ	Mu	115	*	asteriskmath	052
Ν	Nu	116	|	bar	174
Ω	Omega	127	β	beta	142
Ο	Omicron	117	{	braceleft	173
Φ	Phi	106	}	braceright	175
Π	Pi	120	⎧	bracelefttp	354
Ψ	Psi	131	⎨	braceleftmid	355
ℜ	Rfraktur	302	⎩	braceleftbt	356
Ρ	Rho	122	⎫	bracerighttp	374
Σ	Sigma	123	⎬	bracerightmid	375
Τ	Tau	124	⎭	bracerightbt	376
Θ	Theta	121	⏐	braceex	357
Υ	Upsilon	125	[	bracketleft	133
ϒ	Upsilon1	241	]	bracketright	135
Ξ	Xi	130	⎡	bracketlefttp	351
Ζ	Zeta	132	⏐	bracketleftex	352
ℵ	aleph	300	⎣	bracketleftbt	353
α	alpha	141	⎤	bracketrighttp	371
&	ampersand	046	⏐	bracketrightex	372
∠	angle	320	⎦	bracketrightbt	373
〈	angleleft	341	•	bullet	267
〉	angleright	361	↵	carriagereturn	277
≈	approxequal	273	χ	chi	143

CHAR	NAME	CODE	CHAR	NAME	CODE
⊗	circlemultiply	304	⌡	integralbt	365
⊕	circleplus	305	∩	intersection	307
♣	club	247	ι	iota	151
:	colon	072	κ	kappa	153
,	comma	054	λ	lambda	154
≅	congruent	100	<	less	074
©	copyrightsans	343	≤	lessequal	243
©	copyrightserif	323	∧	logicaland	331
°	degree	260	¬	logicalnot	330
δ	delta	144	∨	logicalor	332
♦	diamond	250	◊	lozenge	340
÷	divide	270	–	minus	055
·	dotmath	327	′	minute	242
8	eight	070	μ	mu	155
∈	element	316	×	multiply	264
…	ellipsis	274	9	nine	071
∅	emptyset	306	∉	notelement	317
ε	epsilon	145	≠	notequal	271
=	equal	075	⊄	notsubset	313
≡	equivalence	272	ν	nu	156
η	eta	150	#	numbersign	043
!	exclam	041	ω	omega	167
∃	existential	044	ϖ	omega1	166
5	five	065	ο	omicron	157
f	florin	246	1	one	061
4	four	064	(	parenleft	050
⁄	fraction	244	)	parenright	051
γ	gamma	147	⎛	parenlefttp	346
∇	gradient	321	⎜	parenleftex	347
>	greater	076	⎝	parenleftbt	350
≥	greaterequal	263	⎞	parenrighttp	366
♥	heart	251	⎟	parenrightex	367
∞	infinity	245	⎠	parenrightbt	370
∫	integral	362	∂	partialdiff	266
⌠	integraltp	363	%	percent	045
⎮	integralex	364	.	period	056

CHAR	NAME	CODE	CHAR	NAME	CODE
⊥	perpendicular	136	~	similar	176
ϕ	phi	146	6	six	066
φ	phi1	152	/	slash	057
π	pi	160		space	040
+	plus	053	♠	spade	252
±	plusminus	261	∋	suchthat	047
∏	product	325	∑	summation	345
⊂	propersubset	314	τ	tau	164
⊃	propersuperset	311	∴	therefore	134
∝	proportional	265	θ	theta	161
ψ	psi	171	ϑ	theta1	112
?	question	077	3	three	063
√	radical	326	™	trademarksans	344
¯	radicalex	140	™	trademarkserif	324
⊆	reflexsubset	315	2	two	062
⊇	reflexsuperset	312	_	underscore	137
®	registersans	342	∪	union	310
®	registerserif	322	∀	universal	042
ρ	rho	162	υ	upsilon	165
″	second	262	℘	weierstrass	303
;	semicolon	073	ξ	xi	170
7	seven	067	0	zero	060
σ	sigma	163	ζ	zeta	172
ς	sigma1	126			

D.4 ZapfDingbats Set and Encoding

CHAR	NAME	CODE	CHAR	NAME	CODE	CHAR	NAME	CODE	CHAR	NAME	CODE
	space	040	✣	a30	103	❆	a65	146	♠	a109	253
✁	a1	041	✤	a31	104	✳	a66	147	①	a120	254
✂	a2	042	✥	a32	105	✼	a67	150	②	a121	255
✃	a202	043	✦	a33	106	❇	a68	151	③	a122	256
✄	a3	044	✧	a34	107	✳	a69	152	④	a123	257
☎	a4	045	★	a35	110	✻	a70	153	⑤	a124	260
✆	a5	046	☆	a36	111	●	a71	154	⑥	a125	261
✇	a119	047	✪	a37	112	❍	a72	155	⑦	a126	262
✈	a118	050	✫	a38	113	■	a73	156	⑧	a127	263
✉	a117	051	✬	a39	114	❑	a74	157	⑨	a128	264
☛	a11	052	✭	a40	115	❒	a203	160	⑩	a129	265
☞	a12	053	✮	a41	116	❑	a75	161	❶	a130	266
✌	a13	054	✯	a42	117	❒	a204	162	❷	a131	267
✍	a14	055	✰	a43	120	▲	a76	163	❸	a132	270
✎	a15	056	✱	a44	121	▼	a77	164	❹	a133	271
✏	a16	057	✲	a45	122	◆	a78	165	❺	a134	272
✐	a105	060	✳	a46	123	❖	a79	166	❻	a135	273
✑	a17	061	✴	a47	124	◗	a81	167	❼	a136	274
✒	a18	062	✵	a48	125	❙	a82	170	❽	a137	275
✓	a19	063	✶	a49	126	❚	a83	171	❾	a138	276
✔	a20	064	✷	a50	127	❯	a84	172	❿	a139	277
✕	a21	065	✸	a51	130	❛	a97	173	①	a140	300
✖	a22	066	✹	a52	131	❜	a98	174	②	a141	301
✗	a23	067	✺	a53	132	❝	a99	175	③	a142	302
✘	a24	070	✻	a54	133	❞	a100	176	④	a143	303
✙	a25	071	✼	a55	134	❡	a101	241	⑤	a144	304
✚	a26	072	✽	a56	135	❢	a102	242	⑥	a145	305
✛	a27	073	✾	a57	136	❣	a103	243	⑦	a146	306
✜	a28	074	✿	a58	137	❤	a104	244	⑧	a147	307
†	a6	075	❀	a59	140	❥	a106	245	⑨	a148	310
✝	a7	076	❁	a60	141	❦	a107	246	⑩	a149	311
✞	a8	077	❂	a61	142	❧	a108	247	❶	a150	312
✠	a9	100	❃	a62	143	♣	a112	250	❷	a151	313
✡	a10	101	❄	a63	144	♦	a111	251	❸	a152	314
☩	a29	102	❅	a64	145	♥	a110	252	❹	a153	315

CHAR	NAME	CODE	CHAR	NAME	CODE	CHAR	NAME	CODE	CHAR	NAME	CODE
❺	a154	316	➚	a192	332	➦	a176	346	➳	a184	363
❻	a155	317	➛	a166	333	➧	a177	347	➴	a197	364
❼	a156	320	➜	a167	334	➨	a178	350	➵	a185	365
❽	a157	321	→	a168	335	➩	a179	351	➶	a194	366
❾	a158	322	➞	a169	336	➪	a193	352	➷	a198	367
❿	a159	323	➟	a170	337	➫	a180	353	➸	a186	370
➔	a160	324	➠	a171	340	➬	a199	354	➹	a195	371
→	a161	325	➡	a172	341	➭	a181	355	➺	a187	372
↔	a163	326	➢	a173	342	➮	a200	356	➻	a188	373
↕	a164	327	➣	a162	343	➯	a182	357	➼	a189	374
↘	a196	330	➤	a174	344	➱	a201	361	➽	a190	375
➙	a165	331	➥	a175	345	➲	a183	362	➾	a191	376