Character Code Standard

Xerox System Integration Standard

XEROX

To: Users of *Xerox Character Code Standard*

From: Xerox Corporation

Date: 15 June 1980

Xerox Character Code Standard (XCCS)

Xerox Character Code Standard is an evolving document that serves as an international standard for quality rendering of formatted text. XCCS 2.0 reflects contributions by international technical experts and standards organizations in support of globally accepted font standards.

Currently, the Association for Font Information Interchange (AFII) Glyph Registry, which is sanctioned by the International Standards Organization (ISO), has numeric identifiers that match XCCS codes. Future developments within the AFII Glyph Registry, which does not reserve space for control codes, may involve changes in numeric identifiers.

For this reason, users of XCCS 2.0 are advised to:

- Minimize dependence on proprietary character codes, which may change in future AFII Glyph Registry documentation

- Prepare for a transition to revised AFII identifiers.

For additional information about these developments, see appendix F of the *Xerox Character Code Standard*.

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Character Code Standard

Notice

This *Xerox Network Systems Standard* describes the Character Code Standard—the assignment, on a fully international basis, of numeric codes to all commonly used characters and to the forms in which sequences of them can be represented.

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Preface

This document is one of a family of publications that collectively describes the protocols underlying Xerox Printing Systems and Network Systems.

This is *the* Xerox corporate Character Code Standard. It supersedes all previous Xerox character code standards, including *Character Code Standard, XSIS 058710, 058605, and 058404; Character Encoding Standard, XSIS 058305;* and the *NS Character Set Specification*, October 1981.

The Character Code Standard specifies the character codes to be used for exchange of text information among Xerox System Elements, and the forms in which sequences of numerical codes can be represented. Fragments of text which are referred to as *strings* (sequences of character codes defined by this standard) are used for such purposes as communication protocols, electronic print files, and document interchange.

In this document we assign codes to a set of graphic characters, rendering characters, and control characters; define and explain the character sequence encoding; give examples of its use; address a number of technical questions concerning the details of the Xerox character code assignments; and provide a cross-reference of commonly used text characters and symbols. Our primary purpose in this document, however, is to provide an accurate specification of character codes and the encoding of a string of these codes.

This standard operates as a strictly cumulative registry of characters and codes; registrations are accepted and codes are assigned by the Xerox Character Code Registrar, subject to periodic formal ballot approval of the additions by Xerox. This document, therefore, constitutes a snapshot of the character code registry. A minor version number of this standard, for example, 2.0, 2.1, 2.2, etc., is assigned to each such periodic snapshot in the series and serves only to identify the particular snapshot. This document is version 2.0.

We encourage you to comment on and make suggestions concerning this document and its use. Please address communications to:

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Acknowledgments

Table of contents

4. Rendering character codes

5. String encoding

Appendices

List of figures

Purpose

The purpose of this standard is to permit the storing and transmitting of multilingual textual information in the form of a sequence of numerical codes called *character codes*. A sequence of such codes forms the body of a *string*. When two information processing systems share a standard interpretation of character codes and a standard format for strings, they can communicate text without danger of degrading its information content.

This particular standard is used throughout the Xerox systems. It generalizes familiar ISO and ANSI standards for coded character sets for text communication, and includes numerical codes for rendering entities, that is, non-graphic character codes which may be used in fragments of text.

In this standard, a character code is any code representing a graphic character, a rendering character, or a control character, usually unique within the set, most commonly represented as a non-negative integer. In order to handle symbols beyond simple punctuation and text in languages other than English, Xerox has generated from current standards to create this two-byte character code standard.

The range of numbers available for character codes is:

[0 .. 177777_8], i.e., 16 bits.

A general method for extending this to 24 bits and to 32 bits is outlined, but not required at this time. Allocation of code space is specified in chapter 2, and assignment of numbers to graphic characters, rendering characters, and control characters is specified in chapters 3 and 4. All assignments are summarized in reference charts in appendix B.

Valid methods of representing a sequence of 16-bit character codes are described in chapter 5, "String encoding." This format for strings is one solution to the problem of compatibility with existing 8-bit character strings.

Scope

This Xerox Standard assigns codes to a set of graphic characters spanning at least the following (for further reference, the numbers in brackets correspond to numbered references in appendix A):

— All ISO 646 IRV graphic characters [5]

— All ISO 5426 graphic characters [8]

— All ISO 5428 graphic characters [9]

— All ISO 6937 graphic characters [10]

— All ANSI 7-bit ASCII graphic characters [1]

— All CCITT 8-bit Teletex "GO" and "G2" graphic characters [2]

— All characters of the International Phonetic Alphabet [28]

— All Xerox 860 graphic characters [16]

— All EBCDIC 8-bit graphic characters [4]

— All JIS C 6226 graphic characters (including all 6,349 most-frequent Japanese *kanji*) [11]

— All characters required to write the following languages:

Arabic, Armenian, Danish, Devanagari, Dutch, English, French, Georgian, German, Gothic, Greek, Hebrew, Italian, Japanese, Malay/Indonesian, Norwegian, Polish, Portuguese, Runic, Russian, Spanish, Swedish, Ukranian, etc.

— All standard office typewriter keyboard characters for the European languages previously listed

— The characters in the American Mathematical Society mathematical symbol set

— The most commonly used dingbats and office, technical, and general symbols.

A graphic is a symbol produced by a process such as handwriting, drawing, or printing. In this standard, a graphic character is defined as a character, other than a control or rendering character, that is ordinarily represented by a graphic.

In addition to assigning codes to graphic characters, the standard also assigns codes to rendering characters, that is, characters other than graphic or control characters which can include any of the following:

— A non-conventional representation of a control code

— A sequence of graphic characters, that is, ligature or accented character

— A contextually dependent alternate representation for a graphic character, that is, initial, medial, or final form for an alphabet, such as Arabic

— A "variant" representation for a graphic character, for example, the rendering character $\overline{\text{A}}$ instead of the graphic character A.

The need for alternate graphic representations arises from language constraints, esthetics, typographic preferences of users, etc. Since any alternate form of a graphic character violates the semantic uniqueness requirement for graphic character codes (refer to the "Design goals" section in this chapter), rendering character codes are "non-graphic character codes." To distinguish one type of character code from another (that is, a graphic character code from a rendering character code), a separate section of the code space is allocated for each type of character code.

In addition to assigning sections of code space to sets of graphic characters and rendering characters, this standard makes provision also for control characters whose occurrence in a particular context initiates, modifies, or stops a control operation. While selected areas of the code space are reserved for control characters, only a single control code assignment is made at this time. This single assignment, having the identity *Character Select Code*, is pivotal, so it is given special treatment throughout this standard.

Other entities which may be associated with text characters (logos, signatures, etc.) are not addressed in this document, but a portion of the rendering code space is reserved for private use for this purpose. This allows for unique code assignments for private use, enabling incorporation of logos, signatures, and specialized graphics within strings destined for printers. Entities, however, contained within this specific private use code space are the responsibility of the communicant—this includes the administration and use of such a code space.

The assigned character codes currently number 10,354 characters and symbols, of which 2,854 are letters and symbols, and 6,727 are Japanese *kanji*. Assigned rendering character codes currently number 773 rendering entities, the largest group being accented characters for the Latin alphabet. The current list should be sufficient for general use, and is complete in the domains covered.

Further Xerox characters to be added in the future will include new technical domains and the alphabets of more languages (in preparation are Arabic/Farsi, Hebrew, Hindi, Chinese, Korean). Xerox periodically will publish updates to this document to reflect such additions.

How to use this standard

This standard specifies the character codes to be used for exchange of text information among Xerox system elements, for such purposes as communications protocols, electronic print files, and document interchange. Since the identified codes are to be used to represent text information transmitted between separate Xerox systems, sometimes spanning multilingual boundaries and code conversion interfaces, a unique, unambiguous, and absolute numerical code is assigned to each semantically different character. Such an assignment permits efficient text storage and manipulation, while also ensuring the information is interpreted properly.

Transmitted information sometimes can contain commands, names, and other forms of information. If translated to a different external code while actually being transmitted, this information must be translated back to these standard numerical codes before being interpreted at the other end, to ensure correct semantic meaning. The codes in this standard are used also for text and structure information in generalized, editable documents. When content is important, the assigned codes are the Xerox standard graphic character codes.

But when only shape or form is relevant, such as when you are printing on an external medium, then a rendering character code can be used for entities such as ligatures that the printing (or

display) systems are able to interpret. In the rendering of ligatures such as "ffi" where a single numeric code for "ffi" violates the singular semantic meaning of a graphic character code, the optimum coded form for printing is a rendering character code. When a rendering character is not used, the correct printing form is established by referencing (or sending along) a complete copy of the appropriate character forms, indexed by the non-standard character codes. Thus, there is more flexibility when no semantic meaning is applied to these text strings.

Design goals

We assign Xerox character codes to achieve specific design goals, as follows:

— To include all commonly used graphic and rendering characters on a fully international basis (refer to previous material)

— To assign each distinct character a unique, unambiguous, *absolute* numerical code

— To allow for high-quality computer typography, including text-rendering devices capable of an indefinite variety of different *looks* for each distinct character

— To permit text storage and text manipulation processes to be as efficient as possible

— To minimize code translations required to interface with existing information interchange standards, especially ISO, ASCII, and Teletex.

Character codes and text manipulation processes

Character codes can be viewed as the static representatives of textual content. Operating upon them are many active processes that handle or manipulate text in some way, as illustrated in figure 1-1.

Figure 1-1. **Text manipulation processes**
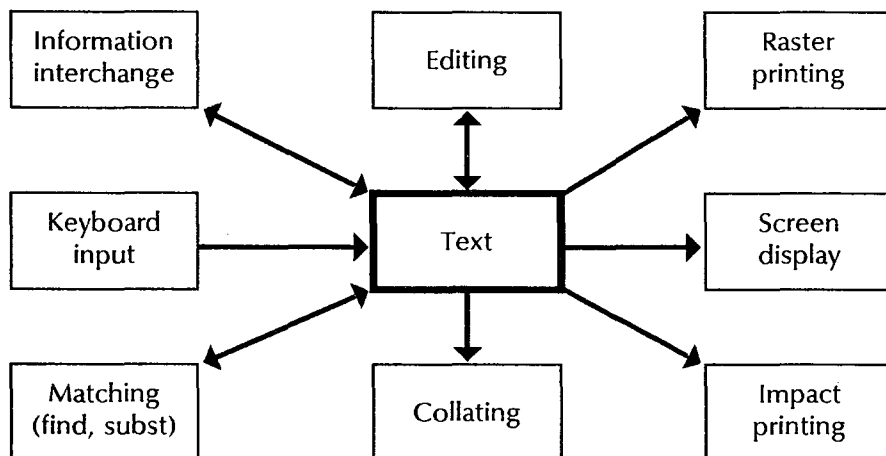
The assignment of character codes affects but does not define the text manipulation processes.

In a simple regime such as 7-bit ASCII for English text, the relationship between graphic character codes and text manipulation processes is very direct: there are invariant one-to-one mappings between input keystrokes, internal character codes, and output printer actions.

In the multilingual, multinational Xerox systems environment, there are many and various input keyboards, output printers and displays, information interchange encodings, national collating sequences, and so on. It is impossible, for example, for graphic and rendering character code assignments to correspond optimally to all of these at once. The increased flexibility of a sophisticated information processing system must come from more powerful text manipulation processes, not from the assignment of the character codes themselves. In the environment of text manipulation processes, illustrated in figure 1-1 as we have seen, the meaning and usage of numerical codes is aimed at the static representation of document text.

The present standard is concerned only with static text content as specified by assigned character codes. It does not define or describe any text manipulation processes. (It sometimes alludes to their existence, particularly in the discussion of technical details in appendix C, and in the partitioning of the code space to allocate restricted areas for special purposes.) Figure 1-1 should serve as a reminder that this document tells only part of the story of text processing.

Character codes and character appearance

A character's numerical code expresses its identity, its content, its semantic, but this does not fully determine a printed or displayed character's visual *appearance*. Separate occurrences of the same graphic character may look quite different. For example, the character code for Latin "C" is always 103_8 in octal notation, but:

This C looks big.

This c looks small.

This ᶜ looks superscripted.

This C̲ looks underlined.

This **C** looks bold.

This C looks serif form.

This C looks sans serif form.

This *C* looks italicized.

The character code models the "C-ness" common to all of the above letters, but there must be something else that models their difference in appearance. This appearance specification which can be applied to character codes may be called *looks* information. Thus, we can say:

character appearance = *function of* (character code, character looks)

In other words, textual information, or content, is to be stored and transmitted in the form of a sequence of numerical codes, but textual appearance is to be stored and transmitted separately in the form of ancillary looks information.

The notion that character appearance is a function of two variables can be visualized in a two-dimensional chart. A sample of such a chart is shown in figure 1-2.

Figure 1-2. **Character appearance as a function of character codes and character looks**

| Code(s) | Looks | | | | | | | |
	#1	#2	#3	#4	#5	#6	#7	#8
101_8	A	A	ᴬ	A̲	**A**	A	A	*A*
102_8	B	B	ᴮ	B̲	**B**	B	B	*B*
103_8	C	c	ᶜ	C̲	**C**	C	C	*C*

Each row of the chart represents a character code and each column indicates some particular combination of looks. The column labels ("#1," "#2," etc.) distinguish one column from another and indicate the number of character looks columns. To indicate an entry in the character appearance matrix (figure 1-2 being only a fragment of such a matrix) we use the following row and column notation: <character code, character looks> pair.

Character codes and general looks

A graphic character appearance matrix may contain a million or more < graphic character code, graphic character looks > pair entries. Recall from the "Scope" section that graphic character codes currently number 9,581 characters and symbols. In addition to the 9,581 rows, the number of character looks columns can be as numerous. For example, without standards, the variations (the product of the number of sizes, character orientations, character postures, weight, etc.), can exceed a thousand. Other attributes such as setwidth or proportion, strike out, underline, and superscript, add to the number of looks columns required.

To minimize the number of looks columns within such a matrix (and the required storage facilities) to several hundred, standards for character looks have been created. The *Xerox General Character Looks Standard* [15] specifies the family of standardized character looks. These are called general looks, defined as that finite set of looks upon which agreement has been reached and which can be broadly applied to all characters in a designated code space.

While this standard is not concerned with general looks, information as portrayed in figure 1-2, nor with the text rendering processes that convert such information into character appearance, it does identify those < rendering character code, rendering character > pairs having specific looks within a character appearance matrix. Old Style looks numerals are an example of specific looks; this look fails to meet the general look test. Only the numbers 0 through 9 can have this named traditional look.

Font matrices of < character code, character looks > pairs

There exists a third dimension to the visualization of character appearance as depicted in the two-dimensional chart of figure 1-2. Within this third dimension is the designated typeface which determines the design style of the pictures within an instance of a character appearance matrix, a multi-column appearance matrix existing for each named face. A typeface is defined as the features by which you recognize a character's design, hence the word "face."

A partial visualization of this third dimension—a series of small fragments of charts like figure 1-2, one for each face—illustrates that not all character appearance charts have identical contents. For example, the typeface named Lydian contains one picture of the uppercase character "A" with the general look weight attribute value = bold; however, in a non-general looks column, there appears a single, but similar entry—a picture of another uppercase "A," but having a different shape. To provide for these *variant* typographic objects which can occur within a typeface design, an identity is required for variant forms.

Recall from the "Scope" section that there are four types of rendering characters, one of which is a variant representation for a graphic character. Also recall the example given, the rendering character A instead of A. To provide an identity for the second

form of "A," a <rendering character code, variant rendering character> pair is required within the Lydian character appearance matrix.

To provide identities for variant character forms, a portion of the rendering character code space will be designated for this type of rendering character. However, since this type of rendering entity does not appear in every character appearance matrix, other standards which define the content of a named matrix and a font are also required. The word "font" or "fount" is derived from the word "foundry," where type was originally cast. "Font" has come to mean the vehicle which holds the typeface character collection.

The Xerox Character Grouping Standard [14] provides for several types of character code collections, one very small in size and another of equal or greater size as that of an ISO character collection or a graphic arts font. The code collection similar in size to the ISO concept of character sets is comprised of selected rows from a general looks character appearance matrix. The result of this selection process is a collection of pairs, <character code, graphic character> pairs.

Another type of Xerox code collection is the small code collection used in the creation of a character grouping. A character grouping is a union of several collections having different sizes, both large (a core collection) and small collections. Small collections having one <character code, character> pair, or several or more <character code, character> pairs, identify the contents of a character looks column in a character appearance matrix, one having non-general character looks.

Figure 1-2 serves as a reminder that this document tells only part of the story of text appearance and character design. It also reminds us that additional standards are required; many of these are in preparation.

Coding of <character code, character> pairs

The question of coding for meaning or shape must be answered in any character code standard. One family of <character code, character> pairs is that comprised solely of <character code, character shape> pairs. An example of such a family is the set of pairs given in the ANSI X3.4-1977 standard [1]. In that standard, character code 47_8 has an identity given as "Apostrophe (Closing Single Quotation Mark; Acute Accent)." For these entities in the ANSI collection (character set), we can say that all of the identities have the same apostrophe shape. Since all identities have a common character code, there exists ambiguity.

Conversely, using a family of <character code, character semantic> pairs and the ISO 6937 standard [10], it is possible to resolve the semantic ambiguity within the ANSI standard. For example, ISO 6937 provides the following <character code, character> pairs: <47_8, Apostrophe>, <271_8, Single quotation mark right>, and <302_8, Acute accent>. The ANSI standard can be derived from the ISO standard by removing (editing) two character codes and using the <47_8, Apostrophe> pair when interpreting octal codes 271_8 and 302_8 at a coding interface.

A primary design objective in the construction of this standard is semantic separation. While the Xerox standard uses national and international standards and maintains compatibility with traditional practices in constructing the standard, the goal is to minimize or eliminate semantic ambiguity (that is, separation of hyphen from minus in ISO 6937). Additions to this standard, after completion of construction from available standards, will consist primarily of < character code, character semantic > pairs.

While the Xerox standard is concerned with coding for meaning, its composition does not preclude the creation of a < character code, character > pairs collection based on coding for shape. The advantage in coding for meaning is that an all-graphic character code collection leads to document text suitable for subsequent processing or calculation. Such an optimized collection is preferred when a processible form of text—a document description used in applications beyond printing—is required. However, if only a final form (not processible) of text is required (that is, for printing originals), editing of a < character code, character semantic > pairs collection provides the necessary < character code, character shape > pairs collection.

Document organization

Chapter 2 describes the Xerox 16-bit code space and the character set allocations for the different text character code spaces.

Chapter 3 enumerates the one-to-one Xerox mapping between numerical codes and graphic characters in the graphic character code space.

Chapter 4 enumerates the one-to-one Xerox mapping between numerical codes and rendering characters in the rendering character code space.

Chapter 5 presents the 1-byte (or default) and 2-byte String Encoding.

Appendix A lists references, mainly information interchange standards.

Appendix B presents the same character codes as chapters 3 and 4 in chart form. Refer to chapters 3 and 4 to make certain of character semantics.

Appendix C addresses a number of technical questions concerning the details of the Xerox character code assignments.

Appendix D contains differences between the Xerox Character Code Standard and the Japanese Industrial Standard JIS C 6226-1983.

Appendix E is a cross reference of commonly used characters and symbols.

The Glossary lists common and unique text processing and printing terms.

2.   Character code space

We presume that textual information is to be stored and transmitted in the form of a sequence of numerical codes called *character codes*. Each character code thus represents a text entity called a *character*. This chapter describes the Xerox 16-bit code space and the character set allocation for the different types of text characters.

Background

International standards define the representation and mapping between numerical codes and text characters:

1. ISO 646—7-bit coded character set for information processing interchange [5].

2. ISO 2022—Code extension techniques and use with the ISO 7-bit coded character set [6,7].

The following illustration of the 7-bit code table (figure 2-1) is used throughout the standards documents of the International Standards Organization (ISO) and various national bodies, such as the American National Standards Institute Incorporated (ANSII). The table includes a set of 32 control characters and a set of 94 graphic characters. Control characters are contained within the first two columns (0 and 1) of the matrix, and the graphic characters fill the remaining six columns (2 through 7).

Figure 2-2 shows a complete character set in the 7-bit environment, referred to as the Set G0. The version illustrated in figure 2-2 is the International Reference Version (IRV) and is used in international information processing interchange. Control information allocated to the first two columns is shaded to indicate a restricted area which is not a segment of the graphic character code space. The character "space" indicated in the column/row position 2/0 is also shaded and may be regarded as either a control character *or* a graphic character. The position 7/15 is also excluded from the graphic character set code space and accounts for the set designation as 94 characters (6 columns x 16 rows, minus 2/0 and 7/15).

The Xerox standard maintains the same character set code space structure to facilitate conversion between the Xerox standard and existing international standards. We avoid assignment of graphic characters outside the outlined structure to minimize problems with interfacing at the terminal device level. The IRV set, designated in the absence of a working agreement between a sender and recipient of the data, also is used.

Figure 2-1. **7-bit code table**

b7 b6 b5 / b4 b3 b2 b1	0 0 0 / 0	0 0 1 / 1	0 1 0 / 2	0 1 1 / 3	1 0 0 / 4	1 0 1 / 5	1 1 0 / 6	1 1 1 / 7
0 0 0 0 / 0								
0 0 0 1 / 1								
0 0 1 0 / 2								
0 0 1 1 / 3								
0 1 0 0 / 4								
0 1 0 1 / 5								
0 1 1 0 / 6								
0 1 1 1 / 7								
1 0 0 0 / 8								
1 0 0 1 / 9								
1 0 1 0 / 10								
1 0 1 1 / 11								
1 1 0 0 / 12								
1 1 0 1 / 13								
1 1 1 0 / 14								
1 1 1 1 / 15								

The structure of a family of 8-bit codes remains compatible with the 7-bit structure. Within ISO documents, a set is appended to the Set G0 to create columns 8 through 15. Various character sets which may be assigned to the right side are referred to as G1, G2, or G3. A member of the right set is obtained by the addition of 1 bit to each of the bit combinations of the 7-bit code. This produces a set of 256 8-bit combinations and results in a graphic character set representative of 188 (94 x 2) characters. These left and right 94 graphic character sets also are referred to as the primary and supplementary sets.

Within the Xerox Character Code Standard, both character sets and graphic character codes generally follow the ISO structure, that is, assignment of graphic characters to 188 of the 256 possible locations. A character set is also said to be composed of two parts, each containing 94 characters. The left side is designated by the letter "L" following the character set identity, and the right side by the letter "R."

Figure 2-2. **Character set G0**

b4 b3 b2 b1		b7 0 b6 0 b5 0 **0**	0 0 1 **1**	0 1 0 **2**	0 1 1 **3**	1 0 0 **4**	1 0 1 **5**	1 1 0 **6**	1 1 1 **7**
0 0 0 0	**0**				0	@	P	`	
0 0 0 1	**1**			!	1	A	Q	a	q
0 0 1 0	**2**			"	2	B	R	b	r
0 0 1 1	**3**			#	3	C	S	c	s
0 1 0 0	**4**			¤	4	D	T	d	t
0 1 0 1	**5**			%	5	E	U	e	u
0 1 1 0	**6**			&	6	F	V	f	v
0 1 1 1	**7**			'	7	G	W	g	w
1 0 0 0	**8**			(	8	H	X	h	x
1 0 0 1	**9**			)	9	I	Y	i	y
1 0 1 0	**10**			*	:	J	Z	j	z
1 0 1 1	**11**			+	;	K	[	k	{
1 1 0 0	**12**			,	<	L	\	l	|
1 1 0 1	**13**			-	=	M	]	m	}
1 1 1 0	**14**			.	>	N	^	n	
1 1 1 1	**15**			/	?	O	__	o	

Specific numeric codes are assigned to every graphic character contained within the Xerox Graphic Library [14]. The goal of this assignment, which is patterned after established standards, is to achieve universality of global names, for example, names for networks, files, or character fonts. This goal is accomplished by assigning a unique, unambiguous, and absolute numeric code to

each graphic. The result is a correct machine interpretation of global names worldwide.

The code space

Character sets

The total range of numbers available for character codes is taken to be [0 .. 177777_8], that is, 16 bits. This would permit up to $65,536_{10}$ distinct codes. Allowing for reserved control character space, this reduces to 189 x 188 = 35,532.

It is extremely convenient to partition this range into 256 blocks of 256 codes each. Each such block is called a *character set*.

Each 16-bit character code can be viewed as consisting of two 8-bit bytes, where the high-order byte is the character set code and the low-order byte is the character's code within the character set (ranging [0 .. 377_8]), as shown below. This point of view often is very useful, especially with regard to string encoding (refer to chapter 5).

Figure 2–3. **16-bit Xerox character code**

1   2   3   4   5   6   7   8   9   10 11 12 13 14 15 16

CharSet Code	Char8Code
1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8
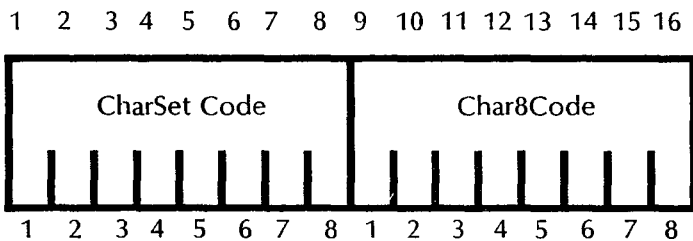
Character set allocation

The Xerox character codes are assigned so that characters within a single character set tend to be related to each other by traditional usage. The principal goal of this arrangement is to minimize character-set switching in runs of text, but grouping related characters together also tends to clarify the meaning of the character sets themselves. Character sets are also arranged so that successive character sets bear some relationship to each other.

The character sets currently used for Xerox character codes and the standard from which they are derived are listed here for reference. A more detailed explanation of each is given in chapters 3 and 4.

Graphic character set allocations

The character sets currently used for graphic character codes and the standard from which they are derived are listed here for reference. A more detailed explanation of each is given in chapter 3:

ASCII/ISO/Teletex	**Character Set 0_8**	Latin alphabet and punctuation
	Character Set 43_8	Extended Latin alphabet
	Character Set 46_8L	Greek alphabet
JIS	**Character Set 44_8L**	Japanese hiragana syllabary
	Character Set 45_8L	Japanese katakana syllabary
	Character Sets 60_8L through 117$8$L	JIS Level-I Japanese kanji
	Character Sets 120_8L through 163$8$L	JI Level-II Japanese kanji
	Character Set 165_8L	JIS Level-II Japanese kanji
Other	**Character Set 41_8**	Symbols 1–Japanese punctuation and mathematical symbols
	Character Set 42_8	Symbols 2–Japanese and mathematical symbols
	Character Set 44_8R	Chinese Bo-po-mo-fo
	Character Set 47_8	Cyrillic alphabet
	Character Set 50_8L	JIS and IBM forms characters
	Character Set 50_8R	Mosaic character
	Character Set 51_8	Runic and Gothic alphabets
	Character Set 52_8L	Extended Cyrillic
	Character Set 56_8L	Decorated rules
	Character Set 57_8L	Vertically written Japanese symbols
	Character Set 164_8L	Symbols 3–Miscellaneous Japanese symbols
	Character Set 166_8L	Symbols 4–Diamond enclosed numbers and circled letters
	Character Sets 167_8L through 176$8$L	Gaiji kanji characters
	Character Set 340_8	Extended Arabic alphabet
	Character Set 341_8	Hebrew alphabet
	Character Set 342_8	International phonetic alphabet
	Character Set 343_8	Korean Hangul alphabet
	Character Set 344_8L	Georgian alphabet
	Character Set 344_8R	Armenian alphabet
	Character Set 345_8	Devanagari alphabet
	Character Set 353_8	General and technical symbols 3
	Character Set 354_8	Extended ITC Dingbats 2 and general symbols
	Character Set 355_8	ITC Dingbats 1
	Character Set 356_8	General and technical symbols 2
	Character Set 357_8	General and technical symbols 1

Rendering character set allocations

The character sets currently used for rendering character codes are listed here for reference. A more detailed explanation of each is given in chapter 4:

Character Set 360_8	Ligatures and field format symbols
Character Set 361_8	Accented Latin characters 1
Character Set 361_8	Accented Latin characters 2
Character Set 363_8	Accent Greek 1
Character Set 364_8	Accent Greek 2
Character Set 365_8	Initial, medial, and final Arabic characters
Character Set 375_8	Variant representations for graphic characters
Character Set 376_8	Reserved, private use

Control character set allocations

Two large blocks of character sets are excluded from availability for use as graphic characters or rendering character codes:

Character Sets 1_8 through 40_8	Reserved
Character Sets 177_8 through 240_8	Reserved

These blocks are reserved for control character code assignments.

Character set select code 377_8

The 8-bit byte 377_8 is given unique treatment in the Xerox standard. It is pivotal to the string encoding (chapter 6), where it is called the *character set select code*. Because of this application, the byte 377_8 is not permitted to occur as high- or low-order byte of any Xerox character codes.

Preponderance of kanji characters

It is worth noting that over 90 percent of the distinct Xerox text characters are kanji ideographs (kanji is a Japanese word meaning *Chinese characters*). Although the Xerox architecture treats kanji the same as non-kanji characters, it is useful in many cases to distinguish the two classes of characters. For example, this document does not enumerate the names of the 6,349 kanji characters that currently have a Xerox character code assigned to them.

Expansion beyond 16 bits

This document specifies a 16-bit character code space. It does not preclude expansion to 24-bit, 32-bit, or greater, character codes. It is anticipated that future versions of this standard will define character code assignments of lengths greater than 16 bits.

The chart on the following page summarizes all the above aspects of the division of the 16-bit code space into character sets and the allocation of the character set sub-spaces.

Figure 2-4.   **Version 2.0 set allocation**

XEROX Version 2.0 Set Allocation

Each square represents one Character Set
(HIGH - order character code byte)
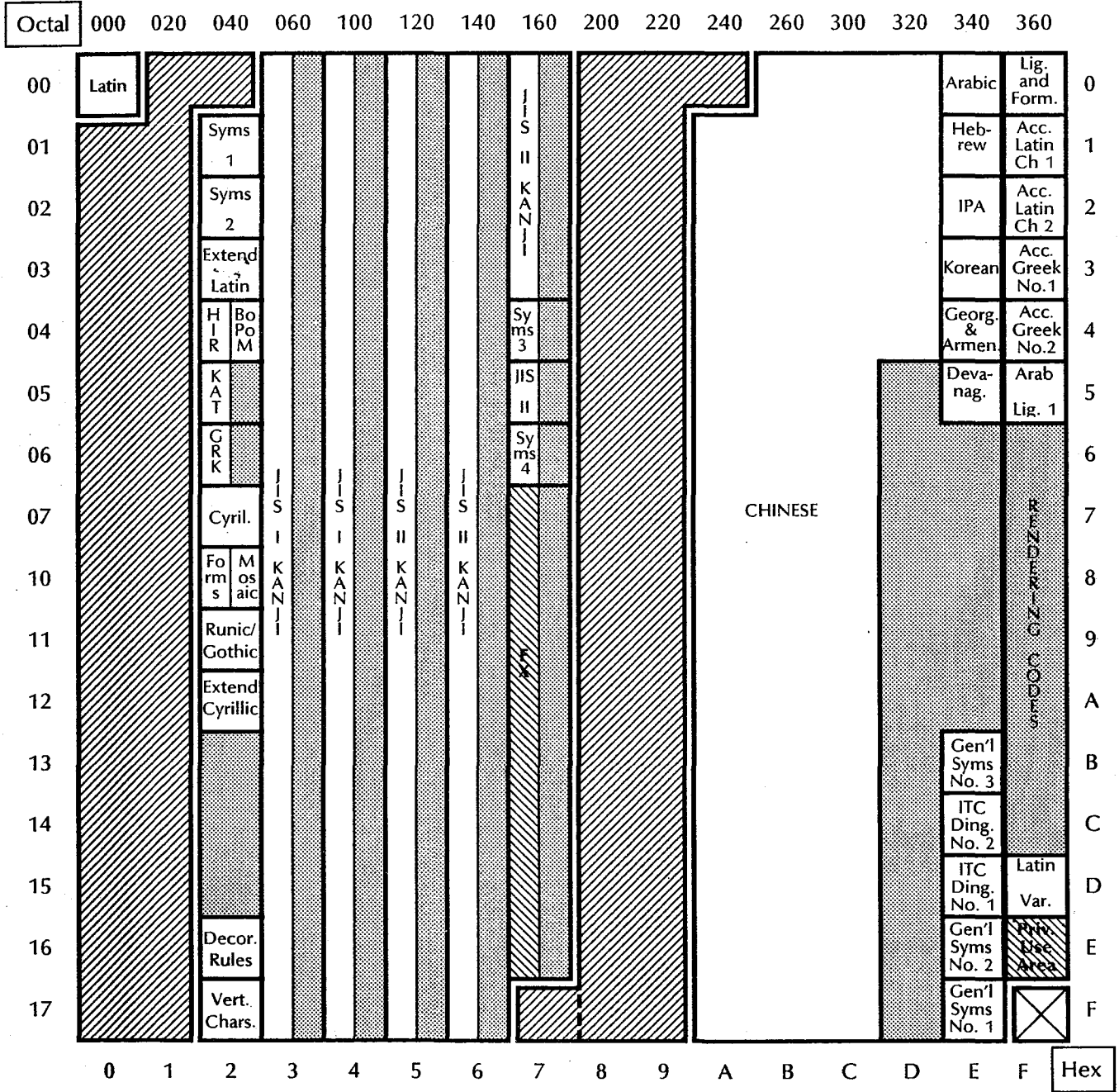
Private Use Area	Reserved, Unassigned	Character Set Select Code
		Reserved, Not Used

3.   Graphic character codes

Graphic character codes

To discuss one character as distinct from another, we can refer to it by its traditional name(s), by its role(s) in a traditional alphabet or symbol system, or by the context(s) in which it is traditionally used. This collection of traditional usage information, which identifies the character, can be referred to in brief as its *semantic*.

To indicate a graphic character, it also helps to show a picture of it. In some cases, however, this is misleading since different graphic characters can look very similar or even identical, for example, hyphen and minus sign. In the listing that follows, a picture of a graphic character is shown, but it is the semantic information that takes precedence in defining the identity of the character.

In some cases, we go so far as to specify what the graphic character is *not*, in order to distinguish it from other graphic characters that look similar or identical. In other cases, we use the "=" sign to indicate either synonymous names or alternative applications for the same Xerox character. We also use brackets ("[ ]") to provide clarifying examples.

Several graphic character shapes traditionally imply the same semantic, that is, the shapes associated with the semantic are approximately equal. In this case, we consider the possibility that the alternate forms are looks variants of each other and use a designation such as "approximately equal, type 1" and "approximately equal, type 2" to distinguish one variant from another.

In referencing other registries and registered character sets we use "< >" to delimit a registry name and the recorded identifier. For example, character reference to an assigned American Mathematical Society TEX Name is the abbreviated registry name followed by the AMS character identifier (for example, <AMS, rightarrow> for the character shape "→").

We always use octal notation, such as (41_8 | 124_8), to depict the two-byte structure of a character code. For example, (41_8 | 124_8) refers to the character in Character Set 41_8, which has the 8-bit code 124_8 within that character set. For convenience, we also make reference to decimal and hexadecimal notation (for example, $0_8 = 0_{10} = 0_{16}$).

The graphic character code sets

Character Set $0_8 = 0_{10} = 0_{16}$: ASCII/ISO/CCITT Latin alphabet and punctuation

Character Set 0_8 serves as Xerox' default 8-bit character codespace (in the character sequence body format, see chapter 6). This fact makes Character Set 0 the most important Xerox character set, especially with regard to communicating with existing systems. Therefore, Character Set 0 is designed to be fully compatible with existing international standards. It is illustrated in figure 3-1.

Character Set 0_8L(Left) is identical to the graphics of the ISO International Reference Version (IRV). This version of ISO 646 is used when there is no requirement for a national or an application-oriented version.

In some cases where ASCII/ISO/CCITT maps more than one distinct semantic into the same character code (hyphen and minus sign), the Xerox standard has two distinct characters, one of which is placed outside of Character Set 0. The result is still ASCII/ISO/CCITT compatible, but permits the distinction to be made when necessary.

Character Set 0_8R(Right) is identical to the supplementary graphic set for text communication from ISO 6937. This collection of graphics is also considered to be generic, in that it includes the graphics proposed in the International Text Communication Standard [10]. The composite left and right character sets are shown in the illustration of Character Set 0 in figure 3-1. The structure follows the pattern established in the "Background" section of chapter 2, and is presented using octal notation.

Figure 3-1. **Xerox Character Set 0**

XEROX Character Set 000₈

Latin alphabet and punctuation

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00			word space	0	@	P	` spacing	p				° degree		— hor. bar	Ω ohms	ĸ grnlnd	0
01			!	1	A	Q	a	q			¡ spanish	± + or −	` grave	¹ superior	Æ diphth.	æ diphth.	1
02			" neutral	2	B	R	b	r			¢ cent	² superior	´ acute	® register	Đ croatian	đ croatian	2
03			#	3	C	S	c	s			£ pound	³ superior	^ circum.	© cpyright	ª spanish	ð iceland	3
04			¤ currency	4	D	T	d	t			$ dollar	× times	~ tilde	™ tr. mark	Ħ maltese	ħ maltese	4
05			%	5	E	U	e	u			¥ yen	µ micro-	¯ macron	♪ 1/8 note	J dotless j	ı dotless i	5
06			&	6	F	V	f	v				¶ paragr.	˘ breve		IJ dutch	ij dutch	6
07			' apostr.	7	G	W	g	w			§ section	· cent. dot	· dot		Ŀ catalan	ŀ catalan	7
10			(	8	H	X	h	x				÷ divide	¨ diaresis		Ł polish	ł polish	8
11			)	9	I	Y	i	y			' left q.	' right q.			Ø norweg.	ø norweg.	9
12			*	:	J	Z	j	z			" left q.	" right q.	° ring		Œ diphth.	œ diphth.	A
13			+	;	K	[	k	{			« left q.	» right q.	¸ cedilla		º spanish	ß german	B
14			,	<	L	\	l	|			←	¼ en frac.	_ undrline	⅛ en frac.	Þ iceland	þ iceland	C
15			– neutral	=	M	]	m	}			↑	½ en frac.	˝ db acute	⅜ en frac.	Ŧ lapp	ŧ lapp	D
16			.	>	N	^ spacing	n	~ spacing			→	¾ en frac.	˛ ogonek	⅝ en frac.	Ŋ lapp	ŋ lapp	E
17			/	?	O	_ low bar	o				↓	¿ en frac.	ˇ hachek	⅞ en frac.	'n s. africa	☒	F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Legend:

- ▒ Reserved, Unassigned
- ☒ Character Set Select Code
- ▨ Reserved, not used

The character identifier (low-order byte) within Set 0_8 (see reference chart in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 0_8: Latin
40_8	32	20	SP	Space (normally nonprinting)	
41_8	33	21	!	Exclamation point Also: Exclamation mark	
42_8	34	22	"	Neutral (vertical) double quote	
43_8	35	23	#	Number sign; <ITC, 374>	
44_8	36	24	¤	General currency symbol (represents any currency)	
45_8	37	25	%	Percent sign	
46_8	38	26	&	Ampersand	
47_8	39	27	'	Apostrophe	
50_8	40	28	(	Opening parenthesis Also: Dingbat (Parenthesis, beginning (open), curved); <ITC, 199S>	
51_8	41	29	)	Closing parenthesis Also: Dingbat (Parenthesis, close (end), curved); <ITC, 199T>	
52_8	42	2A	*	Asterisk	
53_8	43	2B	+	Plus sign	
54_8	44	2C	,	Comma	
55_8	45	2D	–	Neutral dash Also: hyphen/minus sign	
56_8	46	2E	.	Period = full stop	
57_8	47	2F	/	Slant = solidus = virgule = slash	
60_8	48	30	0	Digit 0	
61_8	49	31	1	Digit 1	
62_8	50	32	2	Digit 2	
63_8	51	33	3	Digit 3	
64_8	52	34	4	Digit 4	
65_8	53	35	5	Digit 5	
66_8	54	36	6	Digit 6	
67_8	55	37	7	Digit 7	
70_8	56	38	8	Digit 8	
71_8	57	39	9	Digit 9	
72_8	58	3A	:	Colon	
73_8	59	3B	;	Semicolon	
74_8	60	3C	<	Less than	

Identifier Octal Dec Hex			Shape	Character description	Character set 0₈: Latin
75₈	61	3D	=	Equals	
76₈	62	3E	>	Greater than	
77₈	63	3F	?	Question mark	
100₈	64	40	@	Commercial at	
101₈	65	41	A	Uppercase Latin (Roman) letter A	
102₈	66	42	B	Uppercase Latin (Roman) letter B	
103₈	67	43	C	Uppercase Latin (Roman) letter C	
104₈	68	44	D	Uppercase Latin (Roman) letter D	
105₈	69	45	E	Uppercase Latin (Roman) letter E	
106₈	70	46	F	Uppercase Latin (Roman) letter F	
107₈	71	47	G	Uppercase Latin (Roman) letter G	
110₈	72	48	H	Uppercase Latin (Roman) letter H	
111₈	73	49	I	Uppercase Latin (Roman) letter I	
112₈	74	4A	J	Uppercase Latin (Roman) letter J	
113₈	75	4B	K	Uppercase Latin (Roman) letter K	
114₈	76	4C	L	Uppercase Latin (Roman) letter L	
115₈	77	4D	M	Uppercase Latin (Roman) letter M	
116₈	78	4E	N	Uppercase Latin (Roman) letter N	
117₈	79	4F	O	Uppercase Latin (Roman) letter O	
120₈	80	50	P	Uppercase Latin (Roman) letter P	
121₈	81	51	Q	Uppercase Latin (Roman) letter Q	
122₈	82	52	R	Uppercase Latin (Roman) letter R	
123₈	83	53	S	Uppercase Latin (Roman) letter S	
124₈	84	54	T	Uppercase Latin (Roman) letter T	
125₈	85	55	U	Uppercase Latin (Roman) letter U	
126₈	86	56	V	Uppercase Latin (Roman) letter V	
127₈	87	57	W	Uppercase Latin (Roman) letter W	
130₈	88	58	X	Uppercase Latin (Roman) letter X	
131₈	89	59	Y	Uppercase Latin (Roman) letter Y	
132₈	90	5A	Z	Uppercase Latin (Roman) letter Z	
133₈	91	5B	[	Opening bracket	
134₈	92	5C	\	Reverse slant = backslash = reverse solidus = reverse virgule; <AMS, backslash>	
135₈	93	5D	]	Closing bracket	

Identifier			Shape	Character description	Character set 0₈: Latin
Octal	Dec	Hex			
136₈	94	5E	^	Circumflex accent (spacing character)	
137₈	95	5F	_	Low bar (spacing character)	
140₈	96	60	`	Grave accent (spacing character)	
141₈	97	61	a	Lowercase Latin (Roman) letter a	
142₈	98	62	b	Lowercase Latin (Roman) letter b	
143₈	99	63	c	Lowercase Latin (Roman) letter c	
144₈	100	64	d	Lowercase Latin (Roman) letter d	
145₈	101	65	e	Lowercase Latin (Roman) letter e	
146₈	102	66	f	Lowercase Latin (Roman) letter f	
147₈	103	67	g	Lowercase Latin (Roman) letter g	
150₈	104	68	h	Lowercase Latin (Roman) letter h	
151₈	105	69	i	Lowercase Latin (Roman) letter i	
152₈	106	6A	j	Lowercase Latin (Roman) letter j	
153₈	107	6B	k	Lowercase Latin (Roman) letter k	
154₈	108	6C	l	Lowercase Latin (Roman) letter l	
155₈	109	6D	m	Lowercase Latin (Roman) letter m	
156₈	110	6E	n	Lowercase Latin (Roman) letter n	
157₈	111	6F	o	Lowercase Latin (Roman) letter o	
160₈	112	70	p	Lowercase Latin (Roman) letter p	
161₈	113	71	q	Lowercase Latin (Roman) letter q	
162₈	114	72	r	Lowercase Latin (Roman) letter r	
163₈	115	73	s	Lowercase Latin (Roman) letter s	
164₈	116	74	t	Lowercase Latin (Roman) letter t	
165₈	117	75	u	Lowercase Latin (Roman) letter u	
166₈	118	76	v	Lowercase Latin (Roman) letter v	
167₈	119	77	w	Lowercase Latin (Roman) letter w	
170₈	120	78	x	Lowercase Latin (Roman) letter x	
171₈	121	79	y	Lowercase Latin (Roman) letter y	
172₈	122	7A	z	Lowercase Latin (Roman) letter z	
173₈	123	7B	{	Opening brace Also: Dingbat (Brace, beginning (open)); <AMS, lbrace>; <ITC, 331>	
174₈	124	7C	|	Vertical bar Also: Dingbat (Bar, vertical, single); <ITC, 325>	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 0_8 Latin
175_8	125	7D	}	Closing brace Also: Dingbat (Brace, closing, (end)); <AMS, rbrace>; <ITC, 332>	
176_8	126	7E	~	Tilde (spacing character)	
241_8	161	A1	¡	Inverted exclamation point (Spanish) Also: Exclamation mark (Spanish) inverted	
242_8	162	A2	¢	Cent sign	
243_8	163	A3	£	Pound-Sterling sign	
244_8	164	A4	$	Dollar sign	
245_8	165	A5	¥	Yen sign (Japanese); <AMS, yen>	
247_8	167	A7	§	Section sign; <AMS, S>; <ITC, 172>	
251_8	169	A9	'	Left single Quote = single quote open An alternate rendition of "left single quote" is 375_8 | 251_8. Also: Dingbat (Quotation mark, beginning, single, curved); <ITC, 113>	
252_8	170	AA	"	Left double Quote = double quote openx An alternate rendition of "left double quote" is 375_8 | 252_8 Also: Dingbat (Quotation mark, beginning, double, curved); <ITC, 313)	
253_8	171	AB	«	Left double guillemet (European quotation mark)—*not* much-less-than (357_8 | 102_8) Also: Guillemet, left, double	
254_8	172	AC	←	West arrow = leftward arrow Also: Arrow, barbed, light, west pointing	
255_8	173	AD	↑	North arrow = upward arrow Also: Arrow, barbed, light, north pointing	
256_8	174	AE	→	East arrow = rightward arrow Also: Dingbat (Arrow, barbed, light, east pointing); <ITC, 199G>	
257_8	175	AF	↓	South arrow = downward arrow Also: Arrow, barbed, light, south pointing	
260_8	176	B0	°	Degree sign (spacing character)—*not* over-ring accent (0_8 | 312_8)	
261_8	177	B1	±	Plus/minus sign; <AMS, pm>	
262_8	178	B2	^{2}	Superscript 2 as independent character from 2 Also: Squared and reference 2 This character may or may not have the same shape as 375_8 | 342_8 (Superscript 2)	
263_8	179	B3	^{3}	Superscript 3 as independent character from 3 Also: Cubed and reference 3 This character may or may not have the same shape as 375_8 | 343_8 (Superscript 3)	
264_8	180	B4	×	Multiply sign; <AMS, times>	
265_8	181	B5	μ	Micro sign—*not* Greek "mu" (46_8 | 157_8)	

Identifier Octal Dec Hex			Shape	Character description	Character set 0₈: Latin
266₈	182	B6	¶	Paragraph sign = pilcrow; <AMS, P>; <ITC, 111>	
267₈	183	B7	·	Centered dot—*not* scaler product (356₈ | 264₈); <AMS, cdotp>	
270₈	184	B8	÷	Divide sign; <AMS, div>	
271₈	185	B9	'	Right single quote = single quote closed Also: Dingbat (Quotation mark, closing, single, curved); <ITC, 114>	
272₈	186	BA	"	Right double quote = double quote closed Also: Dingbat (Quotation mark, closing, double, curved); <ITC, 314>	
273₈	187	BB	»	Right double guillemet (European quotation mark)—*not* much-greater-than (357₈ | 103₈)	
274₈	188	BC	¼	Fraction one quarter, en set, as independent character	
275₈	189	BD	½	Fraction one half, en set, as independent character	
276₈	190	BE	¾	Fraction three quarters, en set, as independent character	
277₈	191	BF	¿	Inverted question mark (Spanish) Also: Question mark, Spanish, inverted	
301₈	193	C1	`	Grave accent (nonspacing lowercase)[1] Alternate: 375₈ | 301₈	
302₈	194	C2	´	Acute accent (nonspacing lowercase) Alternate: 375₈ | 302₈	
303₈	195	C3	^	Circumflex accent = hat (nonspacing lowercase) Alternate: 375₈ | 303₈	
304₈	196	C4	~	Tilde accent (nonspacing lowercase) Alternate: 375₈ | 304₈	
305₈	197	C5	¯	Macron accent (nonspacing lowercase) Alternate: 375₈ | 305₈	
306₈	198	C6	˘	Breve accent (nonspacing lowercase) Alternate: 375₈ | 306₈	
307₈	199	C7	·	Over-dot accent (nonspacing lowercase) Alternate: 375₈ | 307₈	
310₈	200	C8	¨	Diaeresis accent = umlaut accent (nonspacing lowercase) Alternate: 375₈ | 310₈	
312₈	202	CA	°	Over-ring accent—*not* degree sign (0₈ | 260₈) (nonspacing lowercase) Alternate: 375₈ | 312₈	
313₈	203	CB	¸	Cedilla undermark (nonspacing lowercase) Alternate: 375₈ | 313₈	
314₈	204	CC	_	Underline (non-spacing undermark)	
315₈	205	CD	˝	Double acute accent (nonspacing lowercase) Alternate: 375₈ | 315₈	

[1] In this standard, nonspacing explicitly implies that the escapement value is zero.

Identifier			Shape	Character description	Character set 0₈: Latin
Octal	Dec	Hex			
316₈	206	CE	˛	Ogonek undermark = Polish hook (nonspacing lowercase) Alternate: 375₈ | 316₈	
317₈	207	CF	ˇ	Hachek accent = caron (nonspacing lowercase) Alternate: 375₈ | 317₈	
320₈	208	D0	—	Horizontal bar	
321₈	209	D1	¹	Superscript 1 as independent character from 1 Also: Reference 1 This character may or may not have the same shape as 375₈ | 341₈ (Superscript 1)	
322₈	210	D2	®	Registered sign; < AMS, circledR >	
323₈	211	D3	©	Copyright sign; < AMS, circledC >	
324₈	212	D4	™	Trademark sign (TM)	
325₈	213	D5	♪	Music Note = eighth note	
334₈	220	DC	⅛	Fraction one eighth, en set, as independent character	
335₈	221	DD	⅜	Fraction three eighths, en set, as independent character	
336₈	222	DE	⅝	Fraction five eighths, en set, as independent character	
337₈	223	DF	⅞	Fraction seven eighths, en set, as independent character	
340₈	224	E0	Ω	Ohm sign—*not* uppercase Greek "omega" (46₈ | 135₈)	
341₈	225	E1	Æ	Uppercase AE digraph; < AMS, AE >	
342₈	226	E2	Đ	Uppercase D with stroke (Croatian)	
343₈	227	E3	ª	Feminine Spanish ordinal indicator as independent character from a	
344₈	228	E4	Ħ	Uppercase H with stroke (Maltese)	
345₈	229	E5	ȷ	Lowercase dotless j; < AMS, j >; (only when italic)	
346₈	230	E6	IJ	Uppercase IJ digraph (Dutch)	
347₈	231	E7	Ŀ	Uppercase L with middle dot (Catalan)	
350₈	232	E8	Ł	Uppercase L with stroke (Polish); < AMS, L >	
351₈	233	E9	Ø	Uppercase O with slash (Norwegian, Danish); < AMS, O >	
352₈	234	EA	Œ	Uppercase OE digraph; < AMS, OE >	
353₈	235	EB	º	Masculine Spanish ordinal indicator as independent character from o	
354₈	236	EC	Þ	Uppercase "Thorn" (Icelandic)	
355₈	237	ED	Ŧ	Uppercase T with stroke (Lapp)	
356₈	238	EE	Ŋ	Uppercase "Eng" (Lapp)	
357₈	239	EF	ʼn	Lowercase n with apostrophe (South African)	
360₈	240	F0	ĸ	Lowercase k (Greenlandic)	
361₈	241	F1	æ	Lowercase ae digraph; < AMS, ae >	

Identifier			Shape	Character description	Character set 0₈: Latin
Octal	Dec	Hex			
362₈	242	F2	đ	Lowercase d with stroke (Croatian)	
363₈	243	F3	ð	Lowercase "Eth" (Icelandic); <AMS, eth>	
364₈	244	F4	ħ	Lowercase h with stroke (Maltese—*not* Planck's constant) (357₈ | 150₈)	
365₈	245	F5	ı	Lowercase dotless i (Turkish); <AMS, i>; (only when italic)	
366₈	246	F6	ij	Lowercase ij digraph (Dutch)	
367₈	247	F7	ŀ	Lowercase l with middle dot (Catalan)	
370₈	248	F8	ł	Lowercase l with stroke (Polish); <AMS, l>	
371₈	249	F9	ø	Lowercase o with slash (Norwegian, Danish); <AMS, o>	
372₈	250	FA	œ	Lowercase oe digraph; <AMS, oe>	
373₈	251	FB	ß	Double s = Ess-zed = sharp s (German); <AMS, ss>	
374₈	252	FC	þ	Lowercase "Thorn" (Icelandic)	
375₈	253	FD	ŧ	Lowercase t with stroke (Lapp)	
376₈	254	FE	ŋ	Lowercase "Eng" (Lapp	

Character Set $41_8 = 33_{10} = 21_{16}$: Symbols 1-Japanese punctuation and math symbols

The following are character codes (low-order byte) within Character Set 41₈ (see reference chart in appendix B):

Identifier			Shape	Character description	Character set 41₈: Symbols
Octal	Dec	Hex			
41₈	33	21	SP	Fixed pitch kanji space (normally nonprinting)	
42₈	34	22	、	Japanese comma = Chinese comma	
43₈	35	23	。	Japanese period = Chinese period	
44₈	36	24	,	Square comma	
45₈	37	25	.	Square period	
53₈	43	2B	゛	"Daku-on" mark	
54₈	44	2C	゜	"Han-daku-on" mark	
63₈	51	33	ヽ	Repeat katakana	
64₈	52	34	ヾ	Repeat katakana with daku-on	
65₈	53	35	ゝ	Repeat hiragana	
66₈	54	36	ゞ	Repeat hiragana with daku-on	
67₈	55	37	〃	"Reduplicate"	
70₈	56	38	仝	"Reduplicate above item"	
71₈	57	39	々	Repeat kanji	
72₈	58	3A	〆	"Shime"	

Identifier Octal Dec Hex	Shape	Character description	Character set 41₈: Symbols

Identifier			Shape	Character description
Octal	Dec	Hex		
73₈	59	3B	○	"Kanji zero"
74₈	60	3C	‒	Long vowel bar (spacing character)
76₈	62	3E	-	Hyphen—*not* minus (0₈ | 55₈)
100₈	64	40	⋖	Less than, with dot inside; <AMS, lessdot>
101₈	65	41	⋗	Greater than, with dot inside; <AMS, gtrdot>
102₈	66	42	‖	Parallel sign, type 1 = double vertical bar; <AMS, Vert> (as ordinary character, e.g., ‖x‖); <AMS, parallel> (as a relation, e.g., A‖B) Alternate: type 2 = (357₈ | 110₈)
103₈	67	43	⊩	Forces; <AMS, Vdash>
104₈	68	44	…	Three-dot leader on an em body
105₈	69	45	‥	Two-dot leader on an em body
106₈	70	46	⋘	Very much less than; <AMS, lll>; <AMS, llless>;<AMS, Ll>
107₈	71	47	⋙	Very much greater than; <AMS, ggg>; <AMS, gggtr>; <AMS, Gg>
110₈	72	48	⦇	Left open angled bracket
111₈	73	49	⦈	Right open angled bracket
112₈	74	4A	⟦	Left open bracket
113₈	75	4B	⟧	Right open bracket
114₈	76	4C	❨	Left broken bracket Also: Dingbat (Parenthesis, beginning (open), angled); <ITC, 119>
115₈	77	4D	❩	Right broken bracket Also: Dingbat (Parenthesis, closing (end), angled); <ITC, 120>
116₈	78	4E	⋚	Less than, equal to, or greater than, type 1; <AMS, lesseqgtr>; Alternate: type 2 = (41₈ | 164₈)
117₈	79	4F	⋛	Greater than, equal to, or less than, type 1; <AMS, gtreqless>; Alternate: type 2 = (41₈ | 165₈)
120₈	80	50	≺	Precedes Also: is dominated by; <AMS, prec>
121₈	81	51	≻	Succeeds = dominates; <AMS, succ>
122₈	82	52	≼	Precedes (has lower rank than) or equals, type 1; <AMS, preccurlyeq>; Alternate: type 2 = (42₈ | 145₈)
123₈	83	53	≽	Succeeds (has higher rank than) or equals, type 1; <AMS, succcurlyeq>; Alternate: type 2 = (42₈ | 146₈)
124₈	84	54	⋞	Curly equal to or precedes (has lower rank than); <AMS, curlyeqprec>
125₈	85	55	⋟	Curly equal to or succeeds (has higher rank than); <AMS, curlyeqsucc>
126₈	86	56	⌜	Left Japanese quote = left Chinese quote
127₈	87	57	⌟	Right Japanese quote = right Chinese quote

| Identifier | | | Shape | Character description | Character set 41₈: Symbols |
Octal	Dec	Hex			
130₈	88	58	『	Left Japanese double quote = left Chinese double quote	
131₈	89	59	』	Right Japanese double quote = right Chinese double quote	
132₈	90	5A	【	Left black lenticular bracket	
133₈	91	5B	】	Right black lenticular bracket	
134₈	92	5C	⊆	Subset of or equal to < AMS, subseteqq >	
135₈	93	5D	⊇	Includes or is equal to < AMS, supseteqq >	
136₈	94	5E	⋐	Double subset; < AMS, Subset >	
137₈	95	5F	⋑	Double superset; < AMS, Supset >	
140₈	96	60	⩽	"Equal to or less than"; < AMS, eqslantless >	
141₈	97	61	⩾	"Equal to or greater than"; < AMS, eqslantgtr >	
142₈	98	62	≠	Does not equal; < AMS, ne >	
143₈	99	63	≲	"Less than or equivalent to"; < AMS, lessapprox >	
144₈	100	64	≳	"Greater than or equivalent to"; < AMS, gtrapprox >	
145₈	101	65	≤	"Less than or equal to," type 1; < AMS, leq >; < AMS, le >; Alternate: type 2 = (41₈ | 160₈), type 3 = (41₈ | 162₈)	
146₈	102	66	≥	"Greater than or equal to," type 1; < AMS, geq >; < AMS, ge >; Alternates: type 2 = (41₈ | 161₈), type 3 = (41₈ | 162₈)	
147₈	103	67	∞	Infinity; < AMS, infty >	
150₈	104	68	∴	Therefore; < AMS, therefore >	
151₈	105	69	♂	Male = Mars	
152₈	106	6A	♀	Female = Venus	
153₈	107	6B	‴	Triple prime	
154₈	108	6C	′	Minutes sign = feet sign = prime sign—*not* acute accent (0₈ | 302₈); < AMS, prime >	
155₈	109	6D	″	Seconds sign = double prime = inches sign (spacing character)—*not* double acute accent (0₈ | 315₈) Also: Dingbat (Inch mark); < ITC, 316 >	
156₈	110	6E	°C	Degrees-Celsius symbol	
157₈	111	6F	⊪	Turnstile with triple vertical bars ; < AMS, Vvdash >;	
160₈	112	70	≦	"Less than or equal to," type 2; < AMS, leqq >; Alternates: type 1 = (41₈ | 145₈), type 3 = (41₈ | 162₈)	
161₈	113	71	≧	"Greater than or equal to," type 2; < AMS, geqq >; Alternates: type 1 = (41₈ | 146₈), type 3 = (41₈ | 162₈)	
162₈	114	72	⩽	"Less than or equal to," type 3; < AMS, leqslant >; Alternates: type 1 = (41₈ | 145₈), type 2 = (41₈ | 160₈)	
163₈	115	73	⩾	"Greater than or equal to," type 3; < AMS, geqslant >; Alternates: type 1 = (41₈ | 146₈), type 2 = (41₈ | 161₈)	

Identifier			Shape	Character description	Character set 41₈: Symbols
Octal	Dec	Hex			
164₈	116	74	⩋	Less than, equal to, or greater than, type 2; <AMS, lesseqqgtr>; Alternate: type 1 = (41₈ | 116₈)	
165₈	117	75	⩌	Greater than, equal to, or less than, type 2; <AMS, gtreqqless>; Alternate: type 1 = (41₈ | 117₈)	
166₈	118	76	∥	Short parallel; <AMS, shortparallel>	
167₈	119	77	⊖	Circled dash; <AMS, circleddash>	
170₈	120	78	⊛	Circled asterisk; <AMS, circledast>	
171₈	121	79	☆	White star Also: Dingbat (Star, outline (open)); <ITC, 135>	
172₈	122	7A	★	Black star = filled star Also: Dingbat (Star, solid); <AMS, bigstar>; <ITC, 133>	
173₈	123	7B	○	White circle Also: Dingbat (Circle, monotone, open); <ITC, 124>	
174₈	124	7C	●	Black circle Also: Dingbat (Circle, solid); <ITC, 123>	
175₈	125	7D	◎	Two concentric white circles = bull's eye Also: Concentricity (ANSI Y14.5)	
176₈	126	7E	◇	White diamond Also: Dingbat (Diamond, open); <AMS, lozenge>; <ITC, 324>	
241₈	161	A1	≼	Precedes or equivalent to; <AMS, precsim>	
242₈	162	A2	≽	Succeeds or equivalent to; <AMS, succsim>	
243₈	163	A3	⪷	Precedes or approximates; <AMS, precapprox>	
244₈	164	A4	⪸	Succeeds or approximates; <AMS, succapprox>	
245₈	165	A5	⌣	Cup product; <AMS, smallsmile>	
246₈	166	A6	⌢	Frown; <AMS, smallfrown>	
247₈	167	A7	∣	Short vertical stroke; <AMS, shortmid>	
250₈	168	A8	≐	Geometrically equal to; equals between dots; <AMS, doteqdot>; <AMS, Doteq>	
251₈	169	A9	≗	Approximately equal to, type 5; <AMS, circeq>; Alternates: type 1 = (357₈ | 167₈), type 2 = (357₈ | 171₈), type 3 = (42₈ | 142₈), type 4 = (42₈ | 170₈)	
252₈	170	AA	⊜	Centered circle equals; <AMS, eqcirc>	
253₈	171	AB	≜	Equals by definition; <AMS, triangleq>	
254₈	172	AC	⋔	Proper intersection; pitchfork; <AMS, pitchfork>	
255₈	173	AD	⨿	Coproduct (binary operator, no limits); <AMS, amalg>	
256₈	174	AE	✠	Maltese Cross; <AMS, maltese>; <ITC, 299R>	
257₈	175	AF	◊	Small white diamond	

Identifier Octal	Dec	Hex	Shape	Character description — Character set 41₈: Symbols
260₈	176	B0		Not equivalent to, type 1; <AMS, nsim>; Alternate: type 2 = (356₈ | 376₈)
261₈	177	B1		Precedes, not similar; <AMS, precnsim>
262₈	178	B2		Succeeds, not similar; <AMS, succnsim>
263₈	179	B3		Precedes, not approximate; <AMS, precnapprox>
264₈	180	B4		Succeeds, not approximate; <AMS, succnapprox>
265₈	181	B5		Does not divide, type 2; <AMS, nshortmid>; Alternate: type 1 = (357₈ | 107₈)
266₈	182	B6		Is not parallel to, type 2; <AMS, nshortparallel>; Alternate: type 1 = (357₈ | 111₈)
267₈	183	B7		Does not prove; <AMS, nvdash>
270₈	184	B8		Does not model; <AMS, nvDash>
271₈	185	B9		Does not force; <AMS, nVdash>
272₈	186	BA		Negated turnstile with double horizontal and vertical bars; <AMS, nVDash>
273₈	187	BB		Is not a proper normal subgroup of; <AMS, ntriangleleft>
274₈	188	BC		Does not contain as normal subgroup; <AMS, ntriangleright>
275₈	189	BD		Is not a normal subgroup of; <AMS, ntrianglelefteq>
276₈	190	BE		Does not contain as normal or equal to; <AMS, ntrianglerighteq>
277₈	191	BF		Not approximately equal to; <AMS, nsimeq>
300₈	192	C0		Neither approximately nor actually equal to; <AMS, napprox>
301₈	193	C1		Properly contained in, type 1; <AMS, subsetneqq>; Alternate: type 2 = (41₈ | 305₈)
302₈	194	C2		Properly contains, type 1; <AMS, supsetneqq>; Alternate: type 2 = (41₈ | 306₈)
303₈	195	C3		Not contained in or equal to, type 2; <AMS, nsubseteqq>; Alternates: type 1 = (357₈ | 135₈), type 3 = (357₈ | 125₈), type 4 = (41₈ | 307₈)
304₈	196	C4		Does not contain or equal, type 2; <AMS, nsupseteqq>; Alternates: type 1 = (357₈ | 134₈), type 3 = (357₈ | 124₈), type 4 = (41₈ | 310₈)
305₈	197	C5		Properly contained in, type 2; <AMS, subsetneq>; Alternate: type 1 = (41₈ | 301₈)
306₈	198	C6		Properly contains, type 2; <AMS, supsetneq>; Alternate: type 1 = (41₈ | 302₈)
307₈	199	C7		Not contained in or equal to, type 4; <AMS, varsubsetneqq>; Alternates: type 1 = (357₈ | 135₈), type 2 = (41₈ | 303₈), type 3 = (357₈ | 125₈)

Identifier			Shape	Character description	Character set 41₈ Symbols

310_8 200 C8 $\supsetneqq$ Does contain or equal, type 4 < AMS, varsupsetneqq >
Alternates: type 1 = $(357_8 \mid 134_8)$, type 2 = $(41_8 \mid 304_8)$,
type 3 = $(357_8 \mid 124_8)$

311_8 201 C9 $\nless$ Not less than, type 2
Alternate: type 1 = $(357_8 \mid 104_8)$

312_8 202 CA $\ngtr$ Not greater than, type 2
Alternate: type 1 = $(357_8 \mid 105_8)$

313_8 203 CB $\equiv$ Reverse of congruence symbol $(357_8 \mid 170_8)$; < AMS, backcong >

314_8 204 CC $\ncong$ Not isomorphic; not congruent; < AMS, ncong >

320_8 208 D0 $\nprec$ Does not precede; < AMS, nprec >

321_8 209 D1 $\nsucc$ Does not succeed; < AMS, nsucc >

322_8 210 D2 $\npreceq$ Does not precede or equal; < AMS, npreceq >

323_8 211 D3 $\nsucceq$ Does not succeed or equal; < AMS, nsucceq >

324_8 212 D4 $\precneqq$ Precedes and does not equal; < AMS, precneqq >

325_8 213 D5 $\succneqq$ Succeeds and does not equal; < AMS, succneqq >

326_8 214 D6 $\nsubseteq$ Is not contained in, nor equals

340_8 224 E0 $\nleqslant$ Not less than or equal to, type 1; < AMS, nleqslant >;
Alternates: type 2 = $(356_8 \mid 145_8)$, type 3 = $(41_8 \mid 360_8)$,
type 4 = $(41_8 \mid 346_8)$

341_8 225 E1 $\ngeqslant$ Not greater than or equal to, type 1 ; < AMS, ngeqslant >;
Alternates: type 2 = $(356_8 \mid 146_8)$, type 3 = $(41_8 \mid 361_8)$,
type 4 = $(41_8 \mid 347_8)$

342_8 226 E2 $\lneq$ Less than and not equal to, type 2; < AMS, lneq >;
Alternates: type 1 = $(41_8 \mid 362_8)$, type 3 = $(41_8 \mid 364_8)$

343_8 227 E3 $\gneq$ Greater than and not equal to, type 2; < AMS, gneq >;
Alternates: type 1 = $(41_8 \mid 363_8)$, type 3 = $(41_8 \mid 365_8)$

344_8 228 E4 $\lnsim$ Less than and not equivalent to, type ;1 < AMS, lnsim >;
Alternates: type 2 = $(41_8 \mid 366_8)$

345_8 229 E5 $\gnsim$ Greater than and not equivalent to, type 1; < AMS, gnsim >;
Alternate: type 2 = $(41_8 \mid 367_8)$

346_8 230 E6 $\nleq$ Not less than or equal to, type 4; < AMS, nleq >;
Alternates: type 1 = $(41_8 \mid 340_8)$, type 2 = $(356_8 \mid 145_8)$,
type 3 = $(41_8 \mid 360_8)$

347_8 231 E7 $\ngeq$ Not greater than or equal to, type 4; < AMS, ngeq >;
Alternates: type 1 = $(41_8 \mid 341_8)$, type 2 = $(356_8 \mid 146_8)$,
type 3 = $(41_8 \mid 361_8)$

360_8 240 F0 $\nleqq$ Not less than or equal to, type 3; < AMS, nleqq >;
Alternates: type 1 = $(41_8 \mid 340_8)$, type 2 = $(356_8 \mid 145_8)$,
type 4 = $(41_8 \mid 346_8)$

Identifier Octal Dec Hex	Shape	Character description	Character set 41₈: Symbols
361₈ 241 F1	$\ngeqq$	Not greater than or equal to, type 3; <AMS, ngeqq>; Alternates: type 1 = (41₈ | 341₈), type 2 = (356₈ | 146₈), type 4 = (41₈ | 347₈)	
362₈ 242 F2	$\lneqq$	Less than and not equal to, type 1; <AMS, lneqq>; Alternates: type 2 = (41₈ | 342₈), type 3 = (41₈ | 364₈)	
363₈ 243 F3	$\gneqq$	Greater than and not equal to, type 1; <AMS, gneqq>; Alternates: type 2 = (41₈ | 343₈), type 3 = (41₈ | 365₈)	
364₈ 244 F4	$\lneqq$	Less than and not equal to, type 3; <AMS, lvertneqq> Alternates: type 1 = (41₈ | 362₈), type 2 = (41₈ | 342₈)	
365₈ 245 F5	$\gneqq$	Greater than and not equal to, type 3; <AMS, gvertneqq> Alternates: type 1 = (41₈ | 363₈), type 2 = (41₈ | 343₈)	
366₈ 246 F6	$\lnapprox$	Less than and not equivalent to, type 2; <AMS, lnapprox> Alternate: type 1 = (41₈ | 344₈)	
367₈ 247 F7	$\gnapprox$	Greater than and not equivalent to, type 2; <AMS, gnapprox> Alternate: type 1 = (41₈ | 345₈)	
375₈ 253 FD	$\overline{}$	Upper summation sign connector	
376₈ 254 FE	$\underline{}$	Lower summation sign connector	

Character Set 42₈ = 34₁₀ = 22₁₆: Symbols 2—Japanese and mathematical symbols

The following are character codes (low-order byte) within Character Set 42₈ (see reference chart in appendix B):

Identifier Octal Dec Hex	Shape	Character description	Character set 42₈: Symbols
41₈ 33 21	◆	Black diamond Also: Dingbat (Diamond, solid); <AMS, blacklozenge>; <ITC, 323>	
42₈ 34 22	□	Ballot box = wave operator = white square Also: Dingbat (Square, open); <AMS, square>; <ITC, 224>	
43₈ 35 23	■	Black square Also: Dingbat (Square, solid); <AMS, blacksquare>; <ITC, 223>	
44₈ 36 24	△	White point-up triangle—not uppercase Greek "delta" (46₈ | 105₈) Also: Dingbat (Triangle, open); <AMS, bigtriangleup>; <AMS, triangle>; <ITC, 126>	
45₈ 37 25	▲	Black point-up triangle Also: Dingbat (Triangle, solid); <ITC, 125>	
46₈ 38 26	▽	White point-down triangle—not nabla (357₈ | 271₈) Also: Dingbat (Triangle, open, inverted); <AMS, bigtriangledown>; <ITC, 226>	
47₈ 39 27	▼	Black point-down triangle Also: Dingbat (Triangle, solid, inverted); <ITC, 225>	
50₈ 40 28	※	"Kome" symbol	

| Identifier | | | Shape | Character description | Character set 42₈: Symbols |
Octal	Dec	Hex			
51₈	41	29	₸	"Post office" symbol	
52₈	42	2A	'	Inverted apostophe	
53₈	43	2B	'	Left minutes sign	
54₈	44	2C	"	Left seconds sign; < ITC, 315 >	
55₈	45	2D	—	Left dash (Japanese)	
56₈	46	2E	=	Japanese "geta"	
57₈	47	2F	⊞	Box with plus sign; < AMS, boxplus >	
60₈	48	30	⊟	Box with minus sign; < AMS, boxminus >	
61₈	49	31	⊠	Box with times sign Also: Ballot box with "x"; < AMS, boxtimes >	
62₈	50	32	⊡	Box with dot; < AMS, boxdot >	
72₈	58	3A	—	Right dash (Japanese)	
73₈	59	3B	=	Double dash (Japanese)	
74₈	60	3C	**	Asterhythm (Japanese)	
75₈	61	3D	⅀	Ounce (Japanese)	
76₈	62	3E	‱	Per ten thousand	
100₈	64	40	⇐	Double map (left); < AMS, leftleftarrows >	
101₈	65	41	⇉	Double map (right); < AMS, rightrightarrows >	
102₈	66	42	⇈	Parallel up arrows; < AMS, upuparrows >	
103₈	67	43	⇊	Parallel down arrows; < AMS, downdownarrows >	
104₈	68	44	⇚	Left triple arrow; < AMS, Lleftarrow >	
105₈	69	45	⇛	Right triple arrow; < AMS, Rrightarrow >	
106₈	70	46	↞	Left double-headed arrow; < AMS, twoheadleftarrow >	
107₈	71	47	↠	Onto map; < AMS, twoheadrightarrow >	
110₈	72	48	↿	Up harpoon left; < AMS, upharpoonleft >	
111₈	73	49	⇃	Down harpoon left; < AMS, downharpoonleft >	
112₈	74	4A	↾	Restriction; up harpoon right; < AMS, upharpoonright >	
113₈	75	4B	⇂	Down harpoon right; < AMS, downharpoonright >	
114₈	76	4C	↢	Left tailed arrow; < AMS, leftarrowtail >	
115₈	77	4D	↣	Right tailed arrow; < AMS, rightarrowtail >	
116₈	78	4E	↫	Left arrow with loop; < AMS, looparrowleft >	
117₈	79	4F	↬	Right arrow with loop; < AMS, looparrowright >	
120₈	80	50	↰	Turn left arrow; < AMS, Lsh >	
121₈	81	51	↱	Turn right arrow; < AMS, Rsh >	

Identifier Octal	Dec	Hex	Shape	Character description — Character set 42₈: Symbols
122₈	82	52	↔	Symmetrical squiggly arrow; <AMS, leftrightsquigarrow>
123₈	83	53	—o	Right comet; <AMS, multimap>
124₈	84	54	:=	Defined to be Also: colon equals; <AMS, coloneq>
125₈	85	55	=:	Equals colon; <AMS, eqcolon>
126₈	86	56	↼	Left harpoon up; <AMS, leftharpoonup>
127₈	87	57	↽	Left harpoon down; <AMS, leftharpoondown>
130₈	88	58	⇀	Weakly converges to; right harpoon up; <AMS, rightharpoonup>
131₈	89	59	⇁	Weakly converges to; right harpoon down; <AMS, rightharpoondown>
132₈	90	5A	↪	Inclusion map; hook right arrow; <AMS, hookrightarrow>
133₈	91	5B	↩	Inclusion map; hook left arrow; <AMS, hookleftarrow>
134₈	92	5C	⟵	Long leftward arrow; <AMS, longleftarrow>
135₈	93	5D	⟶	Long rightward arrow; <AMS, longrightarrow>
136₈	94	5E	⟸	Is implied by; <AMS, Longleftarrow>
137₈	95	5F	⟹	Implies; <AMS, Longrightarrow>
140₈	96	60	⇑	Double up arrow; <AMS, Uparrow>
141₈	97	61	⇓	Double down arrow; <AMS, Downarrow>
142₈	98	62	≒	Is the image of Also: Approximately equal to, type 3 (uncommon usage); <AMS, fallingdotseq>; Alternates: type 1 = (357₈ | 167₈), type 2 = (357₈ | 171₈), type 5 = (41₈ | 251₈)
143₈	99	63	≓	Equals, left underdot, right overdot; <AMS, risingdotseq>
144₈	100	64	≍	Asymptotically equal to, type 2; <AMS, asymp>; Alternate: type 1 = (357₈ | 167₈)
145₈	101	65	≼	Precedes or equals, type 2; <AMS, preceq>; Alternate: type 1 = (41₈ | 122₈)
146₈	102	66	≽	Succeeds or equals, type 2; <AMS, succeq>; Alternate: type 1 = (41₈ | 123₈)
147₈	103	67	⟷	If and only if (variant); <AMS, longleftrightarrow>
150₈	104	68	⟺	If and only if, type 2 [Between En quads, e.g., n, this shape appears as n ⟺ n and thus differs from (42₈ | 151₈)]; <AMS, Longleftrightarrow>; Alternate: type 1 = (357₈ | 116₈)
151₈	105	69	⟺	Long double double arrow [Between En quads, e.g., n, this shape appears as n⟺n and thus differs from (42₈ | 150₈)]; <AMS, Leftrightarrow>
152₈	106	6A	∬	Double integral
153₈	107	6B	↦	Maps to; <AMS, mapsto>
154₈	108	6C	⋈	Bowtie; <AMS, bowtie>

Identifier Octal Dec Hex	Shape	Character description	Character set 42₈ Symbols
155₈ 109 6D	★	Small black star; <AMS, star>	
156₈ 110 6E	♮	Musical natural; <AMS, natural>	
157₈ 111 6F	⌣	Smile; <AMS, smile>	
160₈ 112 70	△	Small white triangle; <AMS, vartiangle>	
161₈ 113 71	≪	Much less than, type 2; <AMS, ll>; Alternate: type 1 = (357₈ | 102₈)	
162₈ 114 72	≫	Much greater than, type 2; <AMS, gg>; Alternate: type 1 = (357₈ | 103₈)	
163₈ 115 73	⊕	Circle plus; <AMS, oplus>	
164₈ 116 74	⊖	Circle minus; <AMS, ominus>	
165₈ 117 75	⊗	Circle times; <AMS, otimes>	
166₈ 118 76	⊘	Circle slash; <AMS, oslash>; Alternate: type 1 = (41₈ | 123₈)	
167₈ 119 77	∼	Similar to, type 2; <AMS, thicksim>; Alternate: type 1 = (356₈ | 376₈)	
170₈ 120 78	≈	Approximately equal, type 4; <AMS, thickapprox>; Alternates: type 1 = (357₈ | 167₈), type 2 = (357₈ | 171₈), type 3 = (42₈ | 142₈), type 5 = (41₈ | 251₈)	
171₈ 121 79	∝	Proportional to, type 2; <AMS, propto>; Alternate: type 1 = (357₈ | 161₈)	
172₈ 122 7A	∫	Small integral; <AMS, smallint>	
173₈ 123 7B	▽	Small point-down white triangle; <AMS, triangledown>	
174₈ 124 7C	℧	Conductance; <AMS, mho>	
175₈ 125 7D	≀	Wreath product; <AMS, wr>	
176₈ 126 7E	○	Large circle Also: Roundness (ANSI Y14.5); <AMS, bigcirc>	
241₈ 161 A1	&̲	Ampersand underscore (APL) (possibly obsolete)	
242₈ 162 A2	≡	Equal underbar (APL) preferred use is "Identity" (357₈ | 162₈)	
243₈ 163 A3	Δ̲	Delta underbar (APL)	
244₈ 164 A4	ι̲	Iota underbar (APL)	
245₈ 165 A5	ε̲	Epsilon underbar (APL)	
246₈ 166 A6	℘	Weierstrass; <AMS, wp>	
247₈ 167 A7	∅	Null set, type 2; <AMS, emptyset>; Alternate: type 1 = (357₈ | 141₈)	
250₈ 168 A8	ℜ	Set of real numbers; <AMS, Re>	
251₈ 169 A9	ℑ	Set of imaginary numbers; <AMS, Im>	

Identifier			Shape	Character description	Character set 42₈: Symbols
Octal	Dec	Hex			
252₈	170	AA	⊥	Bottom; <AMS, bot>	
253₈	171	AB	⊎	Plus sign in union; <AMS, uplus>	
254₈	172	AC	⊨	Models; <AMS, models>	
255₈	173	AD	⊔	Square union; <AMS, sqcup>	
256₈	174	AE	⊓	Square intersection; <AMS, sqcap>	
257₈	175	AF	⊎	Big union with inner plus sign; <AMS, biguplus>	
260₈	176	B0	⊑	Square is contained by or equals; <AMS, sqsubseteq>	
261₈	177	B1	⊒	Square contains or equals; <AMS, sqsupseteq>	
262₈	178	B2	∧	Meet (infimum); <AMS, wedge> <AMS, land>	
263₈	179	B3	∨	Join (supremum); <AMS, vee>;<AMS, lor>	
264₈	180	B4	▲	Small black triangle Also: Triangle, solid, small; <AMS, blacktriangle>	
265₈	181	B5	▼	Small black point-down triangle Also: Triangle, solid, small, inverted; <AMS, blacktriangledown>	
266₈	182	B6	⊔	Square union (cumulative operator, with limits); <AMS, bigsqcup>	
267₈	183	B7	∐	Coproduct operator; <AMS, coprod>	
270₈	184	B8	⊲	Spherical angle, type 2; <AMS, sphericalangle>; Alternate: type 1 = (357₈ | 155₈)	
271₈	185	B9	϶	Reverse of membership symbol (variant); <AMS, backepsilon>	
272₈	186	BA	∉	Is not an element of, type 2 Alternate: type 1 = (357₈ | 113₈)	
273₈	187	BB	▷	small white point-right triangle	
274₈	188	BC	◁	small white point-left triangle	
275₈	189	BD	⊙	Circle dot;<AMS, odot>	
276₈	190	BE	∽	Reverse similar to; reverse tilde; <AMS, backsim>	
277₈	191	BF	‾	Radical extension	
300₈	192	C0	^	Up arrowhead; ASCII circumflex (Postscript)	
301₈	193	C1	$\underline{A}$	Underlined uppercase Latin letter A (APL)	
302₈	194	C2	$\underline{B}$	Underlined uppercase Latin letter B (APL)	
303₈	195	C3	$\underline{C}$	Underlined uppercase Latin letter C (APL)	
304₈	196	C4	$\underline{D}$	Underlined uppercase Latin letter D (APL)	
305₈	197	C5	$\underline{E}$	Underlined uppercase Latin letter E (APL)	
306₈	198	C6	$\underline{F}$	Underlined uppercase Latin letter F (APL)	
307₈	199	C7	$\underline{G}$	Underlined uppercase Latin letter G (APL)	
310₈	200	C8	$\underline{H}$	Underlined uppercase Latin letter H (APL)	

Identifier			Shape	Character description	Character set 42₈: Symbols
Octal	Dec	Hex			
311₈	201	C9	I	Underlined uppercase Latin letter I (APL)	
312₈	202	CA	J	Underlined uppercase Latin letter J (APL)	
313₈	203	CB	K	Underlined uppercase Latin letter K (APL)	
314₈	204	CC	L	Underlined uppercase Latin letter L (APL)	
315₈	205	CD	M	Underlined uppercase Latin letter M (APL)	
316₈	206	CE	N	Underlined uppercase Latin letter N (APL)	
317₈	207	CF	O	Underlined uppercase Latin letter O (APL)	
320₈	208	D0	P	Underlined uppercase Latin letter P (APL)	
321₈	209	D1	Q	Underlined uppercase Latin letter Q (APL)	
322₈	210	D2	R	Underlined uppercase Latin letter R (APL)	
323₈	211	D3	S	Underlined uppercase Latin letter S (APL)	
324₈	212	D4	T	Underlined uppercase Latin letter T (APL)	
325₈	213	D5	U	Underlined uppercase Latin letter U (APL)	
326₈	214	D6	V	Underlined uppercase Latin letter V (APL)	
327₈	215	D7	W	Underlined uppercase Latin letter W (APL)	
330₈	216	D8	X	Underlined uppercase Latin letter X (APL)	
331₈	217	D9	Y	Underlined uppercase Latin letter Y (APL)	
332₈	218	DA	Z	Underlined uppercase Latin letter Z (APL)	
333₈	219	CB	|	Left center bracket = bracketleftex (Postscript)	
334₈	220	CC	|	Right center bracket = bracketrightex (Postscript)	
335₈	221	CD	—	Horizontal arrow extension (extension to arrows 0₈ | 354₈ or 0₈ | 356₈)	
336₈	222	CE	|	Vertical arrow extension (extension to arrows 0₈ | 355₈ or 0₈ | 357₈)	
337₈	223	CF	□	Quad (APL)	
340₈	224	D0	⎛	Top left parenthesis = parenlefttp (Postscript) Also: Parenthesis, piece, top, left, curved	
341₈	225	D1	|	Left extension parenthesis = parenleftex (Postscript) Also: Parenthesis, piece, extension, left, straight	
342₈	226	D2	⎝	Bottom left parenthesis = parenleftbt (Postscript) Also: Parenthesis, piece, bottom, left, curved	
343₈	227	D3	|	Center extension parenthesis Also: Parenthesis, piece, center extension, straight, left/right	
344₈	228	D4	⎞	Top right parenthesis = parenrighttp (Postscript) Also: Parenthesis, piece, top, right, curved	
345₈	229	D5	|	Right extension parenthesis = parenrightex (Postscript) Also: Parenthesis, piece, extension, right, straight	

Identifier			Shape	Character description	Character set 42₈: Symbols
Octal	Dec	Hex			
346₈	230	D6	)	Bottom right parenthesis = parenrightbt (Postscript) Also: Parenthesis, piece, bottom, right, curved	
347₈	231	D7	ℚ	Rationals	
350₈	232	D8	ℍ	Quaternions	
351₈	233	D9	𝕆	Octonions	
352₈	234	DA	⊕	Big circle plus; <AMS, bigoplus>	
353₈	235	DB	⊗	Big circle times; <AMS, bigotimes>	
354₈	236	DC	⊙	Big circle dot; <AMS, bigodot>	
355₈	237	DD	£	Italian Lira	
356₈	238	DE	↵	Inverted turn left arrow = inverted (42₈ | 120₈)	
357₈	239	DF	↳	Inverted turn right arrow = inverted (42₈ | 121₈)	
360₈	240	F0	•	Dark center dot; <AMS, centerdot>	
361₈	231	F1	⌐	Quine corner, upper left; <AMS, ulcorner>	
362₈	243	F2	⌐	Quine corner, upper right; <AMS, urcorner>	
363₈	243	F3	⌞	Quine corner, lower left; <AMS, llcorner>	
364₈	244	F4	⌟	Quine corner, lower right; <AMS, lrcorner>	
365₈	245	F5	⊚	Circled circle; <AMS, centerdot>	
366₈	246	F6	√	Lower half radical sign	
367₈	247	F7	|	Upper half radical sign	
370₈	248	F8	╲	Upper-left corner summation sign	
371₈	247	F9	╱	Bottom-left corner summation sign	
372₈	259	FA	╲	Upper summation sign connector	
373₈	251	FB	╱	Lower summation sign connector	
374₈	252	FC	￢	Upper-right summation sign	
375₈	253	FD	⌟	Lower-right summation sign	
376₈	254	FE	⟩	Middle portion summation sign	

Character Set 43₈ = 35₁₀ = 23₁₆: Extended Latin alphabet

Character Set 43₈ contains characters defined in ISO 5426, "Extension of the Latin alphabet coded character set for bibliographic information interchange" [8]. They constitute a character set for the interchange of bibliographic citations, including their annotations, in the Latin alphabet. The characters selected are retained in ISO order and are assigned to code positions on the right side of the ISO 8-bit code table.

The following are character codes (low-order byte) within Character Set 43₈ (see reference chart in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 43₈ Latin
42₈	34	22	¨	Diaeresis accent (spacing character)	
43₈	35	23	´	Acute accent (spacing)	
44₈	36	24	‾	Macron accent (spacing)	
45₈	37	25	˘	Breve (spacing)	
46₈	38	26	·	Over-dot accent (spacing)	
47₈	39	27	'	Ambiguous character "apostrophe, right single quotation mark, or acute accent"	
50₈	40	28	°	Over-ring accent = hungarumlaut (Postscript)	
51₈	41	29	˝	Double acute accent (spacing)	
52₈	42	2A	˛	Ogonek undermark (spacing)	
53₈	43	2B	ˇ	Hachek accent = caron (spacing)	
54₈	44	2C	˛	Cedilla undermark (spacing)	
61₈	49	31	`	Alternate rendition of "grave accent" (0₈ | 140₈) (uppercase)	
62₈	50	32	´	Alternate rendition of "acute accent" (43₈ | 43₈) (uppercase)	
63₈	51	33	^	Alternate rendition of "circumflex accent" (0₈ | 136₈) (uppercase)	
64₈	52	34	~	Alternate rendition of "tilde accent" (0₈ | 176₈) (uppercase)	
65₈	53	35	‾	Alternate rendition of "macron accent" (43₈ | 44₈) (uppercase)	
66₈	54	36	˘	Alternate rendition of "breve accent" (43₈ | 45₈) (uppercase)	
67₈	55	37	·	Alternate rendition of "overdot accent" (43₈ | 46₈) (uppercase)	
70₈	56	38	¨	Alternate rendition of "diaeresis accent" (43₈ | 42₈) (uppercase)	
72₈	58	3A	°	Alternate rendition of "overring accent" (43₈ | 50₈) (uppercase)	
73₈	59	3B	˛	Alternate rendition of "cedilla accent" (43₈ | 54₈) (uppercase)	
75₈	61	3D	˝	Alternate rendition of "double acute accent" (43₈ | 51₈) (uppercase)	
76₈	62	3E	˛	Alternate rendition of "ogonek undermark" (43₈ | 52₈) (uppercase)	
77₈	63	3F	ˇ	Alternate rendition of "hachek accent" (43₈ | 53₈) (uppercase)	
101₈	65	41	Ɓ	Hausa capital letter B (Capital letter bilabial voiced implosive)	
102₈	66	42	Ɗ	Hausa capital letter D (Capital letter alveolar voiced implosive)	
103₈	67	43	Ƙ	Hausa capital letter K (Capital letter velar unvoiced ejective)	
104₈	68	44	Ơ	Vietnamese capital letter O	
105₈	69	45	Ư	Vietnamese capital letter U	
106₈	70	46	Ə	Azerbaijani capital letter E	
107₈	71	47	Ɔl	Azerbaijani capital letter OJ	
110₈	72	48	Ƶ	Azerbaijani capital letter Z	
140₈	96	60	`	Ambiguous character: left single quotation mark or grave accent	

Identifier Octal Dec	Hex	Shape	Character description Character set 43₈: Latin
141₈ 97	61	ɓ	Hausa small letter B (Small letter bilabial voiced implosive)
142₈ 98	62	ɗ	Hausa small letter D (Small letter alveolar voiced implosive)
143₈ 99	63	ƙ	Hausa small letter K (Small letter velar unvoiced ejective)
144₈ 100	64	ơ	Vietnamese small letter O
145₈ 101	65	ư	Vietnamese small letter U
146₈ 102	66	ə	Azerbaijani small letter E
147₈ 103	67	ŋ	Azerbaijani small letter OJ
150₈ 104	68	z	Azerbaijani small letter Z
176₈ 126	7E	‾	Overbar (spacing character)
242₈ 162	A2	'	Right single quote (German)
254₈ 172	AC	♭	Musical flat < AMS, flat >
256₈ 174	AE	℗	Sound recording copyright statement
257₈ 175	AF	℥	Ounce (Latin)
260₈ 176	B0	'	Ayn—*not* single open quote (0₈ | 251₈)
261₈ 177	B1	'	Alif/Hamzah—*not* single open quote (0₈ | 251₈)
262₈ 178	B2	,	Lowered left single quote—*not* single open quote (0 | 251₈), prints low on line; used in German, etc.
263₈ 179	B3	⁀	Tie bar for two characters; tie accent (nonspacing)
264₈ 180	B4	ꞈ	Tone circumflex (Vietnamese) (nonspacing)
265₈ 181	B5	᷈	Grave circumflex (Vietnamese) (nonspacing)
266₈ 182	B6	᷉	Acute circumflex (Vietnamese) (nonspacing)
267₈ 183	B7	᷊	Tilde circumflex (Vietnamese) (nonspacing)
270₈ 184	B8	→	Vector accent (nonspacing)
271₈ 185	B9	/	Negation of math symbols (nonspacing) < AMS, not >
272₈ 186	BA	⌢	Hat accent (multiple characters and nonspacing) < AMS, widehat >
273₈ 187	BB	~	Tilde accent (multiple characters and nonspacing) < AMS, widetilde >
274₈ 188	BC	♯	Musical sharp < AMS, sharp >
275₈ 189	BD	'	Mjagkij znak (transliterated Cyrillic alphabet languages)
276₈ 190	BE	"	Tverdyj znak (transliterated Cyrillic alphabet languages)
277₈ 191	BF	⁀	Tie accent (nonspacing) Also: Concatenation
300₈ 192	C0	⁀	Low rising tone mark (Vietnamese) (nonspacing)
301₈ 193	C1	´	Floating bar mid character (nonspacing)
302₈ 194	C2	⊕	Tensor arrow (nonspacing)

Identifier			Shape	Character description	Character set 43₈: Latin
Octal	Dec	Hex			
303₈	195	C3	_	Overline (nonspacing)	
304₈	196	C4		Tone breve (Vietnamese) (nonspacing)	
305₈	197	C5		Grave breve (Vietnamese) (nonspacing)	
306₈	198	C6		Acute breve (Vietnamese) (nonspacing)	
307₈	199	C7		Tilde breve (Vietnamese) (nonspacing)	
310₈	200	C8	←	Directed segment (right to left) (nonspacing)	
311₈	201	C9	¨	Umlaut (German, etc.)—Diaeresis (0₈ | 310₈) is preferred in a single language application, and umlaut should be used only where text operations are performed on several languages. (nonspacing)	
313₈	203	CB	,	High comma off center (Czech, Slovak, etc.) (nonspacing)	
314₈	204	CC	'	High inverted cedilla centered (Latvian) (nonspacing)	
316₈	206	CE	'	Horn (Vietnamese and transliterated Thai) (nonspacing)	
321₈	209	D1	￭	Rude (transliterated Thai) (nonspacing)	
322₈	210	D2	￭	Hook to the left (Latvian, Romanian) (nonspacing)	
324₈	212	D4	ₒ	Circle below (transliterated Bengali, Hindi, etc.) (nonspacing)	
325₈	213	D5	ᵥ	Half circle below (transliterated Semitic languages, Sanskrit) (nonspacing)	
326₈	214	D6	.	Dot below (transliterated Bengali, Hindi, etc.) (nonspacing)	
327₈	215	D7	∴	Double dot below (transliterated Urdu) (nonspacing)	
331₈	217	D9	=	Double underline (transliterated Hindi, Sindhi) (nonspacing)	
332₈	218	DA	,	Vertical bar (African languages) (nonspacing)	
333₈	219	DB	∧	Circumflex undermark (African languages) (nonspacing)	
335₈	221	DD	⌐	Left half of ligature sign and of double tilde (Both ligature and double tilde are divided into two part, the first parts of each being identical. Used in transliterations.) (nonspacing)	
336₈	222	DE	⌐	Right half of ligature sign—see 335₈ above (nonspacing)	
337₈	223	DF	⌐	Right half of double tilde (Tagalog)—see 335₈ above (nonspacing)	

Character Set 44₈L = 36₁₀L = 24₁₆L: Japanese hiragana syllabary

Character Set 44L contains hiragana characters used to write about 60 percent of typical Japanese text.

The following are character codes (low-order byte) within Character Set 44₈L (see reference chart in appendix B):

Identifier			Shape	Character description	Character set 44₈L: Japanese
Octal	Dec	Hex			
41₈	33	21	あ	Hiragana small あ = "ah"	
42₈	34	22	あ	Hiragana large あ = "ah"	
43₈	35	23	い	Hiragana small い = "i"	
44₈	36	24	い	Hiragana large い = "i"	
45₈	37	25	う	Hiragana small う = "u"	
46₈	38	26	う	Hiragana large う = "u"	
47₈	39	27	え	Hiragana small え = "e"	
50₈	40	28	え	Hiragana large え = "e"	
51₈	41	29	お	Hiragana small お = "o"	
52₈	42	2A	お	Hiragana large お = "o"	
53₈	43	2B	か	Hiragana か = "ka"	
54₈	44	2C	が	Hiragana が = "ga"	
55₈	45	2D	き	Hiragana き = "ki"	
56₈	46	2E	ぎ	Hiragana ぎ = "gi"	
57₈	47	2F	く	Hiragana く = "ku"	
60₈	48	30	ぐ	Hiragana ぐ = "gu"	
61₈	49	31	け	Hiragana け = "ke"	
62₈	50	32	げ	Hiragana げ = "ge"	
63₈	51	33	こ	Hiragana こ = "ko"	
64₈	52	34	ご	Hiragana ご = "go"	
65₈	53	35	さ	Hiragana さ = "sa"	
66₈	54	36	ざ	Hiragana ざ = "za"	
67₈	55	37	し	Hiragana し = "shi"	
70₈	56	38	じ	Hiragana じ = "ji"	
71₈	57	39	す	Hiragana す = "su"	
72₈	58	3A	ず	Hiragana ず = "zu"	
73₈	59	3B	せ	Hiragana せ = "se"	
74₈	60	3C	ぜ	Hiragana ぜ = "ze"	
75₈	61	3D	そ	Hiragana そ = "so"	

| Identifier | | | Shape | Character description | Character set 44₈L: Japanese |
Octal	Dec	Hex			
76₈	62	3E	ぞ	Hiragana ぞ	= "zo"
77₈	63	3F	た	Hiragana た	= "ta"
100₈	64	40	だ	Hiragana だ	= "da"
101₈	65	41	ち	Hiragana ち	= "chi"
102₈	66	42	ぢ	Hiragana ぢ	= "ji"
103₈	67	43	っ	Hiragana っ	= "tsu"
104₈	68	44	つ	Hiragana つ	= "tsu"
105₈	69	45	づ	Hiragana づ	= "zu"
106₈	70	46	て	Hiragana て	= "te"
107₈	71	47	で	Hiragana で	= "de"
110₈	72	48	と	Hiragana と	= "to"
111₈	73	49	ど	Hiragana ど	= "do"
112₈	74	4A	な	Hiragana な	= "na"
113₈	75	4B	に	Hiragana に	= "ni"
114₈	76	4C	ぬ	Hiragana ぬ	= "nu"
115₈	77	4D	ね	Hiragana ね	= "ne"
116₈	78	4E	の	Hiragana の	= "no"
117₈	79	4F	は	Hiragana は	= "ha"
120₈	80	50	ば	Hiragana ば	= "ba"
121₈	81	51	ぱ	Hiragana ぱ	= "pa"
122₈	82	52	ひ	Hiragana ひ	= "hi"
123₈	83	53	び	Hiragana び	= "bi"
124₈	84	54	ぴ	Hiragana ぴ	= "pi"
125₈	85	55	ふ	Hiragana ふ	= "fu"
126₈	86	56	ぶ	Hiragana ぶ	= "bu"
127₈	87	57	ぷ	Hiragana ぷ	= "pu"
130₈	88	58	へ	Hiragana へ	= "he"
131₈	89	59	べ	Hiragana べ	= "be"
132₈	90	5A	ぺ	Hiragana ぺ	= "pe"
133₈	91	5B	ほ	Hiragana ほ	= "ho"
134₈	92	5C	ぼ	Hiragana ぼ	= "bo"
135₈	93	5D	ぽ	Hiragana ぽ	= "po"
136₈	94	5E	ま	Hiragana ま	= "ma"
137₈	95	5F	み	Hiragana み	= "mi"

Identifier Octal	Dec	Hex	Shape	Character description	Character set 44₈L: Japanese
140₈	96	60	む	Hiragana む = "mu"	
141₈	97	61	め	Hiragana め = "me"	
142₈	98	62	も	Hiragana も = "mo"	
143₈	99	63	や	Hiragana や = "ya"	
144₈	100	64	や	Hiragana や = "ya"	
145₈	101	65	ゆ	Hiragana small ゆ = "yu"	
146₈	102	66	ゆ	Hiragana large ゆ = "yu"	
147₈	103	67	よ	Hiragana small よ = "yo"	
150₈	104	68	よ	Hiragana large よ = "yo"	
151₈	105	69	ら	Hiragana ら = "ra"	
152₈	106	6A	り	Hiragana り = "ri"	
153₈	107	6B	る	Hiragana る = "ru"	
154₈	108	6C	れ	Hiragana れ = "re"	
155₈	109	6D	ろ	Hiragana ろ = "ro"	
156₈	110	6E	わ	Hiragana small わ = "wa"	
157₈	111	6F	わ	Hiragana large わ = "wa"	
160₈	112	70	ゐ	Hiragana ゐ = "wi"	
161₈	113	71	ゑ	Hiragana ゑ = "we"	
162₈	114	72	を	Hiragana を = "wo"	
163₈	115	73	ん	Hiragana ん = "n"	

Character Set 44₈R = 36₁₀R = 24₁₆R: Chinese Bo-po-mo-fo

Character Set 44R contains 37 Chinese phonetic-annotated letters and 5 tone marks; the 37 symbols are in the same order as shown in documents submitted by the Library Association of China (at Taipei) [17] and The People's Republic of China National Standard GB 2312-80 [18].

The following are character codes (low-order byte) within Character Set 44₈R (see reference chart in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 44₈R: Japanese
241₈	161	A1	ㄅ	Chinese phonetic-annotated letter B	
242₈	162	A2	ㄆ	Chinese phonetic-annotated letter P	
243₈	163	A3	ㄇ	Chinese phonetic-annotated letter M	
244₈	164	A4	ㄈ	Chinese phonetic-annotated letter F	
245₈	165	A5	ㄉ	Chinese phonetic-annotated letter D	

Identifier Octal Dec Hex	Shape	Character description	Character set 44₈R: Japanese
246₈ 166 A6	古	Chinese phonetic-annotated letter T	
247₈ 167 A7	3	Chinese phonetic-annotated letter N	
250₈ 168 A8	分	Chinese phonetic-annotated letter L	
251₈ 169 A9	《	Chinese phonetic-annotated letter G	
252₈ 170 AA	丂	Chinese phonetic-annotated letter K	
253₈ 171 AB	厂	Chinese phonetic-annotated letter H	
254₈ 172 AC	丩	Chinese phonetic-annotated letter J	
255₈ 173 AD	〈	Chinese phonetic-annotated letter Q	
256₈ 174 AE	丅	Chinese phonetic-annotated letter X	
257₈ 175 AF	业	Chinese phonetic-annotated letter ZH	
260₈ 176 B0	彳	Chinese phonetic-annotated letter CH	
261₈ 177 B1	尸	Chinese phonetic-annotated letter SH	
262₈ 178 B2	日	Chinese phonetic-annotated letter R	
263₈ 179 B3	卩	Chinese phonetic-annotated letter Z	
264₈ 180 B4	丂	Chinese phonetic-annotated letter C	
265₈ 181 B5	厶	Chinese phonetic-annotated letter S	
266₈ 182 B6	丫	Chinese phonetic-annotated letter A	
267₈ 183 B7	ट	Chinese phonetic-annotated letter O	
270₈ 184 B8	古	Chinese phonetic-annotated letter E	
271₈ 185 B9	世	Chinese phonetic-annotated letter EH	
272₈ 186 BA	历	Chinese phonetic-annotated letter AI	
273₈ 187 BB	₹	Chinese phonetic-annotated letter EI	
274₈ 188 BC	幺	Chinese phonetic-annotated letter AU	
275₈ 189 BD	又	Chinese phonetic-annotated letter OU	
276₈ 190 BE	马	Chinese phonetic-annotated letter AN	
277₈ 191 BF	与	Chinese phonetic-annotated letter EN	
300₈ 192 C0	尢	Chinese phonetic-annotated letter ANG	
301₈ 193 C1	∠	Chinese phonetic-annotated letter ENG	
302₈ 194 C2	儿	Chinese phonetic-annotated letter ER	
303₈ 195 C3	I	Chinese phonetic-annotated letter I	
304₈ 196 C4	乂	Chinese phonetic-annotated letter U	
305₈ 197 C5	凵	Chinese phonetic-annotated letter IU	
306₈ 198 C6	´	Chinese Tone 2	
307₈ 199 C7	ˇ	Chinese Tone 3	

Identifier			Shape	Character description	Character set 44₈R: Japanese
Octal	Dec	Hex			
310₈	200	C8	`	Chinese Tone 4	
311₈	201	C9	·	Chinese Tone 5	
312₈	202	CA	‾	Chinese Tone 1	
313₈	203	CB	兀	Chinese phonetic-annotated letter NG	

Character Set 45₈ = 37₁₀ = 25₁₆: Japanese katakana syllabary

Character Set 45₈ contains katakana characters used to write about 10 percent of typical Japanese text.

The following are character codes (low-order byte) within Character Set 45₈ (see reference chart in appendix B):

Identifier			Shape	Character description	Character set 45₈: Japanese
Octal	Dec	Hex			
41₈	33	21	ァ	Katakana small ア = "ah"	
42₈	34	22	ア	Katakana large ア = "ah"	
43₈	35	23	ィ	Katakana small イ = "i"	
44₈	36	24	イ	Katakana large イ = "i"	
45₈	37	25	ゥ	Katakana small ウ = "u"	
46₈	38	26	ウ	Katakana large ウ = "u"	
47₈	39	27	ェ	Katakana small エ = "e"	
50₈	40	28	エ	Katakana large エ = "e"	
51₈	41	29	ォ	Katakana small オ = "o"	
52₈	42	2A	オ	Katakana large オ = "o"	
53₈	43	2B	カ	Katakana カ = "ka"	
54₈	44	2C	ガ	Katakana ガ = "ga"	
55₈	45	2D	キ	Katakana キ = "ki"	
56₈	46	2E	ギ	Katakana ギ = "gi"	
57₈	47	2F	ク	Katakana ク = "ku"	
60₈	48	30	グ	Katakana グ = "gu"	
61₈	49	31	ケ	Katakana ケ = "ke"	
62₈	50	32	ゲ	Katakana ゲ = "ge"	
63₈	51	33	コ	Katakana コ = "ko"	
64₈	52	34	ゴ	Katakana ゴ = "go"	
65₈	53	35	サ	Katakana サ = "sa"	
66₈	54	36	ザ	Katakana ザ = "za"	
67₈	55	37	シ	Katakana シ = "shi"	

Identifier Octal Dec Hex			Shape	Character description		Character set 45₈: Japanese
70₈	56	38	ジ	Katakana ジ	= "ji"	
71₈	57	39	ス	Katakana ス	= "su"	
72₈	58	3A	ズ	Katakana ズ	= "zu"	
73₈	59	3B	セ	Katakana セ	= "se"	
74₈	60	3C	ゼ	Katakana ゼ	= "ze"	
75₈	61	3D	ソ	Katakana ソ	= "so"	
76₈	62	3E	ゾ	Katakana ゾ	= "zo"	
77₈	63	3F	タ	Katakana タ	= "ta"	
100₈	64	40	ダ	Katakana ダ	= "da"	
101₈	65	41	チ	Katakana チ	= "chi"	
102₈	66	42	ヂ	Katakana ヂ	= "ji"	
103₈	67	43	ッ	Katakana ッ	= "tsu"	
104₈	68	44	ツ	Katakana ツ	= "tsu"	
105₈	69	45	ヅ	Katakana ヅ	= "zu"	
106₈	70	46	テ	Katakana テ	= "te"	
107₈	71	47	デ	Katakana デ	= "de"	
110₈	72	48	ト	Katakana ト	= "to"	
111₈	73	49	ド	Katakana ド	= "do"	
112₈	74	4A	ナ	Katakana ナ	= "na"	
113₈	75	4B	ニ	Katakana ニ	= "ni"	
114₈	76	4C	ヌ	Katakana ヌ	= "nu"	
115₈	77	4D	ネ	Katakana ネ	= "ne"	
116₈	78	4E	ノ	Katakana ノ	= "no"	
117₈	79	4F	ハ	Katakana ハ	= "ha"	
120₈	80	50	バ	Katakana バ	= "ba"	
121₈	81	51	パ	Katakana パ	= "pa"	
122₈	82	52	ヒ	Katakana ヒ	= "hi"	
123₈	83	53	ビ	Katakana ビ	= "bi"	
124₈	84	54	ピ	Katakana ピ	= "pi"	
125₈	85	55	フ	Katakana フ	= "fu"	
126₈	86	56	ブ	Katakana ブ	= "bu"	
127₈	87	57	プ	Katakana プ	= "pu"	
130₈	88	58	ヘ	Katakana ヘ	= "he"	
131₈	89	59	ベ	Katakana ベ	= "be"	

| Identifier | | | Shape | Character description | Character set 45₈: Japanese |
Octal	Dec	Hex			
132₈	90	5A	ペ	Katakana ペ = "pe"	
133₈	91	5B	ホ	Katakana ホ = "ho"	
134₈	92	5C	ボ	Katakana ボ = "bo"	
135₈	93	5D	ポ	Katakana ポ = "po"	
136₈	94	5E	マ	Katakana マ = "ma"	
137₈	95	5F	ミ	Katakana ミ = "mi"	
140₈	96	60	ム	Katakana ム = "mu"	
141₈	97	61	メ	Katakana メ = "me"	
142₈	98	62	モ	Katakana モ = "mo"	
143₈	99	63	ヤ	Katakana ヤ = "ya"	
144₈	100	64	ヤ	Katakana ヤ = "ya"	
145₈	101	65	ユ	Katakana small ユ = "yu"	
146₈	102	66	ユ	Katakana large ユ = "yu"	
147₈	103	67	ヨ	Katakana small ヨ = "yo"	
150₈	104	68	ヨ	Katakana large ヨ = "yo"	
151₈	105	69	ラ	Katakana ラ = "ra"	
152₈	106	6A	リ	Katakana リ = "ri"	
153₈	107	6B	ル	Katakana ル = "ru"	
154₈	108	6C	レ	Katakana レ = "re"	
155₈	109	6D	ロ	Katakana ロ = "ro"	
156₈	110	6E	ワ	Katakana small ワ = "wa"	
157₈	111	6F	ワ	Katakana large ワ = "wa"	
160₈	112	70	ヰ	Katakana ヰ = "wi"	
161₈	113	71	ヱ	Katakana ヱ = "we"	
162₈	114	72	ヲ	Katakana ヲ = "wo"	
163₈	115	73	ン	Katakana ン = "n"	
164₈	116	74	ヴ	Katakana ヴ = "vu"	
165₈	117	75	カ	Katakana small カ = "ka"	
166₈	118	76	ケ	Katakana small ケ = "ke"	

Character Set $46_8 = 38_{10} = 26_{16}$: Greek alphabet

Character Set 46_8 contains characters defined in ISO 5428, "Greek alphabet coded character set for bibliographic information interchange" [9]. The characters selected are retained in ISO order and in ISO code positions.

The following are character codes (low-order byte) within Character Set 46_8 (see reference chart in appendix B):

Identifier			Shape	Character description	Character set 46_8: Greek
Octal	Dec	Hex			
44_8	36	24	'	Oxia accent (nonspacing)	
45_8	37	25	,	Smooth breathing (nonspacing)—Prints over a small letter, before a capital letter	
46_8	38	26	'	Rough breathing (nonspacing)—Prints over a small letter, before a capital letter	
47_8	39	27	.	Iota subscript (nonspacing)—Prints under small letter	
64_8	52	34	′	Upper prime—Follows letters used as numbers under 1000	
65_8	53	35	,	Lower prime—Follows letters used as numbers from 1000	
73_8	59	3B	·	Raised full stop (period)	
100_8	64	40	↳	Greek character with no name	
101_8	65	41	A	Capital letter Alpha	
102_8	66	42	B	Capital letter Beta	
104_8	68	44	Γ	Capital letter Gamma; <AMS, Gamma>	
105_8	69	45	Δ	Capital letter Delta; <AMS, Delta>	
106_8	70	46	E	Capital letter Epsilon	
107_8	71	47	Ϛ	Capital letter Stigma—Obsolete letter used as 6	
110_8	72	48	F	Capital letter Digamma—Obsolete letter used as 6	
111_8	73	49	Z	Capital letter Zeta	
112_8	74	5A	H	Capital letter Eta	
113_8	75	5B	Θ	Capital letter Theta; <AMS, Theta>	
114_8	76	4C	I	Capital letter Iota	
115_8	77	4D	K	Capital letter Kappa	
116_8	78	4E	Λ	Capital letter Lambda; <AMS, Lambda>	
117_8	79	4F	M	Capital letter Mu	
120_8	80	50	N	Capital letter Nu	
121_8	81	51	Ξ	Capital letter Xi; <AMS, Xi>	
122_8	82	52	O	Capital letter Omicron	
123_8	83	53	Π	Capital letter Pi; <AMS, Pi>	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 46₈: Greek
124₈	84	54	Ϙ	Capital letter Koppa—Obsolete letter used as 90 (also written K')	
125₈	85	55	P	Capital letter Rho	
126₈	86	56	Σ	Capital letter Sigma; <AMS, Sigma>	
130₈	88	58	T	Capital letter Tau	
131₈	89	59	Y	Capital letter Upsilon; <AMS, Upsilon>	
132₈	90	5A	Φ	Capital letter Phi; <AMS, Phi>	
133₈	91	5B	X	Capital letter Chi	
134₈	92	5C	Ψ	Capital letter Psi; <AMS, Psi>	
135₈	93	5D	Ω	Capital letter Omega; <AMS, Omega>	
136₈	94	5E	Ϡ	Capital letter Sampi—Obsolete letter used as 900	
140₈	96	60	ϗ	Small Greek character with no name	
141₈	97	61	α	Small letter Alpha; <AMS, alpha>	
142₈	98	62	β	Small letter Beta, found at beginning of word; <AMS, beta>	
143₈	99	63	ϐ	Small letter Beta, found at middle of word	
144₈	100	64	γ	Small letter Gamma; <AMS, gamma>	
145₈	101	65	δ	Small letter Delta; <AMS, delta>	
146₈	102	66	ε	Small letter Epsilon; <AMS, varepsilon>	
147₈	103	67	ς	Small letter Stigma—Obsolete letter used as 6	
150₈	104	68	ϝ	Small letter Digamma—Obsolete letter used as 6; <AMS, digamma>	
151₈	105	69	ζ	Small letter Zeta; <AMS, zeta>	
152₈	106	6A	η	Small letter Eta; <AMS, eta>	
153₈	107	6B	θ	Small letter Theta; <AMS, theta>	
154₈	108	6C	ι	Small letter Iota; <AMS, iota>	
155₈	109	6D	κ	Small letter Kappa; <AMS, kappa>	
156₈	110	6E	λ	Small letter Lambda; <AMS, lambda>	
157₈	111	6F	μ	Small letter Mu; <AMS, mu>	
160₈	112	70	ν	Small letter Nu; <AMS, nu>	
161₈	113	71	ξ	Small letter Xi; <AMS, xi>	
162₈	114	72	o	Small letter Omicron	
163₈	115	73	π	Small letter Pi; <AMS, pi>	
164₈	116	74	ϙ	Small letter Koppa—Obsolete letter used as 90	
165₈	117	75	ρ	Small letter Rho; <AMS, rho>	
166₈	118	76	σ	Small letter Sigma, found at beginning or middle of word; <AMS, sigma>	
167₈	119	77	ς	Small letter Sigma, found at end of word; <AMS, varsigma>	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 46₈: Greek
170₈	120	78	τ	Small letter Tau; <AMS, tau>	
171₈	121	79	υ	Small letter Upsilon; <AMS, upsilon>	
172₈	122	7A	φ	Small letter Phi; <AMS, phi>; <AMS, straightphi>	
173₈	123	7B	χ	Small letter Chi; <AMS, chi>	
174₈	124	7C	ψ	Small letter Psi; <AMS, psi>	
175₈	125	7D	ω	Small letter Omega; <AMS, omega>	
176₈	126	7E	ϡ	Small letter Sampi—Obsolete letter used as 900	
300₈	192	C0	̈́	Oxia diaeresis (nonspacing)	
301₈	193	C1	῞	Asper oxia (nonspacing)	
302₈	194	C2	῍	Lenis oxia (nonspacing)	
303₈	195	C3	῟	Tilde asper (nonspacing)	
304₈	196	C4	῏	Tilde lenis (nonspacing)	
305₈	197	C5	´	Acute accent (nonspacing)	
306₈	198	C6	`	Grave accent (nonspacing)	
307₈	199	C7	˜	Tilde accent (nonspacing)	
310₈	200	C8	῞	Asper acute accent (nonspacing)	
311₈	201	C9	῝	Asper grave accent (nonspacing)	
312₈	202	CA	῎	Lenis acute accent (nonspacing)	
313₈	203	CB	῍	Lenis grave accent (nonspacing)	
314₈	204	CC	¨	Diaeresis accent (nonspacing)	
315₈	205	CD	῭	Acute diaeresis accent (nonspacing)	
316₈	206	CE	῭	Grave diaeresis accent (nonspacing)	
317₈	207	CF	῁	Tilde diaeresis accent (nonspacing)	
320₈	208	30	Ά	Capital oxia Alpha	
321₈	209	31	Έ	Capital oxia Epsilon	
322₈	210	32	Ή	Capital oxia Eta	
323₈	211	33	Ί	Capital oxia Iota	
324₈	212	34	Ό	Capital oxia Omicron	
325₈	213	35	Ύ	Capital oxia Upsilon	
326₈	214	36	Ώ	Capital oxia Omega	
327₈	215	37	Ϊ	Capital diaeresis Iota	
330₈	216	38	Ϋ	Capital diaeresis Upsilon	
331₈	217	39	Ϊ́	Capital oxia diaeresis Iota	
332₈	218	3A	Ϋ́	Capital oxia diaeresis Upsilon	

Identifier			Shape	Character description	Character set 46₈: Greek
Octal	Dec	Hex			
360₈	240	F0	ά	Lowercase oxia Alpha	
361₈	241	F1	έ	Lowercase oxia Epsilon	
362₈	242	F2	ή	Lowercase oxia Eta	
363₈	243	F3	ί	Lowercase oxia Iota	
364₈	244	F4	ό	Lowercase oxia Omicron	
365₈	245	F5	ύ	Lowercase oxia Upsilon	
366₈	246	F6	ώ	Lowercase oxia Omega	
367₈	247	F7	ϊ	Lowercase diaeresis Iota	
370₈	248	F8	ϋ	Lowercase diaeresis Upsilon	
371₈	249	F9	ΐ	Lowercase oxia diaeresis Iota	
372₈	250	FA	ΰ	Lowercase oxia diaeresis Upsilon	

Character Set $47_8 = 39_{10} = 27_{16}$: Cyrillic alphabet

Character Set 47_8 contains the Russian and Cyrillic alphabets [19] [20].

The following are character codes (low-order byte) within Character Set 47_8 (see reference chart in appendix B):

Identifier			Shape	Character description	Character set 47₈: Cyrillic
Octal	Dec	Hex			
41₈	33	21	А	Russian capital letter A	
42₈	34	22	Б	Russian capital letter BE	
43₈	35	23	В	Russian capital letter VE	
44₈	36	24	Г	Russian capital letter GHE	
45₈	37	25	Д	Russian capital letter DE	
46₈	38	26	Е	Russian capital letter E	
47₈	39	27	Ё	Russian capital letter YO	
50₈	40	28	Ж	Russian capital letter ZHE	
51₈	41	29	З	Russian capital letter ZE	
52₈	42	2A	И	Russian capital letter I	
53₈	43	2B	Й	Russian capital letter SHORT I	
54₈	44	2C	К	Russian capital letter KA	
55₈	45	2D	Л	Russian capital letter EL	
56₈	46	2E	М	Russian capital letter EM	
57₈	47	2F	Н	Russian capital letter EN	
60₈	48	30	О	Russian capital letter O	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 47₈: Cyrillic
61₈	49	31	П	Russian capital letter PE	
62₈	50	32	Р	Russian capital letter ER	
63₈	51	33	С	Russian capital letter ES	
64₈	52	34	Т	Russian capital letter TE	
65₈	53	35	У	Russian capital letter U	
66₈	54	36	Ф	Russian capital letter EF	
67₈	55	37	Х	Russian capital letter HA	
70₈	56	38	Ц	Russian capital letter TSE	
71₈	57	39	Ч	Russian capital letter CHE	
72₈	58	3A	Ш	Russian capital letter SHA	
73₈	59	3B	Щ	Russian capital letter SHCHA	
74₈	60	3C	Ъ	Russian capital letter ER (also hard sign)	
75₈	61	3D	Ы	Russian capital letter ERY	
76₈	62	3E	Ь	Russian capital letter SOFT SIGN	
77₈	63	3F	Э	Russian capital letter REVERSE E	
100₈	64	40	Ю	Russian capital letter YU	
101₈	65	41	Я	Russian capital letter YA	
102₈	66	42	Ґ	Ukrainian, Ruthenian, and Byelorussian capital letter HARD G	
103₈	67	43	Ђ	Serbian capital letter SOFT DJ	
104₈	68	44	Ѓ	Macedonian capital letter SOFT DJ	
105₈	69	45	Є	Ukrainian capital letter YE	
106₈	70	46	Ѕ	Macedonian capital letter ZELO	
107₈	71	47	І	Old Russian, Ukrainian, and Byelorussian capital letter I	
110₈	72	48	Ї	Ukrainian capital letter I with two dots	
111₈	73	49	Ј	Serbian and Macedonian capital letter JE	
112₈	74	4A	Љ	Serbian and Macedonian capital letter SOFT L	
113₈	75	4B	Њ	Serbian and Macedonian capital letter SOFT N	
114₈	76	4C	Ћ	Serbian capital letter SOFT T	
115₈	77	4D	Ќ	Macedonian capital letter SOFT K	
116₈	78	4E	Ў	Byelorussian capital letter SHORT U	
121₈	81	51	а	Russian small letter A	
122₈	82	52	б	Russian small letter BE	
123₈	83	53	в	Russian small letter VE	
124₈	84	54	г	Russian small letter GHE	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 47₈: Cyrillic
125₈	85	55	д	Russian small letter DE	
126₈	86	56	е	Russian small letter E	
127₈	87	57	ё	Russian small letter YO	
130₈	88	58	ж	Russian small letter ZHE	
131₈	89	59	з	Russian small letter ZE	
132₈	90	5A	и	Russian small letter I	
133₈	91	5B	й	Russian small letter SHORT I	
134₈	92	5C	к	Russian small letter KA	
135₈	93	5D	л	Russian small letter EL	
136₈	94	5E	м	Russian small letter EM	
137₈	95	5F	н	Russian small letter EN	
140₈	96	60	о	Russian small letter O	
141₈	97	61	п	Russian small letter PE	
142₈	98	62	р	Russian small letter ER	
143₈	99	63	с	Russian small letter ES	
144₈	100	64	т	Russian small letter TE	
145₈	101	65	у	Russian small letter U	
146₈	102	66	ф	Russian small letter EF	
147₈	103	67	х	Russian small letter HA	
150₈	104	68	ц	Russian small letter TSE	
151₈	105	69	ч	Russian small letter CHE	
152₈	106	6A	ш	Russian small letter SHA	
153₈	107	6B	щ	Russian small letter SHCHA	
154₈	108	6C	ъ	Russian small letter ER (also hard sign)	
155₈	109	6D	ы	Russian small letter ERY	
156₈	110	6E	ь	Russian small letter SOFT sign	
157₈	111	6F	э	Russian small letter reverse E	
160₈	112	70	ю	Russian small letter YU	
161₈	113	71	я	Russian small letter YA	
162₈	114	72	ґ	Ukrainian, Ruthenian, and Byelorussian small letter HARD G	
163₈	115	73	ђ	Serbian small letter SOFT DJ	
164₈	116	74	ѓ	Macedonian small letter SOFT DJ	
165₈	117	75	є	Ukrainian small letter YE	
166₈	118	76	ѕ	Macedonian small letter ZELO	

Identifier			Shape	Character description	Character set 47₈: Cyrillic
Octal	Dec	Hex			
167₈	119	77	i	Old Russian, Ukrainian, and Byelorussian small letter I	
170₈	120	78	ï	Ukrainian small letter I with two dots	
171₈	121	79	j	Serbian and Macedonian small letter JE	
172₈	122	7A	љ	Serbian and Macedonian small letter SOFT L	
173₈	123	7B	њ	Serbian and Macedonian small letter SOFT N	
174₈	124	7C	ħ	Serbian small letter SOFT T	
175₈	125	7D	ќ	Macedonian small letter SOFT K	
176₈	126	7E	ў	Byelorussian small letter SHORT U	
241₈	161	A1	Џ	Serbian and Macedonian capital letter HARD DJ	
242₈	162	A2	Ѣ	Old Russian, Byelorussian, and Bulgarian capital letter YAT'	
243₈	163	A3	Ѳ	Old Russian capital letter FITA	
244₈	164	A4	Ѵ	Old Russian capital letter IZHITSA	
245₈	165	A5	Ѫ	Old Bulgarian capital letter YUS	
246₈	166	A6	Q	Non-Slavic Cyrillic capital letter QA (Kurdish)	
247₈	167	A7	W	Non-Slavic Cyrillic capital letter W (Kurdish)	
250₈	168	A8	Y	Non-Slavic Cyrillic capital letter close U	
251₈	169	A9	Á	Cyrillic capital letter stressed A	
252₈	170	AA	Ä	Non-Slavic Cyrillic capital letter front A	
253₈	171	AB	Ă	Non-Slavic Cyrillic capital letter back A (Chuvash)	
254₈	172	AC	Æ	Non-Slavic Cyrillic capital AE ligature (Ossetic)	
255₈	173	AD	Ғ	Non-Slavic Cyrillic capital letter crossed GHE	
256₈	174	AE	Ҕ	Non-Slavic Cyrillic capital letter GHE with tail	
257₈	175	AF	É	Cyrillic capital letter stressed E	
260₈	176	B0	Ĕ	Non-Slavic Cyrillic capital letter close E (Chuvash)	
261₈	177	B1	Җ̈	Non-Slavic Cyrillic capital letter DZH (Udmurt)	
262₈	178	B2	Җ	Non-Slavic Cyrillic capital letter DZH (Dungan, Kalmyk)	
263₈	179	B3	Ӟ	Non-Slavic Cyrillic capital letter DZ (Udmurt)	
264₈	180	B4	Ҙ	Non-Slavic Cyrillic capital letter interdental voiced THE	
265₈	181	B5	Ѝ	Cyrillic capital letter stressed I	
266₈	182	B6	Ӥ	Non-Slavic Cyrillic capital letter HARD I (Udmurt)	
267₈	183	B7	Ӣ	Non-Slavic Cyrillic capital letter LONG I (Tadjik)	
270₈	184	B8	Қ	Non-Slavic Cyrillic capital letter back KA	
271₈	185	B9	Ҟ	Non-Slavic Cyrillic capital letter back KA	
272₈	186	BA	Ҝ	Non-Slavic Cyrillic capital letter SOFT GHE (Azerbaijanian)	

Identifier Octal Dec Hex			Shape	Character description	Character set 47₈: Cyrillic
273₈	187	BB	Ҡ	Non-Slavic Cyrillic capital letter back KA (Bashkir)	
274₈	188	BC	Ҟ	Non-Slavic Cyrillic capital letter crossed KA (Abkhazian)	
275₈	189	BD	Ҥ	Non-Slavic Cyrillic capital letter back EN	
276₈	190	BE	Ҥ	Non-Slavic Cyrillic capital EN-GHE ligature	
277₈	191	BF	Ó	Cyrillic capital letter stressed O	
300₈	192	C0	Ö	Non-Slavic Cyrillic capital letter front O	
302₈	194	C2	Пҍ	Non-Slavic Cyrillic capital letter PE with tail (Abkhazian)	
303₈	195	C3	Ҫ	Non-Slavic Cyrillic capital letter interdental unvoiced THE (Bashkir)	
304₈	196	C4	Ҫ	Non-Slavic Cyrillic capital letter ? (Abkhazian)	
305₈	197	C5	Ҭ	Non-Slavic Cyrillic capital letter TE with tail (Abkhazian)	
306₈	198	C6	Ҵ	Non-Slavic Cyrillic capital letter abruptive TSE (Abkhazian)	
307₈	199	C7	Ý	Cyrillic capital letter stressed U	
310₈	200	C8	Ÿ	Non-Slavic Cyrillic capital letter front U	
311₈	201	C9	Ӳ	Non-Slavic Cyrillic capital letter front U (Churvash)	
313₈	203	CB	Ӯ	Non-Slavic Cyrillic capital letter LONG U (Tadjik)	
314₈	204	CC	Ҳ	Non-Slavic Cyrillic capital letter HA with tail	
315₈	205	CD	Ҳ	Non-Slavic Cyrillic capital letter HA with tail	
316₈	206	CE	Ҷ	Non-Slavic Cyrillic capital letter HARD CHE (Udmurt)	
321₈	209	D1	џ	Serbian and Macedonian small letter HARD DJ	
322₈	210	D2	ѣ	Old Russian, Byelorussian, and Bulgarian small letter YAT'	
323₈	211	D3	ѳ	Old Russian small letter FITA	
324₈	212	D4	ѵ	Old Russian small letter IZHITSA	
325₈	213	D5	ѫ	Old Bulgarian small letter YUS	
326₈	214	D6	q	Non-Slavic Cyrillic small letter QA (Kurdish)	
327₈	215	D7	w	Non-Slavic Cyrillic small letter W (Kurdish)	
330₈	216	D8	ү	Non-Slavic Cyrillic small letter close U	
331₈	217	D9	á	Cyrillic small letter stressed A	
332₈	218	DA	ä	Non-Slavic Cyrillic small letter front A	
333₈	219	DB	ă	Non-Slavic Cyrillic small letter back A (Chuvash)	
334₈	220	DC	æ	Non-Slavic Cyrillic small AE ligature (Ossetic)	
335₈	221	DD	ғ	Non-Slavic Cyrillic small letter crossed GHE	
336₈	222	DE	ҕ	Non-Slavic Cyrillic small letter GHE with tail	
337₈	223	DF	é	Cyrillic small letter stressed E	
340₈	224	E0	ĕ	Non-Slavic Cyrillic small letter close E (Chuvash)	

Identifier			Shape	Character description	Character set 47₈: Cyrillic
Octal	Dec	Hex			
341₈	225	E1	ӝ	Non-Slavic Cyrillic small letter DZH (Udmurt)	
342₈	226	E2	җ	Non-Slavic Cyrillic small letter DZH (Dungan, Kalmyk)	
343₈	227	E3	ӟ	Non-Slavic Cyrillic small letter DZ (Udmurt)	
344₈	228	E4	ҙ	Non-Slavic Cyrillic small letter interdental voiced THE	
345₈	229	E5	и́	Cyrillic small letter stressed I	
346₈	230	E6	ӥ	Non-Slavic Cyrillic small letter HARD I (Udmurt)	
347₈	231	E7	ӣ	Non-Slavic Cyrillic small letter LONG I (Tadjik)	
350₈	232	E8	қ	Non-Slavic Cyrillic small letter back KA	
351₈	233	E9	ҝ	Non-Slavic Cyrillic small letter back KA	
352₈	234	EA	ҝ	Non-Slavic Cyrillic small letter SOFT GHE (Azerbaijanian)	
353₈	235	EB	ҡ	Non-Slavic Cyrillic small letter back KA (Bashkir)	
354₈	236	EC	ҟ	Non-Slavic Cyrillic small letter crossed KA (Abkhazian)	
355₈	237	ED	ӈ	Non-Slavic Cyrillic small letter back EN	
356₈	238	EE	ҥ	Non-Slavic Cyrillic small EN-GHE ligature	
357₈	239	EF	о́	Cyrillic small letter stressed O	
360₈	240	F0	ӧ	Non-Slavic Cyrillic small letter front O	
362₈	242	F2	ҧ	Non-Slavic Cyrillic small letter PE with tail (Abkhazian)	
363₈	243	F3	ҫ	Non-Slavic Cyrillic small letter interdental unvoiced THE (Bashkir)	
364₈	244	F4	ҫ	Non-Slavic Cyrillic small letter ? (Abkhazian)	
365₈	245	F5	ҭ	Non-Slavic Cyrillic small letter TE with tail (Abkhazian)	
366₈	246	F6	ҵ	Non-Slavic Cyrillic small letter abruptive TSE (Abkhazian)	
367₈	247	F7	у́	Cyrillic small letter stressed U	
370₈	248	F8	ӱ	Non-Slavic Cyrillic small letter front U	
371₈	249	F9	ӳ	Non-Slavic Cyrillic small letter front U (Churvash)	
373₈	251	FB	ӯ	Non-Slavic Cyrillic small letter LONG U (Tadjik)	
374₈	252	FC	ҳ	Non-Slavic Cyrillic small letter HA with tail	
375₈	253	FD	ҳ	Non-Slavic Cyrillic small letter HA with tail	
376₈	254	FE	ӵ	Non-Slavic Cyrillic small letter HARD CHE (Udmurt)	

Character Set $50_8L = 40_{10}L = 28_{16}L$: JIS and IBM forms characters

JIS forms characters are located at Char8Codes 43_8 through 100_8 and have two line weights, thin and thick. The description of the line weight and the direction of any form line is given in coordinates x and y, lowercase indicating a thin line. Capital letters X and Y indicate thick form lines and their directions.

IBM forms characters are located at Char8Codes 120_8 through 154_8 and are composed of single and double lines. The description of line shape is given as single and/or double lines, and location is as it relates to an element of a larger forms box, for example, "lower left box corner."

When a thin line forms character has a shape common to both JIS and IBM, only one can be coded. Since the JIS standard precedes the IBM standard, in time the IBM elements in common with JIS are found in the JIS forms code space. These are identified easily since the common shape description uses both vernaculars. For example, $(50_8 \mid 46_8)$ has both the names "y + x" and "lower left box corner." A single line is implied in the IBM description. If the shape were "lower left box corner double," indicating a double thin line, $(50_8 \mid 134_8)$ would be used. For double thin lines, no equivalent shape exists within JIS.

The following are character codes (low-order byte) within Character Set 50_8L (see reference charts in appendix B):

Identifier			Shape	Character description	Character set 50₈L: Forms
Octal	Dec	Hex			
41₈	33	21		**ref:** See —=(357₈ | 345₈)	
42₈	34	22		**ref:** See | =(357₈ | 344₈)	
43₈	35	23	⌐	x -y (direction of form lines) = upper left box corner (IBM)	
44₈	36	24	┐	-x -y = upper right box corner	
45₈	37	25	┘	-x +y = lower right box corner	
46₈	38	26	└	y +x = lower left box corner	
47₈	39	27	├	y +x -y = left middle box side	
50₈	40	28	┬	-x -y +x = middle box top	
51₈	41	29	┤	y -x -y = right middle box side	
52₈	42	2A	┴	x +y -x = middle box bottom	
53₈	43	2B		**ref:** See ┼=(357₈ | 346₈)	
54₈	44	2C		**ref:** See ━=(357₈ | 342₈)	
55₈	45	2D		**ref:** See | =(357₈ | 341₈)	
56₈	46	2E	┏	X -Y (uppercase denotes thick line)	
57₈	47	2F	┓	-X -Y	
60₈	48	30	┛	-X +Y	
61₈	49	31	┗	Y +X	
62₈	50	32	┣	X +Y -Y	
63₈	51	33	┳	X -X -Y	
64₈	52	34	┫	Y -X -Y	
65₈	53	35	┻	X +Y -X	
66₈	54	36		**ref:** See ┼=(357₈ | 343₈)	
67₈	55	37	┝	x +Y -Y	
70₈	56	38	┰	X -X -y	
71₈	57	39	┥	Y -x -Y	
72₈	58	3A	┸	X +y -X	
73₈	59	3B	┿	X +y -X -y	
74₈	60	3C	┞	X +y -y	
75₈	61	3D	┯	x -x -Y	
76₈	62	3E	┩	y -X -y	
77₈	63	3F	┷	x +Y -x	
100₈	64	40	╀	x +Y -x -Y	
101₈	65	41	┊	Thin broken vertical line = broken x-y	
102₈	66	42	┋	Thick broken vertical line = broken X-Y	

Identifier			Shape	Character description	Character set 50₈L: Forms
Octal	Dec	Hex			
120₈	80	50	╡	Right box side double to single	
121₈	81	51	╢	Right box side single to double	
122₈	82	52	╖	Upper right box corner single to double	
123₈	83	53	╕	Upper right box corner double to single	
124₈	84	54	╣	Right box side double	
125₈	85	55	║	Center box bar vertical double	
126₈	86	56	╗	Upper right box corner double	
127₈	87	57	╝	Lower right box corner double	
130₈	88	58	╜	Lower right box corner single to double	
131₈	89	59	╛	Lower right box corner double to single	
132₈	90	5A	╞	Left box side single to double	
133₈	91	5B	╟	Left box side double to single	
134₈	92	5C	╚	Lower left box corner double	
135₈	93	5D	╔	Upper left box corner double	
136₈	94	5E	╩	Middle box bottom double	
137₈	95	5F	╦	Middle box top double	
140₈	96	60	╠	Left box side double	
141₈	97	61	═	Center box bar horizontal double	
142₈	98	62	╬	Box intersection double	
143₈	99	63	╧	Middle box bottom single to double	
144₈	100	64	╨	Middle box bottom double to single	
145₈	101	65	╤	Middle box top double to single	
146₈	102	66	╥	Middle box top single to double	
147₈	103	67	╙	Lower left box corner double to single	
150₈	104	68	╘	Lower left box corner single to double	
151₈	105	69	╒	Upper left box corner single to double	
152₈	106	6A	╓	Upper left box corner double to single	
153₈	107	6B	╫	Box intersection single to double	
154₈	108	6C	╪	Box intersection double to single	

Character Set $50_8R = 40_{10}R = 28_{16}R$: mosaic characters

Character Set 50_8R contains mosaic characters defined in ANSI X3.110, Videotex/Teletext Presentation Level Protocol Syntax (North American PLPS). They are used to form pictures or patterns. The rectangle surrounding each 2 × 3 inlay in the code chart in appendix B is for illustrative purposes only and is not part of the graphic symbol.

A tile name contains a 2 × 3 pattern description in left to right and top to bottom order (1/0 = black/white).

The following are character codes (low-order byte) within Character Set 50_8R (see reference charts in appendix B):

| Identifier | | | Shape | Character description | Character set 50_8R: Mosaic |
Octal	Dec	Hex			
241_8	161	A1	▪	Tile 10-00-00	
242_8	162	A2	▪	Tile 01-00-00	
243_8	163	A3	▬	Tile 11-00-00	
244_8	164	A4	▪	Tile 00-10-00	
245_8	165	A5	▐	Tile 10-10-00	
246_8	166	A6	▪▪	Tile 01-10-00	
247_8	167	A7	▛	Tile 11-10-00	
250_8	168	A8	▪	Tile 00-01-00	
251_8	169	A9	▀▪	Tile 10-01-00	
252_8	170	AA	▌	Tile 01-01-00	
253_8	171	AB	▜	Tile 11-01-00	
254_8	172	AC	▬	Tile 00-11-00	
255_8	173	AD	▙	Tile 10-11-00	
256_8	174	AE	▟	Tile 01-11-00	
257_8	175	AF	■	Tile 11-11-00	
260_8	176	B0	▪	Tile 00-00-10	
261_8	177	B1	▪▪	Tile 10-00-10	
262_8	178	B2	▗▪	Tile 01-00-10	
263_8	179	B3	▬▪	Tile 11-00-10	
264_8	180	B4	▐	Tile 00-10-10	
265_8	181	B5	▐	Tile 10-10-10	
266_8	182	B6	▌▪	Tile 01-10-10	
267_8	183	B7	▛	Tile 11-10-10	
270_8	184	B8	▗▪	Tile 00-01-10	
271_8	185	B9	▜▪	Tile 10-01-10	

Identifier			Shape	Character description	Character set 50₈R: Mosaic
Octal	*Dec*	*Hex*			
272₈	186	BA		Tile 01-01-10	
273₈	187	BB		Tile 11-01-10	
274₈	188	BC		Tile 00-11-10	
275₈	189	BD		Tile 10-11-10	
276₈	190	BE		Tile 01-11-10	
277₈	191	BF		Tile 11-11-10	
337₈	223	DF		Tile 11-11-11	
340₈	224	E0		Tile 00-00-01	
341₈	225	E1		Tile 10-00-01	
342₈	226	E2		Tile 01-00-01	
343₈	227	E3		Tile 11-00-01	
344₈	228	E4		Tile 00-10-01	
345₈	229	E5		Tile 10-10-01	
346₈	230	E6		Tile 01-10-01	
347₈	231	E7		Tile 11-10-01	
350₈	232	E8		Tile 00-01-01	
351₈	233	E9		Tile 10-01-01	
352₈	234	EA		Tile 01-01-01	
353₈	235	EB		Tile 11-01-01	
354₈	236	EC		Tile 00-11-01	
355₈	237	ED		Tile 10-11-01	
356₈	238	EE		Tile 01-11-01	
357₈	239	EF		Tile 11-11-01	
360₈	240	F0		Tile 00-00-11	
361₈	241	F1		Tile 10-00-11	
362₈	242	F2		Tile 01-00-11	
363₈	243	F3		Tile 11-00-11	
364₈	244	F4		Tile 00-10-11	
365₈	245	F5		Tile 10-10-11	
366₈	246	F6		Tile 01-10-11	
367₈	247	F7		Tile 11-10-11	
370₈	248	F8		Tile 00-01-11	
371₈	249	F9		Tile 10-01-11	
372₈	250	FA		Tile 01-01-11	

Identifier			Shape	Character description	Character set 50₈R: Mosaic
Octal	Dec	Hex			
373₈	251	FB	▟	Tile 11-01-11	
374₈	252	FC	▮	Tile 00-11-11	
375₈	253	FD	▙	Tile 10-11-11	
376₈	254	FE	▟	Tile 01-11-11	

Character Set $51_8 = 41_{10} = 29_{16}$: Runic alphabet

These character identifiers are reserved for Runic letters. The alphabet is called simply "Runic." The letters added in the Scandinavian alphabet are called "Scandinavian Runic," and those of the English runes are called "English Runic." The runes of the Swedish Hälsingerunor (191-316) are called the "Hälsing Runic."

In the column headed "Letter value," subheaded *"Roman-English,"* you'll find the usual alphabetic transliteration of the runes in Roman type as used in English writing. When several characters stand for the same letter, subscript numbers distinguish between them: for example, f_1, f_2, f_3, etc. It is impossible to identify the place or alphabet in which each one is found without an elaborate system; we have not done so.

In the column headed "Letter name," you'll find two varieties of names, the Old English *(OE)* and the Old Norse *(ON)* or Icelandic names. Unlike the Roman and Gothic alphabets, the runic letters have names as well as sound values.

In the column headed "Meaning," you'll find the meaning or semantic equivalent of the runic names for each character. Those that are conjectural are marked with "?".

The following are character codes (low-order byte) within Character Set 51_8 (see reference charts in appendix B):

Identifier			Shape	Letter value	Letter name		Meaning		Character set 51₈:
Octal	Dec	Hex		Roman-English	OE	ON	OE	ON	Runic
41₈	33	21	ᚠ	Runic f_1	feoh	fé	'cattle'		
42₈	34	22	ᚡ	Runic f_2	feoh	fé	'cattle'		
43₈	35	23	ᚢ	Runic f_3	feoh	fé	'cattle'		
44₈	36	24	ᚾ	Runic u_1	ūr	úr	'urox;	drizzle'	
45₈	37	25	ᚿ	Runic u_2	ūr	úr	'urox;	drizzle'	
46₈	38	26	ᚼ	Runic u_3	ūr	úr	'urox;	drizzle'	
47₈	39	27	ᚦ	Runic th_1	thorn	thurs	'thorn;	giant'	
50₈	40	28	ᚦ	Runic th_2	thorn	thurs	'thorn;	giant'	
51₈	41	29	ᛑ	Runic th_3	thorn	thurs	'thorn;	giant'	
52₈	42	2A	ᚦ	Runic th_4	thorn	thurs	'thorn;	giant'	
53₈	43	2B	ᚫ	Runic $a_1 > o$	ōs	áss > óss	'god'		
54₈	44	2C	ᚫ	Runic $a_2 > o$	ōs	áss > óss	'god'		

Identifier			Shape	Letter value	Letter name		Meaning		Character set 51₈:
Octal	Dec	Hex.		Roman-English	OE	ON	OE	ON	Runic
55_8	45	2D	ꜳ	Runic a_3 > o	ōs	áss > óss	'god'		
56_8	46	2E	ꜳ	Runic a_4 > o	ōs	áss > óss	'god'		
57_8	47	2F	ꜳ	Runic a_5 > o	ōs	áss > óss	'god'		
60_8	48	30	ꜳ	Runic a_6 > o	ōs	áss > óss	'god'		
61_8	49	31	ꜳ	Runic a_7 > o	ōs	áss > óss	'god'		
62_8	50	32	�R	Runic r_1	rād	reið	'ride;	cart'	
63_8	51	33	ᚱ	Runic r_2	rād	reið	'ride;	cart'	
64_8	52	34	R	Runic r_3	rād	reið	'ride;	cart'	
65_8	53	35	ᚲ	Runic k_1	rād	kaun	'boil'		
66_8	54	36	ᚭ	Runic k_2	rād	kaun	'boil'		
67_8	55	37	ᛣ	Runic k_3	rād	kaun	'boil'		
70_8	56	38	ᛈ	Runic k_4	rād	kaun	'boil'		
71_8	57	39	ᛤ	Runic k_5	rād	kaun	'boil'		
72_8	58	3A	X	Runic g_1	gyfu	(gjǫf)	'gift'		
73_8	59	3B	ᛦ	Runic g_2	gyfu	(gjǫf)	'gift'		
74_8	60	3C	ᛈ	Runic g_3	gyfu	(gjǫf)	'gift'		
75_8	61	3D	ᚹ	Runic w_1	wyn	(unnr)	'hope'		
76_8	62	3E	P	Runic w_2	wyn	(unnr)	'hope'		
77_8	63	3F	ᚺ	Runic h_1	hægl	hagall	'hail'		
100_8	64	40	ᚻ	Runic h_2	hægl	hagall	'hail'		
101_8	65	41	N	Runic h_3	hægl	hagall	'hail'		
102_8	66	42	H	Runic h_4	hægl	hagall	'hail'		
103_8	67	43	ᚼ	Runic h_5	hægl	hagall	'hail'		
104_8	68	44	ᚽ	Runic h_6	hægl	hagall	'hail'		
105_8	69	45	ᚿ	Runic h_7	hægl	hagall	'hail'		
106_8	70	46	ᛂ	Runic h_8	hægl	hagall	'hail'		
107_8	71	47	ᚾ	Runic n_1	nȳd	nauð	'need'		
110_8	72	48	ᚿ	Runic n_2	nȳd	nauð	'need'		
111_8	73	49	ᛜ	Runic n_3	nȳd	nauð	'need'		
112_8	74	4A	ᚾ	Runic n_4	nȳd	nauð	'need'		
113_8	75	4B	ᛁ	Runic i	īs	íss	'ice'		
114_8	76	4C	ᛃ	Runic j_1	gēr	ár	'year'		
115_8	77	4D	ᛡ	Runic j_2	gēr	ár	'year'		
116_8	78	4E	ᛢ	Runic j_3	gēr	ár	'year'		

Identifier Octal	Dec	Hex.	Shape	Letter value Roman-English	Letter name OE	Letter name ON	Meaning OE	Meaning ON	Character set 51₈: Runic
117_8	79	4F	ᚅ	Runic j_4	gēr	ár	'year'		
120_8	80	50	+	Runic j_5	gēr	ár	'year'		
121_8	81	51	Φ	Runic j_6	gēr	ár	'year'		
122_8	82	52	Φ	Runic j_7	gēr	ár	'year'		
123_8	83	53	ᚼ	Runic j_8	gēr	ár	'year'		
124_8	84	54	ᚾ	Runic j_9	gēr	ár	'year'		
125_8	85	55	ᛁ	Runic $ė_1$	ēoh	(jór)	'horse'		
126_8	86	56	ᚘ	Runic $ė_2$	ēoh	(jór)	'horse'		
127_8	87	57	ᛁ	Runic $ė_3$	ēoh	(jór)	'horse'		
130_8	88	58	Z	Runic $ė_4$	ēoh	(jór)	'horse'		
131_8	89	59	ᛈ	Runic p_1	peorð				
132_8	90	5A	ᛈ	Runic p_2	peorð				
133_8	91	5B	ᛘ	Runic p_3	peorð				
134_8	92	5C	ᚈ	Runic p_4	peorð				
135_8	93	5D	ᚺ	Runic p_5	peorð				
136_8	94	5E	ᛒ	Runic p_6	peorð				
137_8	95	5F	ᛦ	Runic $z_1 > R$	eolh	ýr	'willow;	rain'	
140_8	96	60	ᛣ	Runic $z_2 > R$	eolh	ýr	'willow;	rain'	
141_8	98	61	ᚼ	Runic $z_3 > R$	eolh	ýr	'willow;	rain'	
142_8	99	62	Ψ	Runic $z_4 > R$	eolh	ýr	'willow;	rain'	
143_8	100	63	ᚸ	Runic $z_5 > R$	eolh	ýr	'willow;	rain'	
144_8	101	64	ᛁ	Runic $z_6 > R$	eolh	ýr	'willow;	rain'	
145_8	102	65	ᛋ	Runic s_1	sigel	sól	'sun'		
146_8	103	66	ᛋ	Runic s_2	sigel	sól	'sun'		
147_8	104	67	ᛌ	Runic s_3	sigel	sól	'sun'		
150_8	105	68	ᚼ	Runic s_4	sigel	sól	'sun'		
151_8	106	69	ᚿ	Runic s_5	sigel	sól	'sun'		
152_8	107	6A	ᛯ	Runic s_6	sigel	sól	'sun'		
153_8	108	6B	ᚱ	Runic s_7	sigel	sól	'sun'		
154_8	109	6C	ᛉ	Runic s_8	sigel	sól	'sun'		
155_8	110	6D	ᛁ	Runic s_9	sigel	sól	'sun'		
156_8	111	6E	ᛏ	Runic t_1	tīr	týr	'Tyr (god)'		
157_8	112	6F	ᛁ	Runic t_2	tīr	týr	'Tyr (god)'		
160_8	113	70	ᛏ	Runic t_3	tīr	týr	'Tyr (god)'		

| Identifier | | | Shape | Letter value | Letter name | | Meaning | | Character set 51_8: |
Octal	Dec	Hex		Roman-English	OE	ON	OE	ON	Runic
161_8	114	71	ᛒ	Runic b_1	beorc	bjarkan	'birch'		
162_8	115	72	ᛒ	Runic b_2	beorc	bjarkan	'birch'		
163_8	116	73	ᛒ	Runic b_3	beorc	bjarkan	'birch'		
164_8	117	7C4	ᚨ	Runic b_4	beorc	bjarkan	'birch'		
165_8	118	75	ᛘ	Runic b_5	beorc	bjarkan	'birch'		
166_8	119	76	ᛖ	Runic e	e(o)h		'horse'		
167_8	120	77	ᛗ	Runic m_1	man	maðr	'man'		
170_8	121	78	ᛙ	Runic m_2	man	maðr	'man'		
171_8	122	79	ᛉ	Runic m_3	man	maðr	'man'		
172_8	123	7A	ᛨ	Runic m_4	man	maðr	'man'		
173_8	124	7B	ᛁ	Runic m_5	man	maðr	'man'		
174_8	125	7C	ᛢ	Runic m_6	man	maðr	'man'		
175_8	126	7D	ᚱ	Runic l	lagu	lǫgr	'water'		
176_8	127	7E	◇	Runic ng_1	ing	(Yngvi)	'Ing (god)'		
241_8	161	A1	▢	Runic ng_2	ing	(Yngvi)	'Ing (god)'		
242_8	162	A2	ᚷ	Runic ng_3	ing	(Yngvi)	'Ing (god)'		
243_8	163	A3	ᛜ	Runic o_1	ēþel	(óðal)	'land'		
244_8	164	A4	ᛟ	Runic o_2	ēþel	(óðal)	'land'		
245_8	165	A5	ᛚ	Runic o_3	ēþel	(óðal)	'land'		
246_8	166	A6	ᛃ	Runic o_4	ēþel	(óðal)	'land'		
247_8	167	A7	ᛞ	Runic d_1	dæg	(dagr)	'day'		
250_8	168	A8	ᛏ	Runic d_2	dæg	(dagr)	'day'		
251_8	169	A9	ᛡ	Scandinavian Runic		æ			
252_8	170	AA	ᛡ	Scandinavian Runic		ø			
253_8	171	AB	ᚯ	English Runic o_5	ēþel	(óðal)	'land'		
254_8	172	AC	ᚮ	English Runic o_6	ēþel	(óðal)	'land'		
255_8	173	AD	ᚻ	English Runic k_6	cēn	kaun	'boil'		
256_8	174	AE	ᚺ	English Runic k_7	cēn	kaun	'boil'		
257_8	175	AF	ᚨ	English Runic a_1	āc		'oak'		
260_8	176	B0	ᚪ	English Runic a_2	āc		'oak'		
261_8	177	B1	ᚫ	English Runic æ	æsc		'ash'		
262_8	178	B2	ᛠ	English Runic y_1	ȳr		'bow?'		
263_8	179	B3	ᛡ	English Runic y_2	ȳr		'bow?'		
264_8	180	B4	ᚢ	English Runic y_3	ȳr		'bow?'		

| Identifier | | | Shape | Letter value | Letter name | | Meaning | | Character set 51₈: |
Octal	Dec	Hex.		Roman-English	OE	ON	OE	ON	Runic
265_8	181	B5	ᛏ	English Runic y_4	ȳr		'bow?'		
266_8	182	B6	Ψ	English Runic ea_1	ear		'sea?'		
267_8	183	B7	ᛡ	English Runic ea_2	ear		'sea?'		
270_8	184	B8	ᛁ	English Runic io	ior				
271_8	185	B9	Υ	English Runic q(cw)	cweorþ				
272_8	186	BA	ᛣ	English Runic k_1	calc		'chalk'		
273_8	187	BB	ᛤ	English Runic k_2	calc		'chalk'		
274_8	188	BC	ᛥ	English Runic st	stān		'stone'		
275_8	189	BD	ᚸ	English Runic g_1	gār		'spear'		
276_8	190	BE	ᚷ	English Runic g_2	gār		'spear'		
277_8	191	BF	l	Hälsing Runic f					
300_8	192	C0	)	Hälsing Runic u					
301_8	193	C1	'	Hälsing Runic th (þ)					
302_8	194	C2	﹨	Hälsing Runic a					
303_8	195	C3	(	Hälsing Runic r					
304_8	196	C4	⊥	Hälsing Runic k					
305_8	197	C5	ı	Hälsing Runic h					
306_8	198	C6	﹨	Hälsing Runic n					
307_8	199	C7	I	Hälsing Runic i					
310_8	200	C8	╱	Hälsing Runic a					
311_8	201	C9	ı	Hälsing Runic s					
312_8	202	CA	╱	Hälsing Runic t					
313_8	203	CB	╱	Hälsing Runic b					
314_8	204	CC	┆	Hälsing Runic m					
315_8	205	CD	﹨	Hälsing Runic l					
316_8	206	CE	┆	Hälsing Runic r (R)					

Character Set $51_8 = 41_{10} = 29_{16}$: Gothic alphabet

These character identifiers are reserved for Gothic letters, which are designated as "Gothic."

The following are character codes (low-order byte) within Character Set 51_8 (see reference charts in appendix B):

Identifier			Shape	Letter value(numeral value)	Character set 51_8:
Octal	Dec	Hex.		Roman-English	Gothic
341_8	225	E1	ⱥ	Gothic a (1)	
342_8	226	E2	ⰱ	Gothic b (2)	
343_8	227	E3	г	Gothic g (3)	
344_8	228	E4	ⱄ	Gothic d (4)	
345_8	229	E5	є	Gothic e (5)	
346_8	230	E6	u	Gothic q (6)	
347_8	231	E7	z	Gothic z (7)	
350_8	232	E8	h	Gothic h (8)	
351_8	233	E9	ψ	Gothic th (9)	
352_8	234	EA	ï	Gothic i (initial and postvocalic) (10)	
353_8	235	EB	ı	Gothic i (elsewhere) (10)	
354_8	236	EC	к	Gothic k (20)	
355_8	237	ED	λ	Gothic l (30)	
356_8	238	EE	м	Gothic m (40)	
357_8	239	EF	и	Gothic n (50)	
360_8	240	F0	G	Gothic j (60)	
361_8	241	F1	n	Gothic u (70)	
362_8	242	F2	п	Gothic p (80)	
363_8	243	F3	ц	- (90)	
364_8	244	F4	ß	Gothic r (100)	
365_8	245	F5	s	Gothic s (200)	
366_8	246	F6	т	Gothic t (300)	
367_8	247	F7	ɣ	Gothic w/v (400)	
370_8	248	F8	ⱨ	Gothic f (500)	
371_8	249	F9	x	Gothic ch/k (600)	
372_8	250	FA	ө	Gothic hw/hv (700)	
373_8	251	FB	ǫ	Gothic o (800)	
374_8	252	FC	↑	- (900)	

Character Set 52₈L = 42₁₀L = 2A₁₆L: Extended Cyrillic alphabet

Character Set 52₈L contains the characters of the extended Cyrillic alphabet.

The following are character codes (low-order byte) within Character Set 52₈L (see reference chart in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 52₈L: Cyrillic
41₈	33	21	Ч	Non-Slavic Cyrillic capital letter CHE with tail	
42₈	34	22	Ҷ	Non-Slavic Cyrillic capital letter ? (Khakass)	
43₈	35	23	Ҹ	Non-Slavic Cyrillic capital letter SOFT DJE (Azerbaijan)	
44₈	36	24	Э́	Cyrillic capital letter stressed reversed E	
46₈	38	26	Ю́	Cyrillic capital letter stressed YU	
50₈	40	28	Я́	Cyrillic capital letter stressed YA	
52₈	42	2A	Ъ́	Cyrillic capital letter stressed YER	
53₈	43	2B	Ӹ	Non-Slavic Cyrillic capital letter reduced I (Mari)	
54₈	44	2C	Ы́	Cyrillic capital letter stressed YERY	
55₈	45	2D	Є́	Cyrillic capital letter stressed Ukrainian YE	
56₈	46	2E	Ә	Non-Slavic Cyrillic capital letter upside-down E	
57₈	47	2F	Ҽ	Non-Slavic Cyrillic capital letter back CHE (Abkhazian)	
60₈	48	30	Ҿ	Non-Slavic Cyrillic capital letter abruptive back CHE	
61₈	49	31	Ҩ	Non-Slavic Cyrillic capital letter QUA (Abkhazian)	
62₈	50	32	У́	Non-Slavic Cyrillic capital letter stressed close U	
63₈	51	33	Ү	Non-Slavic Cyrillic capital letter reduced close U	
67₈	55	37	Ё	Cyrillic capital letter stressed YO	
70₈	56	38	Ӭ	Non-Slavic Cyrillic capital letter ? (Khanty)	
71₈	57	39	Ӡ	Non-Slavic Cyrillic capital letter DZ (Abkhazian)	
73₈	59	3B	Ӫ	Non-Slavic Cyrillic capital letter reduced front O	
100₈	64	40	Ғ	Cyrillic capital letter back GHE (Bashkir)	
101₈	65	41	Ѳ	Cyrillic capital letter front O	
102₈	66	42	Ӝ	Cyrillic capital letter DZH (Moldavian)	
103₈	67	43	һ	Cyrillic capital letter H (Azerbaijanian)	
121₈	81	51	ч	Non-Slavic Cyrillic small letter CHE with tail	
122₈	82	52	ҷ	Non-Slavic Cyrillic small letter ? (Khakass)	
123₈	83	53	ҹ	Non-Slavic Cyrillic small letter SOFT DJE (Azerbaijan)	
124₈	84	54	э́	Cyrillic small letter stressed reversed E	
126₈	86	56	ю́	Cyrillic small letter stressed YU	

Identifier			Shape	Character description	Character set 52₈L: Cyrillic
Octal	Dec	Hex			
130₈	88	58	я́	Cyrillic small letter stressed YA	
132₈	90	5A	ѣ́	Cyrillic small letter stressed YER	
133₈	91	5B	ӥ	Non-Slavic Cyrillic small letter reduced I (Mari)	
134₈	92	5C	ы́	Cyrillic small letter stressed YERY	
135₈	93	5D	є́	Cyrillic small letter stressed Ukrainian YE	
136₈	94	5E	ə	Non-Slavic Cyrillic small letter upside-down E	
137₈	95	5F	ʻe	Non-Slavic Cyrillic small letter back CHE (Abkhazian)	
140₈	96	60	ʻę	Non-Slavic Cyrillic small letter abruptive back CHE	
141₈	97	61	ꝏ	Non-Slavic Cyrillic small letter QUA (Abkhazian)	
142₈	98	62	ý	Non-Slavic Cyrillic small letter stressed close U	
143₈	99	63	ұ	Non-Slavic Cyrillic small letter reduced close U	
147₈	103	67	ё̈	Cyrillic small letter stressed YO	
150₈	104	68	ӛ	Non-Slavic Cyrillic small letter ? (Khanty)	
151₈	105	69	ӡ	Non-Slavic Cyrillic small letter DZ (Abkhazian)	
153₈	107	6B	ӫ	Non-Slavic Cyrillic small letter reduced front O	
160₈	112	70	ғ	Cyrillic small letter back GHE (Bashkir)	
161₈	113	71	ѳ	Cyrillic small letter front O	
162₈	114	72	җ̆	Cyrillic small letter DZH (Moldavian)	
163₈	115	73	h	Cyrillic small letter H (Azerbaijanian)	

Character Set 56₈L = 46₁₀L = 2E₁₆L: Decorated rules

Character Set 56₈L contains Japanese decorated rules, which are frequently used in publishing applications.

The following are character codes (low-order byte) within Character Set 56₈L (see reference chart in appendix B):

Identifier			Shape	Character description	Character set 56₈L: Rules
Octal	Dec	Hex			
41₈	33	21	—	Hyou kei (Japanese)	
42₈	34	22	—	Nakaboso kei (Japanese)	
43₈	35	23	—	Ura kei (Japanese)	
44₈	36	24	·····	Ten kei (Japanese)	
45₈	37	25	‒·‒·	Itten ura tei (Japanese)	
46₈	38	26	‒‒‒·	Niten ura kei (Japanese)	
47₈	39	27	‒ ‒	Mishin kei (Japanese)	
50₈	40	28	·····	Ura ten kei (Japanese)	

| Identifier | | | Shape | Character description | Character set 56₈L: Rules |
Octal	Dec	Hex			
51₈	41	29	═	Souchuu (Japanese)	
52₈	42	2A	═	Oyako kei 1 (Japanese)	
53₈	43	2B	═	Oyako kei 2 (Japanese)	
54₈	44	2C	▬	1.0 mm kei (Japanese)	
55₈	45	2D	■	2.0 mm kei (Japanese)	
56₈	46	2E	■	5.0 mm kei (Japanese)	
57₈	47	2F	∿	Kazari kei 1 (Japanese)	
60₈	48	30	∿	Kazari kei 2 (Japanese)	
61₈	49	31	≈	Kazari kei 3 (Japanese)	
62₈	50	32	∞	Kazari kei 4 (Japanese)	
63₈	51	33	•••	Kazari kei 5 (Japanese)	
64₈	52	34		Kazari kei 6 (Japanese)	
65₈	53	35		Kazari kei 7 (Japanese)	
66₈	54	36		Kazari kei 8 (Japanese)	
67₈	55	37		Kazari kei 9 (Japanese)	
70₈	56	38		Kazari kei 10 (Japanese)	

Character Set 57₈L = 47₁₀L = 2F₁₆L: Vertically written Japanese symbols

Character Set 57₈L contains vertically written Japanese symbols: punctuation, delimiters, hiragana and katakana syllables, and decorative rules.

The following are character codes (low-order byte) within Character Set 57₈L (see reference charts in appendix B):

| Identifier | | | Shape | Character description | Character set 57₈L: Symbols |
Octal	Dec	Hex			
41₈	33	21	`	Japanese comma = Chinese comma (vertical writing)	
42₈	34	22	°	Japanese period = Chinese period (vertical wrting)	
43₈	35	23	│	Overline (vertical writing)	
44₈	36	24	│	Underline (vertical writing)	
45₈	37	25	│	Long vowel bar (vertical writing)	
46₈	38	26	│	Dash (vertical writing)	
47₈	39	27	'	Hyphen (vertical writing)	
50₈	40	28	∫	Similar to (vertical writing)	
51₈	41	29	═	Parallel sign (vertical writing)	
52₈	42	2A	—	Vertical bar (vertical writing)	

| Identifier | | | Shape | Character description | Character set 57₈L: Symbols |
Octal	Dec	Hex			
53₈	43	2B	⋮	Three dot leader (vertical writing)	
54₈	44	2C	⋮	Two dot leader (vertical writing)	
55₈	45	2D	⌒	Opening parenthesis (vertical writing)	
56₈	46	2E	⌣	Closing parenthesis (vertical writing)	
57₈	47	2F	⌐	Left broken bracket (vertical writing)	
60₈	48	30	⌐	Right broken bracket (vertical writing)	
61₈	49	31	⌐	Opening bracket (vertical writing)	
62₈	50	32	⌐	Closing bracket (vertical writing)	
63₈	51	33	⌐	Opening brace (vertical writing)	
64₈	52	34	⌐	Closing brace (vertical writing)	
65₈	53	35	˄	Left quote (vertical writing)	
66₈	54	36	˅	Right quote (vertical writing)	
67₈	55	37	˄	Left double guillemet (vertical writing)	
70₈	56	38	˅	Right double guillemet (vertical writing)	
71₈	57	39	⌐	Left Japanese quote = left Chinese quote (vertical writing)	
72₈	58	3A	⌐	Right Japanese quote = right Chinese quote (vertical writing)	
73₈	59	3B	⌐	Left Japanese double quote = left Chinese double quote (vertical writing)	
74₈	60	3C	⌐	Right Japanese double quote = right Chinese double quote (vertical writing)	
75₈	61	3D	⌐	Left black lenticular bracket (vertical writing)	
76₈	62	3E	⌐	Right black lenticular bracket (vertical writing)	
77₈	63	3F	‖	Equals (vertical writing)	
100₈	64	40	あ	Hiragana small "a" (vertical writing)	
101₈	65	41	い	Hiragana small "i" (vertical writing)	
102₈	66	42	う	Hiragana small "u" (vertical writing)	
103₈	67	43	え	Hiragana small "e" (vertical writing)	
104₈	68	44	お	Hiragana small "o" (vertical writing)	
105₈	69	45	つ	Hiragana small "tsu" (vertical writing)	
106₈	70	46	や	Hiragana small "ya" (vertical writing)	
107₈	71	47	ゆ	Hiragana small "yu" (vertical writing)	
110₈	72	48	よ	Hiragana small "yo" (vertical writing)	
111₈	73	49	わ	Hiragana small "wa" (vertical writing)	
112₈	74	4A	ア	Katakana small "a" (vertical writing)	
113₈	75	4B	イ	Katakana small "i" (vertical writing)	
114₈	76	4C	ウ	Katakana small "u" (vertical writing)	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 57₈L: Symbols
115₈	77	4D	エ	Katakana small "e" (vertical writing)	
116₈	78	4E	オ	Katakana small "o" (vertical writing)	
117₈	79	4F	ツ	Katakana small "tsu" (vertical writing)	
120₈	80	50	ヤ	Katakana small "ya" (vertical writing)	
121₈	81	51	ユ	Katakana small "yu" (vertical writing)	
122₈	82	52	ヨ	Katakana small "yo" (vertical writing)	
123₈	83	53	ワ	Katakana small "wa" (vertical writing)	
124₈	84	54	カ	Katakana small "ka" (vertical writing)	
125₈	85	55	ケ	Katakana small "ke" (vertical writing)	
126₈	86	56	'	Comma (vertical writing)	
127₈	87	57	˙	Period (vertical writing)	
130₈	88	58	'	Left single quote (vertical writing)	
131₈	89	59	'	Right single quote (vertical writing)	
132₈	90	5A	”	Left double quote (vertical writing)	
133₈	91	5B	“	Right double quote (vertical writing)	
134₈	92	5C	I	Minus sign (vertical writing)	
135₈	93	5D	╫	Not equal (vertical writing)	
136₈	94	5E	∧	Less than (vertical writing)	
137₈	95	5F	∨	Greater than (vertical writing)	
140₈	96	60	‖∧	Less than or equal to (vertical writing)	
141₈	97	61	‖∨	Greater than or equal to (vertical writing)	
142₈	98	62	‖	Japanese "geta" (vertical writing)	
143₈	99	63	|	Left dash (vertical writing)	
144₈	100	64	|	Right dash (vertical writing)	
145₈	101	65	‖	Double dash (vertical writing)	
146₈	102	66	|	Hyou kei (vertical writing)	
147₈	103	67	|	Nakaboso kei (vertical writing)	
150₈	104	68	|	Ura kei (vertical writing)	
151₈	105	69	⋮	Ten kei (vertical writing)	
152₈	106	6A	⋮	Itten ura kei (vertical writing)	
153₈	107	6B	⋮	Niten ura kei (vertical writing)	
154₈	108	6C	⋮	Mishin kei (vertical writing)	
155₈	109	6D	⋮	Ura ten kei (vertical writing)	
156₈	110	6E	‖	Souchuu (vertical writing)	

Identifier			Shape	Character description	Character set 57₈L: Symbols
Octal	Dec	Hex			
157₈	111	6F	‖	Oyako kei 1 (vertical writing)	
160₈	112	70	‖	Oyako kei 2 (vertical writing)	
161₈	113	71	I	1.0 mm kei (vertical writing)	
162₈	114	72	▮	2.0 mm kei (vertical writing)	
163₈	115	73	▮	5.0 mm kei (vertical writing)	
164₈	116	74	⌇	Kozari kei 1 (vertical writing)	
165₈	117	75	⌇	Kozari kei 2 (vertical writing)	
166₈	118	76	⌇	Kozari kei 3 (vertical writing)	
167₈	119	77	⌇	Kozari kei 4 (vertical writing)	
170₈	120	78	⌇	Kozari kei 5 (vertical writing)	
171₈	121	79	⫶	Kozari kei 6 (vertical writing)	
172₈	122	7A	⫶	Kozari kei 7 (vertical writing)	
173₈	123	7B	⫶	Kozari kei 8 (vertical writing)	
174₈	124	7C	⫶	Kozari kei 9 (vertical writing)	
175₈	125	7D	⌇	Kozari kei 10 (vertical writing)	
176₈	126	7E	'	Nonbreaking hyphen (vertical writing)—not (357₈ | 42₈)	

Character Sets 60₈ through 117₈: JIS Level-I Japanese kanji

Japanese kanji are Chinese-style characters used to write about 35 percent of average Japanese text. Character Sets 60₈ through 117₈ contain the characters defined as JIS Level-I kanji by the Japanese Industrial Standard. They contain 2,965 Japanese kanji characters. The characters are retained in JIS order and in JIS code positions.

Character Sets 120₈ through 163₈: JIS Level-II Japanese kanji

Character Sets 120₈ through 163₈ and 165₈ contain the characters defined as JIS Level-II kanji by the Japanese Industrial Standard [11] [12]. In 1983, the original standard (JIS C 6226-1978) was modified and the typographical shapes of 286 kanji characters were changed [21]. Four of the 286 old style characters were retained and placed in an adjacent character set in the JIS Level-II area. The assignment of these characters to the adjacent Character Set 164₈ cannot be allowed in the Xerox standard; Character Set 165₈ is used for this purpose. The assignment of Character Set 164₈ to miscellaneous Japanese symbols was made prior to the 1983 JIS Level-II kanji modification.

The character sets in JIS Level-II contain 3,388 (previously 3,384) Japanese kanji characters. All characters are retained in JIS order and in JIS code positions, except for the single character set discussed previously.

Character Set 164₈ = 116₁₀ = 74₁₆: Symbols 3−miscellaneous Japanese symbols

Character Set 164₈ contains miscellaneous Japanese symbols.

The following are character codes (low-order byte) within Character Set 164₈ (see reference chart in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 164₈: Symbols
41₈	33	21	㈱	Japanese "kabu"	
42₈	34	22	㋐	Circled katakana "ah"	
43₈	35	23	㋑	Circled katakana "i"	
44₈	36	24	㋒	Circled katakana "u"	
45₈	37	25	㋓	Circled katakana "e"	
46₈	38	26	㋔	Circled katakana "o"	
47₈	39	27	㋺	Circled katakana "ro"	
50₈	40	28	㋩	Circled katakana "ha"	
51₈	41	29	�	Circled katakana "ni"	
52₈	42	2A	㋭	Circled katakana "ho"	
53₈	43	2B	㋬	Circled katakana "he"	
54₈	44	2C	㋣	Circled katakana "to"	
55₈	45	2D	㋤	Circled katakana "chi"	
56₈	46	2E	㋷	Circled katakana "ri"	
57₈	47	2F	㋦	Circled katakana "nu"	
60₈	48	30	㊡	Circled kanji "teki" financial symbol	
61₈	49	31	㊢	Circled kanji "hyou" financial symbol	
62₈	50	32	㊤	Circled kanji "kou" financial symbol	
63₈	51	33	㊕	Circled kanji "toku" financial symbol	
64₈	52	34	㊢	Circled kanji "zou" financial symbol	
65₈	53	35	㊤	Circled kanji "gen" financial symbol	
66₈	54	36	㊦	Circled kanji "ki" financial symbol	
67₈	55	37	㊞	Circled kanji "tyou" financial symbol	
70₈	56	38	㊫	Circled kanji "yuu" financial symbol	
71₈	57	39	㊢	Circled kanji "zai" financial symbol	
72₈	58	3A	㊙	Circled kanji "hi" financial symbol	
73₈	59	3B	㊞	Circled kanji "in" financial symbol	

Character Set 166₈ = 118₁₀ = 76₁₆: Symbols 4−enclosed numbers and letters

Character Set 166₈ contains miscellaneous Japanese symbols.

The following are character codes (low-order byte) within Character Set 166₈ (see reference charts in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 166₈: Symbols
60₈	48	30	◇	Diamond enclosed digit 0	
61₈	49	31	◇	Diamond enclosed digit 1	
62₈	50	32	◇	Diamond enclosed digit 2	
63₈	51	33	◇	Diamond enclosed digit 3	
64₈	52	34	◇	Diamond enclosed digit 4	
65₈	53	35	◇	Diamond enclosed digit 5	
66₈	54	36	◇	Diamond enclosed digit 6	
67₈	55	37	◇	Diamond enclosed digit 7	
70₈	56	38	◇	Diamond enclosed digit 8	
71₈	57	39	◇	Diamond enclosed digit 9	
72₈	58	3A	◇	Diamond enclosed digit 10	
73₈	59	3B	◇	Diamond enclosed digit 11	
74₈	60	3C	◇	Diamond enclosed digit 12	
75₈	61	3D	◇	Diamond enclosed digit 13	
76₈	62	3E	◇	Diamond enclosed digit 14	
77₈	63	3F	◇	Diamond enclosed digit 15	
101₈	65	41	Ⓐ	Circled uppercase Latin letter A	
102₈	66	42	Ⓑ	Circled uppercase Latin letter B	
103₈	67	43	Ⓒ	Circled uppercase Latin letter C	
104₈	68	44	Ⓓ	Circled uppercase Latin letter D	
105₈	69	45	Ⓔ	Circled uppercase Latin letter E	
106₈	70	46	Ⓕ	Circled uppercase Latin letter F	
107₈	71	47	Ⓖ	Circled uppercase Latin letter G	
110₈	72	48	Ⓗ	Circled uppercase Latin letter H	
111₈	73	49	Ⓘ	Circled uppercase Latin letter I	
112₈	74	4A	Ⓙ	Circled uppercase Latin letter J	
113₈	75	4B	Ⓚ	Circled uppercase Latin letter K	
114₈	76	4C	Ⓛ	Circled uppercase Latin letter L	
115₈	77	4D	Ⓜ	Circled uppercase Latin letter M Also: Maximum material condition (ANSI Y14.5)	

Identifier			Shape	Character description	Character set 166₈ Symbols
Octal	*Dec*	*Hex*			
116₈	78	4E	Ⓝ	Circled uppercase Latin letter N	
117₈	79	4F	Ⓞ	Circled uppercase Latin letter O	
120₈	80	50	Ⓟ	Circled uppercase Latin letter P Also: Projected tolerance zone (ANSI Y14.5)	
121₈	81	51	Ⓠ	Circled uppercase Latin letter Q	
122₈	82	52	Ⓡ	Circled uppercase Latin letter R	
123₈	83	53	Ⓢ	Circled uppercase Latin letter S Also: Projected tolerance zone (ANSI Y14.5) <AMS, circledS>	
124₈	84	54	Ⓣ	Circled uppercase Latin letter T	
125₈	85	55	Ⓤ	Circled uppercase Latin letter U	
126₈	86	56	Ⓥ	Circled uppercase Latin letter V	
127₈	87	57	Ⓦ	Circled uppercase Latin letter W	
130₈	88	58	Ⓧ	Circled uppercase Latin letter X	
131₈	89	59	Ⓨ	Circled uppercase Latin letter Y	
132₈	90	5A	Ⓩ	Circled uppercase Latin letter Z	
141₈	97	61	ⓐ	Circled lowercase Latin letter a	
142₈	98	62	ⓑ	Circled lowercase Latin letter b	
143₈	99	63	ⓒ	Circled lowercase Latin letter c	
144₈	100	64	ⓓ	Circled lowercase Latin letter d	
145₈	101	65	ⓔ	Circled lowercase Latin letter e	
146₈	102	66	ⓕ	Circled lowercase Latin letter f	
147₈	103	67	ⓖ	Circled lowercase Latin letter g	
150₈	104	68	ⓗ	Circled lowercase Latin letter h	
151₈	105	69	ⓘ	Circled lowercase Latin letter i	
152₈	106	6A	ⓙ	Circled lowercase Latin letter j	
153₈	107	6B	ⓚ	Circled lowercase Latin letter k	
154₈	108	6C	ⓛ	Circled lowercase Latin letter l	
155₈	109	6D	ⓜ	Circled lowercase Latin letter m	
156₈	110	6E	ⓝ	Circled lowercase Latin letter n	
157₈	111	6F	ⓞ	Circled lowercase Latin letter o	
160₈	112	70	ⓟ	Circled lowercase Latin letter p	
161₈	113	71	ⓠ	Circled lowercase Latin letter q	
162₈	114	72	ⓡ	Circled lowercase Latin letter r	
163₈	115	73	ⓢ	Circled lowercase Latin letter s	

| Identifier | | | Shape | Character description | Character set 166₈: Symbols |
Octal	Dec	Hex			
164₈	116	74	ⓣ	Circled lowercase Latin letter t	
165₈	117	75	ⓤ	Circled lowercase Latin letter u	
166₈	118	76	ⓥ	Circled lowercase Latin letter v	
167₈	119	77	ⓦ	Circled lowercase Latin letter w	
170₈	120	78	ⓧ	Circled lowercase Latin letter x	
171₈	121	79	ⓨ	Circled lowercase Latin letter y	
172₈	122	7A	ⓩ	Circled lowercase Latin letter z	

Character Sets 167₈ through 176₈: Gaiji kanji characters

Character Sets 167₈ through 176₈ contain the characters selected from user requests by Fuji Xerox. They contain 374 Japanese gaiji kanji characters, which are often used in Japan.

Character Set 340₈ = 228₁₀ = E0₁₆: Extended Arabic alphabet

Character Set 340₈ contains characters defined in European Computer Manufacturers Association (ECMA) registration number 89, March 30, 1984 [23]. ECMA is the registration authority for ISO 2375. The origin (user) of the 7-bit Coded Arabic Character Set for Information Interchange is Arab Standard 449 [22] [24]. The Arab Organization for Standardization and Metrology (ASMO) and Arab Telecommunication Union are sponsors of the registration. Also, the registration character set has been extended to include characters required for the Farsi language.

Three characters, Indian decimal point, Indian thousands delimiter, and the zero-width joiner, have also been added to this character set. The first two characters are included because of the inconsistencies in the use of decimal signs and the thousands delimiter in printed Arabic literature. For example, both the equivalent of the Arabic letter RA and the equivalent of the Arabic comma have been used as decimal points. Assignment of a numeric with the semantic Indian decimal point provides for unambiguous machine interpretation during text processing operations.

The zero-width joiner character is useful in instances where it is desired to type one of the contextual-shape variants of an Arabic letter alone. For example, to show the joining form of the letter - b-, one cannot type < space > b < space > because that will automatically give the independent shape of "b," not the joined shape "-b-." Introducing the joiner enables the typing of < space > < joiner > b < joiner > < space > and, since the joiner has zero width, it is invisible when the string is displayed or printed.

The following are character codes (low-order byte) within Character Set 340₈ (see reference charts in appendix B):

| Identifier | | | Shape | Character description | Character set 340₈: Arabic |
Octal	Dec	Hex			
45₈	37	25	٪	Arabic percent sign	
54₈	44	2C	،	Arabic comma	
60₈	48	30	٠	Indian numeral zero	
61₈	49	31	١	Indian numeral one	
62₈	50	32	٢	Indian numeral two	
63₈	51	33	٣	Indian numeral three	
64₈	52	34	٤	Indian numeral four	
65₈	53	35	٥	Indian numeral five	
66₈	54	36	٦	Indian numeral six	
67₈	55	37	٧	Indian numeral seven	
70₈	56	38	٨	Indian numeral eight	
71₈	57	39	٩	Indian numeral nine	
73₈	59	3B	؛	Arabic semicolon	
77₈	63	3F	؟	Arabic question mark	
101₈	65	41	ء	Hamzah = glottal stop	
102₈	66	42	آ	Maddah on Alef	
103₈	67	43	أ	Hamzah on Alef	
104₈	68	44	ؤ	Hamzah on Waw	
105₈	69	45	إ	Hamzah under Alef	
106₈	70	46	ئ	Hamzah on YA'	
107₈	71	47	ا	Arabic letter Alef	
110₈	72	48	ب	Isolated Arabic letter BA'	
111₈	73	49	ة	TA' Marbuta	
112₈	74	4A	ت	Isolated Arabic letter TA'	
113₈	75	4B	ث	Isolated Arabic letter THA'	
114₈	76	4C	ج	Isolated Arabic letter JEEM	
115₈	77	4D	ح	Isolated Arabic letter HA'	
116₈	78	4E	خ	Isolated Arabic letter KHA'	
117₈	79	4F	د	Isolated Arabic letter DAL	
120₈	80	50	ذ	Isolated Arabic letter THAL	
121₈	81	51	ر	Isolated Arabic letter RA	
122₈	82	52	ز	Isolated Arabic letter ZAIN	
123₈	83	53	س	Isolated Arabic letter SEEN	
124₈	84	54	ش	Isolated Arabic letter SHEEN	

Identifier			Shape	Character description	Character set 340₈: Arabic
Octal	Dec	Hex			
125₈	85	55	ص	Isolated Arabic letter SAD	
126₈	86	56	ض	Isolated Arabic letter DAD	
127₈	87	57	ط	Isolated Arabic letter TAH	
130₈	88	58	ظ	Isolated Arabic letter DHAH	
131₈	89	59	ع	Isolated Arabic letter AIN	
132₈	90	5A	غ	Isolated Arabic letter GHAIN	
140₈	96	60	ـ	Tatweel = Kashida	
141₈	97	61	ف	Isolated Arabic letter FA'	
142₈	98	62	ق	Isolated Arabic letter QAF	
143₈	99	63	ك	Isolated Arabic letter CAF	
144₈	100	64	ل	Isolated Arabic letter LAM	
145₈	101	65	م	Isolated Arabic letter MEEM	
146₈	102	66	ن	Isolated Arabic letter NOON	
147₈	103	67	ه	Isolated Arabic letter HA	
150₈	104	68	و	Isolated Arabic letter WAW	
151₈	105	69	ى	Alef-maqsura	
152₈	106	6A	ي	Isolated Arabic letter YA	
153₈	107	6B		Fathatan (nonspacing vowel)	
154₈	108	6C		Dammatan (nonspacing vowel)	
155₈	109	6D		Kasratan (nonspacing vowel)	
156₈	110	6E		Fatha (nonspacing vowel)	
157₈	111	6F		Dammah (nonspacing vowel)	
160₈	112	70		Kasrah (nonspacing vowel)	
161₈	113	71		Shaddah (nonspacing vowel)	
162₈	114	72		Sukun (nonspacing vowel)	
163₈	115	73		Dagger Alef (nonspacing vowel)	
164₈	116	74	أ	Wasla on Alef	
165₈	117	75	ر	Indian decimal point = Indian radix point—*not* Arabic RA (340₈ | 121₈)	
166₈	118	76	،	Indian thousands delimiter—*not* Arabic comma (340₈ | 54₈)	
241₈	161	A1	ڤ	Arabic V—used in transliterating foreign words	
242₈	162	A2	پ	Farsi P	
243₈	163	A3	چ	Farsi CH	
244₈	164	A4	ژ	Farsi ZH	
245₈	165	A5	گ	Farsi G	

Identifier			Shape	Character description	Character set 340₈: Arabic
Octal	Dec	Hex			
246₈	166	A6	ٷ	Farsi Hamzah on HA	
374₈	252	FC		"Left-to-right zero-width nonjoiner" (LRZWNJ)	
375₈	253	FD		"Right-to-left zero-width nonjoiner" (RLZWNJ)	
376₈	254	FE		Zero-width joiner	

Character Set 341₈: Hebrew alphabet

Character Set 341_8 contains the 22 characters of the Hebrew alphabet. Like all Semitic alphabets, Hebrew consists solely of consonants. Code assignments within the character set for consonants, 100_8 through 132_8, are identical to those of table 3 in the 7-bit Coded Character Set for Information Processing Interchange, SI 960, of The Standards Institution of Israel, November, 1976 [25].

In Hebrew, any spelled word can be described as divisible into two distinct elements: the skeletal signs and diacritical markings written above, below, or within the letters. In everyday text or manuscripts, however, these diacriticals are not used, and the reader identifies the letter intended from context.

Consonantal modification, when used, is indicated by a dot. Examination of the skeletal list of consonants 100_8 through 132_8 indicates where the inventory of alphabetic graphemes is increased by consonantal modification. For example, code 131_8 is identified as "Hebrew letter Shin/Sin in skeletal form," and a comment in parentheses indicates dot placement to obtain the unambiguous form (Shin when modified by a dot written above and to the right and Sin when modified by a dot written above and to the left). Other commentary refers to how the ambiguous letter form is obtained.

A *dagesh forte*, a dot in the consonant, can be written within almost any letter of the alphabet, for example, in the graphemes of Tiberian Hebrew [26]. A dot can be written within any one of the letters with the exception of Cheth and Ayin. In Modern Hebrew, however, consonantal modification using *dagesh forte* occurs only in the places noted (for example, 101_8, 113_8, and 124_8). The graphic forms appear respectively at 133_8, 134_8, and 135_8.

There are also nine basic Hebrew vowel signs and three vowel digraphs; all of them are nonspacing and located at Char8Codes 301_8 through 317_8. Seven of the vowel signs and all three digraph vowels are subscripts; the comment "superscript" identifies those that are not.

Infrequent consonants written using a letter and an acute accent to the left of the letter are used for writing non-Hebrew names or words. They include the letters Gimel, Zayin, and Tsadi.

The following are character codes (low-order byte) within Character Set 341_8 (see reference charts in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 341₈: Hebrew
42₈	34	20	"	Gershayim (used as a quote mark and to indicate acronyms)	
44₈	36	24	₪	New Shekel	
47₈	39	27	'	Geresh (used in abbreviations and dates)	
54₈	44	2C	,	Hebrew comma	
55₈	45	2D	-	Hebrew nonbreaking hyphen	
73₈	59	3B	;	Hebrew semicolon	
100₈	64	40	א	Hebrew letter Aleph; <AMS, aleph>	
101₈	65	41	ב	Hebrew letter Veth; <AMS, beth> Also: Hebrew letter Beth in skeletal form (Beth without middle dot)	
102₈	66	42	ג	Hebrew letter Gimel; <AMS, gimel>	
103₈	67	43	ד	Hebrew letter Daleth; <AMS, daleth>	
104₈	68	44	ה	Hebrew letter Heh	
105₈	69	45	ו	Hebrew letter Vav	
106₈	70	46	ז	Hebrew letter Zayin	
107₈	71	47	ח	Hebrew letter Cheth	
110₈	72	48	ט	Hebrew letter Teth	
111₈	73	49	י	Hebrew letter Yod	
112₈	74	4A	ך	Hebrew letter Chaph form found at the end of words	
113₈	75	4B	כ	Hebrew letter Chaph Also: Hebrew letter Kaph in skeletal form (Kaph without middle dot)	
114₈	76	4C	ל	Hebrew letter Lamed	
115₈	77	4D	ם	Hebrew letter Mem form found at the end of words	
116₈	78	4E	מ	Hebrew letter Mem	
117₈	79	4F	ן	Hebrew letter Nun form found at the end of words	
120₈	80	50	נ	Hebrew letter Nun	
121₈	81	51	ס	Hebrew letter Samekh	
122₈	82	52	ע	Hebrew letter Ayin	
123₈	83	53	ף	Hebrew letter Feh form found at the end of words	
124₈	84	54	פ	Hebrew letter Feh Also: Hebrew letter Peh in skeletal form (Peh without middle dot)	
125₈	85	55	ץ	Hebrew letter Tsadi form found at the end of words	
126₈	86	56	צ	Hebrew letter Tsadi	
127₈	87	57	ק	Hebrew letter Koph	
130₈	88	58	ר	Hebrew letter Resh	

| Identifier | | | Shape | Character description | Character set 341₈: Hebrew |
Octal	Dec	Hex			
131₈	89	59	שׁ	Hebrew letter Shin/Sin in skeletal form (Shin when modified by a dot written above and to the right, Sin when modified by a dot written above and to the left)	
132₈	90	5A	ת	Hebrew letter Thav	
133₈	91	5B	ב	Hebrew letter Beth	
134₈	92	5C	כ	Hebrew letter Kaph	
135₈	93	5D	פ	Hebrew letter Peh	
301₈	193	C1	.	Hebrew vowel sign Hireq (nonspacing vowel)	
302₈	194	C2	..	Hebrew vowel sign Sereh (nonspacing vowel)	
303₈	195	C3	∴	Hebrew vowel sign Segol (nonspacing vowel)	
304₈	196	C4	∵	Hebrew vowel sign Qubbus (nonspacing vowel)	
305₈	197	C5	т	Hebrew vowel sign Qamas (nonspacing vowel)	
306₈	198	C6	_	Hebrew vowel sign Pathah (nonspacing vowel)	
307₈	199	C7	:	Hebrew vowel sign Shewa (nonspacing vowel)	
310₈	200	C8	‑:	Hebrew vowel digraph Hataph Pathah (nonspacing vowels)	
311₈	201	C9	∵:	Hebrew vowel digraph Hataph Segol (nonspacing vowels)	
312₈	202	CA	т:	Hebrew vowel digraph Hataph Qamas (nonspacing vowels)	
316₈	206	CE	·	Hebrew vowel Holem (superscript) (nonspacing vowel)	
317₈	207	CF	·	Hebrew vowel Shureq (middle) (nonspacing vowel)	

Character Set 342₈ = 226₁₀ = E2₁₆: International phonetic alphabet

Set 342₈ contains the characters defined in *Principles of the International Phonetic Association*, Department of Phonetics, University College, London. The romantic-based alphabet of the Association Phonétique Internationale is designed primarily to meet practical linguistic needs. It records phonetic or phonemic structure of languages, furnishes phonetic transcriptions to assist in pronunciation, and provides romanic orthographies for unwritten and written languages in other alphabetic systems.

The principles do not provide for alphabet character order. The following principles are used to order Set 342₈:

a. Diacritics precede letters.

b. Diacritics written above a letter precede those written below a letter, all of which precede those written in line with the letters.

c. Letters are arranged by phonetic features, vowels preceding consonants. Sorting is as follows:

Vowels:
— From the front of the mouth to the back;
— By height (close to open);
— Thereby liprounding (spread then rounded).

Consonants:
— From the front of the mouth to the back;
— By manner of articulation (following the row order and the 1979 Association table revision);
— Then by voicing (voiceless first).

We excluded a few symbols from the Association table because they are compounds of basic symbols in this set. The set also includes symbols found only in previous versions of the International Phonetic Alphabet.

The following are character codes (low-order byte) within Character Set 342_8 (see reference charts in appendix B):

Identifier			Shape	Character description	Character set 342_8: Phonetic
Octal	Dec	Hex			
41_8	33	21	¨	Centralized (nonspacing)	
42_8	34	22	~	Nasalized (nonspacing)	
43_8	35	23	ˇ	Nonsyllabic (nonspacing)	
44_8	36	24	·	Palatalized (nonspacing)	
45_8	37	25	⌒	Superior ligature (nonspacing)	
46_8	38	26	~	Velarized or pharyngealized (nonspacing)	
47_8	39	27	◞	Palatalized (nonspacing)	
50_8	40	28	̡	Retroflex (nonspacing)	
51_8	41	29	◦	Voiceless (nonspacing)	
52_8	42	2A	ˇ	Voiced (nonspacing)	
53_8	43	2B	̈	Breathy-voiced (inferior two dots) (nonspacing)	
54_8	44	2C	̩	Dental (nonspacing)	
55_8	45	2D	̫	Labialized (nonspacing)	
56_8	46	2E	̩	Syllabic (nonspacing)	
57_8	47	2F	̱	Raised (inferior diacritic) (nonspacing)	
60_8	48	30	·	Close (nonspacing)	
61_8	49	31	̅	Lowered (inferior diacritic)	
62_8	50	32	̌	Open	
63_8	51	33	̟	Advanced (inferior diacritic)	
64_8	52	34	̱	Retracted (inferior diacritic)	
65_8	53	35	‿	Inferior ligature	
66_8	54	36	̟	Raised (in-line diacritic)	
67_8	55	37	̯	Lowered (in-line diacritic)	
70_8	56	38	+	Advanced (in-line diacritic)	
71_8	57	39	̄	Retracted (in-line diacritic)	
72_8	58	3A	:	Long	

Identifier			Shape	Character description	Character set 342₈: Phonetic
Octal	Dec	Hex			
73₈	59	3B	ˑ	Half-long	
74₈	60	3C	﹥	More rounded	
75₈	61	3D	﹤	Less rounded	
76₈	62	3E	ˈ	Stressed	
77₈	63	3F	ˌ	Secondary stress	
100₈	64	40	ˉ	High level pitch	
101₈	65	41	ˍ	Low level pitch	
102₈	66	42	ˊ	High rising pitch	
103₈	67	43	ˎ	Low rising pitch	
104₈	68	44	ˋ	High falling pitch	
105₈	69	45	ˏ	Low falling pitch	
106₈	70	46	ˆ	Rise-fall pitch	
107₈	71	47	ˇ	Fall-rise pitch	
110₈	72	48	ˁ	Aspirated	
111₈	73	49	ʼ	Ejective	
121₈	81	51	i	Close front unrounded vowel	
122₈	82	52	y	Close front rounded vowel	
123₈	83	53	ɩ	Close-lowered front unrounded vowel	
124₈	84	54	ɪ	Close-lowered front unrounded vowel (old form)	
125₈	85	55	ʏ	Close-lowered front rounded vowel	
126₈	86	56	e	Half-close front unrounded vowel	
127₈	87	57	ø	Half-close front rounded vowel	
130₈	88	58	ɛ	Half-open front unrounded vowel	
131₈	89	59	œ	Half-open front rounded vowel	
132₈	90	5A	æ	Low front unrounded vowel	
133₈	91	5B	a	Open front unrounded vowel	
134₈	92	5C	Œ	Open front rounded vowel	
135₈	93	5D	ɨ	Closed central unrounded vowel	
136₈	94	5E	ʉ	Close central rounded vowel	
137₈	95	5F	ə	Schwa	
140₈	96	60	ɚ	R-colored schwa	
141₈	97	61	ɵ	Rounded schwa	
142₈	98	62	ɜ	A variety of schwa	
143₈	99	63	ɐ	Lower-mid central unrounded vowel	

Identifier			Shape	Character description	Character set 342₈: Phonetic
Octal	Dec	Hex			
144₈	100	64	ɯ	Close back unrounded vowel	
145₈	101	65	u	Close back rounded vowel	
146₈	102	66	ɷ	Close-lowered back rounded vowel	
147₈	103	67	ʊ	Close-lowered back rounded vowel (old form)	
150₈	104	68	ɤ	Half-close back unrounded vowel	
151₈	105	69	o	Half-close back rounded vowel	
152₈	106	6A	ʌ	Half-open back unrounded vowel	
153₈	107	6B	ɔ	Half-open back rounded vowel	
154₈	108	6C	ɑ	Open back unrounded vowel	
155₈	109	6D	ɒ	Open back rounded vowel	
241₈	161	A1	m	Bilabial nasal	
242₈	162	A2	p	Voiceless bilabial plosive	
243₈	163	A3	b	Voiced bilabial plosive	
244₈	164	A4	ɸ	Voiceless bilabial fricative	
245₈	165	A5	β	Voiced bilabial fricative	
246₈	166	A6	ɥ	Labial-palatal approximant	
247₈	167	A7	ʍ	Voiceless labial-velar fricative	
250₈	168	A8	w	Labial-velar approximant	
251₈	169	A9	ɓ	Bilabial implosive	
252₈	170	AA	ʘ	Bilabial click	
253₈	171	AB	ɱ	Labiodental nasal	
254₈	172	AC	f	Voiceless labiodental fricative	
255₈	173	AD	v	Voiced labiodental fricative	
256₈	174	AE	ʋ	Labiodental approximant	
257₈	175	AF	n	Dental or alveolar nasal	
260₈	176	B0	t	Voiceless dental or alveolar plosive	
261₈	177	B1	d	Voiced dental or alveolar plosive	
262₈	178	B2	θ	Voiceless dental fricative	
263₈	179	B3	ð	Voiced dental fricative	
264₈	180	B4	ƚ	Voiceless alveolar affricate (obsolete)	
265₈	181	B5	ƻ	Voiced alveolar affricate (obsolete)	
266₈	182	B6	s	Voiceless alveolar median fricative	
267₈	183	B7	z	Voiced alveolar median fricative	
270₈	184	B8	ƪ	Voiceless labialized dental or alveolar fricative (obsolete)	

Identifier			Shape	Character description	Character set 342₈: Phonetic
Octal	Dec	Hex			
271₈	185	B9	ʠ	Voiced labialized dental or alveolar fricative (obsolete)	
272₈	186	BA	ɹ	Postalveolar approximant	
273₈	187	BB	ɬ	Voiceless lateral dental or alveolar fricative	
274₈	188	BC	ɮ	Voiced lateral dental or alveolar fricative	
275₈	189	BD	l	Dental or alveolar lateral approximant	
276₈	190	BE	ɾ	Alveolar fricative trill	
277₈	191	BF	ɺ	Alveolar lateral flap	
300₈	192	C0	r	Alveolar trill	
301₈	193	C1	ɾ	Alveolar tap or flap	
302₈	194	C2	ɗ	Dental or alveolar implosive	
303₈	195	C3	ǀ	Dental or alveolar click (Zulu c)	
304₈	196	C4	ǃ	Alveolar median click (Zulu q)	
305₈	197	C5	ǁ	Alveolar lateral click (Zulu x)	
306₈	198	C6	ɳ	Retroflex nasal	
307₈	199	C7	ʈ	Voiceless retroflex plosive	
310₈	200	C8	ɖ	Voiced retroflex plosive	
311₈	201	C9	ʂ	Voiceless retroflex fricative	
312₈	202	CA	ʐ	Voiced retroflex fricative	
313₈	203	CB	ɻ	Retroflex approximant	
314₈	204	CC	ɭ	Retroflex lateral	
315₈	205	CD	ɽ	Retroflex tap or flap	
316₈	206	CE	ɕ	Voiceless alveolo-palatal fricative	
317₈	207	CF	ʑ	Voiced alveolo-palatal fricative	
320₈	208	D0	ʃ	Voiceless palato-alveolar fricative	
321₈	209	D1	ʒ	Voiced palato-alveolar fricative	
322₈	210	D2	ʆ	Palatalized voiceless palato-alveolar fricative	
323₈	211	D3	ʓ	Palatalized voiced palato-alveolar fricative	
324₈	212	D4	ɺ	Labialized voiceless palato-alveolar fricative (obsolete)	
325₈	213	D5	ʒ	Labialized voiced palato-alveolar fricative (obsolete)	
326₈	214	D6	ɧ	Voiceless fricative simultaneously palato-alveolar and velar	
327₈	215	D7	ɲ	Palatal nasal	
330₈	216	D8	c	Voiceless palatal plosive	
331₈	217	D9	ɟ	Voiced palatal plosive	
332₈	218	DA	ç	Voiceless palatal fricative	

Identifier			Shape	Character description	Character set 342₈: Phonetic
Octal	Dec	Hex			
333₈	219	DB	j	Voiced palatal fricative or approximant	
334₈	220	DC	ʎ	Palatal lateral	
335₈	221	DD	ŋ	Velar nasal	
336₈	222	DE	k	Voiceless velar plosive	
337₈	223	DF	g	Voiced velar plosive	
340₈	224	E0	x	Voiceless velar fricative	
341₈	225	E1	ɣ	Voiced velar fricative	
342₈	226	E2	ɰ	Velar approximant	
343₈	227	E3	ɡ	Velar implosive	
344₈	228	E4	ɴ	Uvular nasal	
345₈	229	E5	ɳ	Japanese syllabic nasal (obsolete)	
346₈	230	E6	q	Voiceless uvular plosive	
347₈	231	E7	ɢ	Voiced uvular plosive	
350₈	232	E8	χ	Voiceless uvular fricative	
351₈	233	E9	ʁ	Voiced uvular fricative	
352₈	234	EA	ʀ	Uvular trill, tap, or flap	
353₈	235	EB	ħ	Voiceless pharyngeal fricative	
354₈	236	EC	ʕ	Voiced pharyngeal fricative	
355₈	237	ED	ʔ	Glottal plosive	
356₈	238	EE	h	Voiceless glottal fricative	
357₈	239	EF	ɦ	Voiced glottal fricative	

Character Set $343_8 = 227_{10} = E3_{16}$: Korean Hangul

Character Set 343₈ contains characters defined in the Korean Standard KS C 5601 - 1982, 8-bit Roman and Korean Character Codes [27]. The characters selected from the Korean Hangul alphabet are retained in the same order and code positions as in the national standard.

The following are character codes (low-order byte) within Character Set 343₈ (see reference charts in appendix B):

| Identifier | | | Shape | Character description | Character set 343₈: Korean |
Octal	Dec	Hex			
242₈	162	A2	₩	Korean Wen (Won) sign	
301₈	193	C1	ㄱ	Korean letter K	
302₈	194	C2	ㄲ	Korean letter KK	
303₈	195	C3	ㄳ	Korean letter KS	
304₈	196	C4	ㄴ	Korean letter N	
305₈	197	C5	ㄵ	Korean letter NC	
306₈	198	C6	ㄶ	Korean letter NH	
307₈	199	C7	ㄷ	Korean letter T	
310₈	200	C8	ㄸ	Korean letter TT	
311₈	201	C9	ㄹ	Korean letter L	
312₈	202	CA	ㄺ	Korean letter LK	
313₈	203	CB	ㄻ	Korean letter LM	
314₈	204	CC	ㄼ	Korean letter LP	
315₈	205	CD	ㄽ	Korean letter LS	
316₈	206	CE	ㄾ	Korean letter LTH	
317₈	207	CF	ㄿ	Korean letter LPH	
320₈	208	D0	ㅀ	Korean letter LH	
321₈	209	D1	ㅁ	Korean letter M	
322₈	210	D2	ㅂ	Korean letter P	
323₈	211	D3	ㅃ	Korean letter PP	
324₈	212	D4	ㅄ	Korean letter PS	
325₈	213	D5	ㅅ	Korean letter S	
326₈	214	D6	ㅆ	Korean letter SS	
327₈	215	D7	ㅇ	Korean letter NG	
330₈	216	D8	ㅈ	Korean letter C	
331₈	217	D9	ㅉ	Korean letter CC	
332₈	218	DA	ㅊ	Korean letter CH	
333₈	219	DB	ㅋ	Korean letter KH	
334₈	220	DC	ㅌ	Korean letter TH	
335₈	221	DD	ㅍ	Korean letter PH	
336₈	222	DE	ㅎ	Korean letter H	
337₈	223	DF	ㅵ	Null Korean Hangul Consonant	
342₈	226	E2	ㅏ	Korean letter A	
343₈	227	E3	ㅐ	Korean letter AI	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 343₈: Korean
344₈	228	E4	ㅑ	Korean letter YA	
345₈	229	E5	ㅒ	Korean letter YAI	
346₈	230	E6	ㅓ	Korean letter E	
347₈	231	E7	ㅔ	Korean letter EI	
352₈	234	EA	ㅕ	Korean letter YE	
353₈	235	EB	ㅖ	Korean letter YEI	
354₈	236	EC	ㅗ	Korean letter O	
355₈	237	ED	ㅘ	Korean letter WA	
356₈	238	EE	ㅙ	Korean letter WAI	
357₈	239	EF	ㅚ	Korean letter OI	
362₈	242	F2	ㅛ	Korean letter YO	
363₈	243	F3	ㅜ	Korean letter WU	
364₈	244	F4	ㅝ	Korean letter WE	
365₈	245	F5	ㅞ	Korean letter WEI	
366₈	246	F6	ㅟ	Korean letter WI	
367₈	247	F7	ㅠ	Korean letter YU	
372₈	250	FA	ㅡ	Korean letter U	
373₈	251	FB	ㅢ	Korean letter UI	
374₈	252	FC	ㅣ	Korean letter I	
375₈	253	FD	回	Null Korean Hangul Vowel	

CHARACTER CODE STANDARD

Character Set $344_8L = 228_{10}L = E4_{16}L$: Georgian alphabet

Character Set 344_8L contains 37 letters of the Georgian script.

The following are character codes (low-order byte) within Character Set 344_8L (see reference charts in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 344_8L: Georgian
41_8	33	21	ა	Georgian letter ა = A	
42_8	34	22	ბ	Georgian letter ბ = B	
43_8	35	23	გ	Georgian letter გ = G	
44_8	36	24	დ	Georgian letter დ = D	
45_8	37	25	ე	Georgian letter ე = E	
46_8	38	26	ვ	Georgian letter ვ = V	
47_8	39	27	ზ	Georgian letter ზ = Z	
50_8	40	28	ჰ	Georgian letter ჰ = H	
51_8	41	29	თ	Georgian letter თ = TH	
52_8	42	2A	ი	Georgian letter ი = I	
53_8	43	2B	კ	Georgian letter კ = K	
54_8	44	2C	ლ	Georgian letter ლ = L	
55_8	45	2D	მ	Georgian letter მ = M	
56_8	46	2E	ნ	Georgian letter ნ = N	
57_8	47	2F	უ	Georgian letter უ = I	
60_8	48	30	ო	Georgian letter ო = O	
61_8	49	31	პ	Georgian letter პ = P	
62_8	50	32	ჟ	Georgian letter ჟ = J	
63_8	51	33	რ	Georgian letter რ = R	
64_8	52	34	ს	Georgian letter ს = S	
65_8	53	35	ტ	Georgian letter ტ = T	
66_8	54	36	ყ	Georgian letter ყ = U	
67_8	55	37	ჳ	Georgian letter ჳ = WI	
70_8	56	38	ფ	Georgian letter ფ = PH	
71_8	57	39	ქ	Georgian letter ქ = KH	
72_8	58	3A	ღ	Georgian letter ღ = GH	
73_8	59	3B	ყ	Georgian letter ყ = Q	
74_8	60	3C	შ	Georgian letter შ = SH	
75_8	61	3D	ჩ	Georgian letter ჩ = CH	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 344₈L: Georgian
76₈	62	3E	ჳ	Georgian letter ჳ = TS	
77₈	63	3F	d	Georgian letter d = DZ	
100₈	64	40	ჭ	Georgian letter ჭ = TS	
101₈	65	41	ჩ	Georgian letter ჩ = CHH	
102₈	66	42	ხ	Georgian letter ხ = X	
103₈	67	43	ჴ	Georgian letter ჴ = XH	
104₈	68	44	ჯ	Georgian letter ჯ = J	
105₈	69	45	ჰ	Georgian letter ჰ = H	

Character Set 344₈R = 228₁₀R = E4₁₆R: Armenian alphabet

Character Set 344₈R contains 38 Georgian script letters and two special symbols.

The following are character codes (low-order byte) within Character Set 344₈R (see reference charts in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 344₈R: Armenian
241₈	161	A1	Ա	Armenian capital letter Ա = A	
242₈	162	A2	Բ	Armenian capital letter Բ = P	
243₈	163	A3	Գ	Armenian capital letter Գ = K	
244₈	164	A4	Դ	Armenian capitalletter Դ = T	
245₈	165	A5	Ե	Armenian capital letter Ե = E	
246₈	166	A6	Զ	Armenian capital letter Զ = Z	
247₈	167	A7	Է	Armenian capital letter Է = E	
250₈	168	A8	Ը	Armenian capital letter Ը = A	
251₈	169	A9	Թ	Armenian capital letter Թ = T	
252₈	170	AA	Ժ	Armenian capital letter Ժ = J	
253₈	171	AB	Ի	Armenian capital letter Ի = I	
254₈	172	AC	Լ	Armenian capital letter Լ = L	
255₈	173	AD	Խ	Armenian capital letter Խ = X	
256₈	174	AE	Ծ	Armenian capital letter Ծ = Z	
257₈	175	AF	Կ	Armenian capital letter Կ = K	
260₈	176	B0	Հ	Armenian capital letter Հ = H	
261₈	177	B1	Ձ	Armenian capital letter Ձ = TS	
262₈	178	B2	Ղ	Armenian capital letter Ղ = GH	
263₈	179	B3	Ճ	Armenian capital letter Ճ = J	

Identifier			Shape	Character description	Character set 344₈R: Armenian
Octal	*Dec*	*Hex*			
264₈	180	B4	Ս	Armenian capital letter Ս =M	
265₈	181	B5	Յ	Armenian capital letter Յ =H,Y	
266₈	182	B6	Ն	Armenian capital letter Ն =N	
267₈	183	B7	Շ	Armenian capital letter Շ =SH	
270₈	184	B8	Ո	Armenian capital letter Ո =O	
271₈	185	B9	Չ	Armenian capital letter Չ =CH	
272₈	186	BA	Պ	Armenian capital letter Պ =B	
273₈	187	BB	Ջ	Armenian capital letter Ջ =CH	
274₈	188	BC	Ռ	Armenian capital letter Ռ =R	
275₈	189	BD	Ս	Armenian capital letter Ս =S	
276₈	190	BE	Վ	Armenian capital letter Վ =V	
277₈	191	BF	Տ	Armenian capital letter Տ =D	
300₈	192	C0	Ր	Armenian capital letter Ր =R	
301₈	193	C1	Ց	Armenian capital letter Ց =TS	
302₈	194	C2	Ւ	Armenian capital letter Ւ =U,V	
303₈	195	C3	Փ	Armenian capital letter Փ =P	
304₈	196	C4	Ք	Armenian capital letter Ք =K	
305₈	197	C5	Օ	Armenian capital letter Օ =O	
306₈	198	C6	Ֆ	Armenian capital letter Ֆ =F	
316₈	206	CE	՝	Armenian "poot"	
317₈	207	CF	՞	Armenian question mark	
321₈	209	D1	ա	Armenian small letter ա =A	
322₈	210	D2	բ	Armenian small letter բ =P	
323₈	211	D3	գ	Armenian small letter գ =K	
324₈	212	D4	դ	Armenian small letter դ =T	
325₈	213	D5	ե	Armenian small letter ե =E	
326₈	214	D6	զ	Armenian small letter զ =Z	
327₈	215	D7	է	Armenian small letter է =E	
330₈	216	D8	ը	Armenian small letter ը =A	
331₈	217	D9	թ	Armenian small letter թ =T	
332₈	218	DA	ժ	Armenian small letter ժ =J	
333₈	219	DB	ի	Armenian small letter ի =I	
334₈	220	DC	լ	Armenian small letter լ =L	
335₈	221	DD	խ	Armenian small letter խ =X	

Identifier			Shape	Character description	Character set 344₈R: Armenian
Octal	*Dec*	*Hex*			
336₈	222	DE	ծ	Armenian small letter ծ = Z	
337₈	223	DF	կ	Armenian small letter կ = K	
340₈	224	E0	h	Armenian small letter h = H	
341₈	225	E1	ձ	Armenian small letter ձ = TS	
342₈	226	E2	ղ	Armenian small letter ղ = GH	
343₈	227	E3	ճ	Armenian small letter ճ = J	
344₈	228	E4	մ	Armenian small letter մ = M	
345₈	229	E5	յ	Armenian small letter յ = H,Y	
346₈	230	E6	ն	Armenian small letter ն = N	
347₈	231	E7	շ	Armenian small letter շ = SH	
350₈	232	E8	ո	Armenian small letter ո = O	
351₈	233	E9	չ	Armenian small letter չ = CH	
352₈	234	EA	պ	Armenian small letter պ = B	
353₈	235	EB	ջ	Armenian small letter ջ = CH	
354₈	236	EC	ռ	Armenian small letter ռ = R	
355₈	237	ED	ս	Armenian small letter ս = S	
356₈	238	EE	վ	Armenian small letter վ = V	
357₈	239	EF	տ	Armenian small letter տ = D	
360₈	240	F0	ր	Armenian small letter ր = R	
361₈	241	F1	g	Armenian small letter g = TS	
362₈	242	F2	ւ	Armenian small letter ւ = U,V	
363₈	243	F3	փ	Armenian small letter փ = P	
364₈	244	F4	f	Armenian small letter f = K	
365₈	245	F5	o	Armenian small letter o = O	
366₈	246	F6	ֆ	Armenian small letter ֆ = F	

Character Set $345_8 = 229_{10L} = E5_{16}L$: Devanagari alphabet

Character Set 345_8 contains the Devanagari alphabet (phonetic content) for Hindi, Sanskrit, Marathi, and Nepali languages.

The following are character codes (low-order byte) within Character Set 345_8 (see reference charts in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 345_8: Devanagari
41_8	33	21	०	Devanagari numeral zero	
42_8	34	22	१	Devanagari numeral one	
43_8	35	23	२	Devanagari numeral two	
44_8	36	24	३	Devanagari numeral three	
45_8	37	25	४	Devanagari numeral four	
46_8	38	26	५	Devanagari numeral five	
47_8	39	27	६	Devanagari numeral six	
50_8	40	28	७	Devanagari numeral seven	
51_8	41	29	८	Devanagari numeral eight	
52_8	42	2A	९	Devanagari numeral nine	
241_8	161	A1	ँ	Candrabindu	
242_8	162	A2	.	Bindu	
243_8	163	A3	:	Visarga—Aspiration (h) at word end (Sanskrit)	
245_8	165	A5	अ	Vowel a	
246_8	166	A6	आ	Vowel aa	
247_8	167	A7	इ	Vowel i	
250_8	168	A8	ई	Vowel ii	
251_8	169	A9	उ	Vowel u	
252_8	170	AA	ऊ	Vowel uu	
253_8	171	AB	ऋ	Vowel r	
254_8	172	AC	ॠ	Vowel rr	
255_8	173	AD	ऌ	Vowel l	
256_8	174	AE	ॡ	Vowel ll	
260_8	176	B0	ए	Vowel e	
261_8	177	B1	ऐ	Vowel ai	
264_8	180	B4	ओ	Vowel o	
265_8	181	B5	औ	Vowel au	
267_8	183	B7	क	Consonant ka	
270_8	184	B8	क़	Persian consonant qa	

Identifier			Shape	Character description	Character set 345₈: Devanagari
Octal	Dec	Hex			
271₈	185	B9	ख	Consonant kha	
272₈	186	BA	ख़	Persian consonant xa	
273₈	187	BB	ग	Consonant ga	
274₈	188	BC	ग़	Persian consonant ga	
275₈	189	BD	घ	Consonant gha	
276₈	190	BE	ङ	Consonant na velar	
277₈	191	BF	च	Consonant ca	
300₈	192	C0	छ	Consonant cha	
301₈	193	C1	ज	Consonant ja	
302₈	194	C2	ज़	Persian consonant za	
303₈	195	C3	झ	Consonant jha	
304₈	196	C4	ञ	Consonant na palatal	
305₈	197	C5	ट	Consonant ta retroflex	
306₈	198	C6	ठ	Consonant tha retroflex	
307₈	199	C7	ड	Consonant da retroflex	
310₈	200	C8	ड़	Consonant ra flip	
311₈	201	C9	ढ	Consonant dha retroflex	
312₈	202	CA	ढ़	Consonant rha flip	
313₈	203	CB	ण	Consonant na retroflex	
314₈	204	CC	त	Consonant ta	
315₈	205	CD	थ	Consonant tha	
316₈	206	CE	द	Consonant da	
317₈	207	CF	ध	Consonant dha	
320₈	208	D0	न	Consonant na	
322₈	210	D2	प	Consonant pa	
323₈	211	D3	फ	Consonant pha	
324₈	212	D4	फ़	Persian consonant fa	
325₈	213	D5	ब	Consonant ba	
326₈	214	D6	भ	Consonant bha	
327₈	215	D7	म	Consonant ma	
330₈	216	D8	य	Consonant ya	
332₈	218	DA	र	Consonant ra	
334₈	220	DC	ल	Consonant la	
335₈	221	DD	ळ	Marathi la	

| Identifier | | | Shape | Character description | Character set 345₈: Devanagari |
Octal	Dec	Hex			
337₈	223	DF	व	Consonant va	
340₈	224	E0	श	Consonant sha palatal	
341₈	225	E1	ष	Consonant sha retroflex	
342₈	226	E2	स	Consonant sa	
343₈	227	E3	ह	Consonant ha	
345₈	229	E5	▯ ▯	INV (invisible consonant between font metric indicators)	
346₈	230	E6	ा	Maatra aa	
347₈	231	E7	ि	Maatra i	
350₈	232	E8	ी	Maatra ii	
351₈	233	E9	ु	Maatra u	
352₈	234	EA	ू	Maatra uu	
353₈	235	EB	ृ	Maatra r	
354₈	236	EC	ॄ	Maatra rr	
355₈	237	ED	ॢ	Maatra vowel l	
356₈	238	EE	ॣ	Maatra vowel ll	
360₈	240	F0	े	Maatra e	
361₈	241	F1	ै	Maatra ai	
362₈	242	F2	ँ	Candra	
364₈	244	F4	ो	Maatra o	
365₈	245	F5	ौ	Maatra au	
367₈	247	F7	्	Halant—marks subtraction of implicit vowel a	
370₈	248	F8	॰	Abbreviation marker	
371₈	249	F9	ऽ	Avagraha—marks omission and thus abbreviation	
372₈	250	FA	ॐ	Om—really is a ligature, but is retained here "for spiritual reasons"	
373₈	251	FB	।	Danda—line/sentence final punctuation	
375₈	253	FD	₨	Rupee	
376₈	254	FE	ॎ	Alternative halant—used for special renderings	

Character Set 353₈ = 235₁₀L = EC₁₆L: General and technical symbols 3

Character Set 353₈ ends a series of these consecutive sets which contain "symbols" that are not traditionally considered part of linguistic punctuation.

The following are character codes (low-order byte) within Character Set 353₈ (see reference charts in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 353₈: Symbols
41₈	33	21	ℙ	Projective (double struck P)	
42₈	34	22	ℋ	Script H	
43₈	35	23	ℐ	Script I	
44₈	36	24	≋	Approximately identical	
45₈	37	25	⊜	Equality relationship	
46₈	38	26	ℰ	Euler's	
47₈	39	27	_	Base-line rule	
50₈	40	28	‽	"Interrobang" (exclamation and question marks overlayed)	
51₈	41	29	⌘	Heraldic knot	
52₈	42	2A	𝔊	Group	
53₈	43	2B	ℌ	Hilbert space	
54₈	44	2C	𝔐	Center of mass	
55₈	45	2D	𝔽	Finite fields	
56₈	46	2E	↑↓	Up and down arrow Also: Antiparallel to	
57₈	47	2F	↓↑	Down and up arrow	
60₈	48	30	-->	Broken arrow	
61₈	49	31	≣	Quadruple bar Also: Strict equivalence	
62₈	50	32	⊎	Disjoint union	
63₈	51	33	⋑	Disjoint superset	
64₈	52	34	∮	Integral around a point	
65₈	53	35	∱	Quarternion integral	
66₈	54	36	∯	Surface integral	
67₈	55	37	∰	Volume integral	
70₈	56	38	〖	Left lenticular parenthesis	
71₈	57	39	〗	Right lenticular parenthesis	
72₈	58	3A	◆	Solid lozenge (Black lozenge)	

Identifier Octal Dec Hex	Shape	Character description	Character set 353₈: Symbols
73₈ 59 3B	▣	Square bullet in box	
74₈ 60 3C	▪	Hyphen bullet	
75₈ 61 3D	℔	Per	
76₈ 62 3E	⚖	Lawyers' symbol	
77₈ 63 3F	₡	Colon	
100₈ 64 40	▮	Solid shade block Glyph 353₈ | 100₈ is one of a family of shades: light (356₈ | 140₈), medium (357₈ | 176₈), and dark (356₈ | 141₈)	
101₈ 65 41	⚕	Caduceus	
102₈ 66 42	℈	Scruple	
103₈ 67 43	∝	Early Christian Also: Hatchery	
104₈ 68 44	☯	Yin Yang symbol	
105₈ 69 45	☹	Frown Also: Sadface	
106₈ 70 46	♿	Access symbol Also: Handicapped	
107₈ 71 47	▪	Small black square	

Character Set 354₈ = 236₁₀ = EC₁₆: Extended ITC Dingbats 2 and general symbols

Character Set 354₈ ends a series of two character sets that contain extended ITC Dingbats and general symbols.

The following character codes (low-order byte) within Character Set 354₈ (see reference charts in appendix B):

Identifier Octal Dec Hex	Shape	Character description	Character set 354₈: Symbols
42₈ 34 22	☞	Hand, (fist) right-pointing, male, solid; <ITC, 100>	
43₈ 35 23	☜	Hand, (fist) left-pointing, male, solid; <ITC, 101>	
44₈ 36 24	☞	Hand, (fist) right-pointing, male, solid; <ITC, 102>	
45₈ 37 25	✂	Scissors, solid with inline handle; <ITC, 105>	
46₈ 38 26	✄	Scissors, outline; <ITC, 106>	
47₈ 39 27	☎	Telephone, solid; <ITC, 107>	
50₈ 40 28	✒	Pen nib (point), solid, pointing left; <ITC, 110>	
51₈ 41 29	¶	Paragraph mark; <ITC, 112>	
52₈ 42 2A	✓	Check mark; <ITC, 121>	

| Identifier | | | Shape | Character description | Character set 354₈: Symbols |
Octal	Dec	Hex			
53₈	43	2B	+	Plus sign light; <ITC, 127>	
56₈	46	2E	★	Star, solid with rounded points; <ITC, 134>	
57₈	47	2F	☆	Star, outline = open star; <ITC, 137>	
60₈	48	30	✳	Asterisk; <ITC, 139>	
61₈	49	31	✶	Star, six point, with open-centered circle; <ITC, 144>	
62₈	50	32	→	Arrow, barbed, light, east pointing = east arrow 175; <ITC, 175>	
63₈	51	33	→	Arrow, barbed, medium, east pointing = east arrow 176; <ITC, 176>	
64₈	52	34	➔	Arrow, barbed, bold, east pointing = east arrow 177; <ITC, 177>	
65₈	53	35	→	Arrow, medium, east pointing, triangle head = east arrow 180; <ITC, 180>	
66₈	54	36	➡	Arrow, bold, east pointing with triangle head = east arrow 182; <ITC, 182>	
67₈	55	37	→	Arrow, light, east pointing = east arrow 186; <ITC, 186>	
70₈	56	38	←	Arrow, light, west pointing = west arrow 187; <ITC, 187>	
71₈	57	39	➤➤	Arrow, ultrabold, east pointing = east arrow 190; <ITC, 190>	
72₈	58	3A	➤➤	Arrow, duotone, east pointing = east arrow 192; <ITC, 192>	
73₈	59	3B	➤➤	Arrow, medium, large tail feathers, east pointing = east arrow 194; <ITC, 194>	
74₈	60	3C	➡	Arrow, ultrabold, bullet shaped, east pointing = east arrow 195; <ITC, 195>	
75₈	61	3D	➤	Arrow, ultrabold, chevron style, east pointing = east arrow 196; <ITC, 196>	
76₈	62	3E	➡	Arrow, bold, hairline barbs, east pointing = east arrow 198; <ITC, 198>	
77₈	63	3F	➡	Arrow, bold, medium barbs, east pointing = east arrow 199; <ITC, 199>	
100₈	64	40	@	At sign, generic serif; <ITC, 317>	
101₈	65	41	➤➤	Arrow, light, double barbs, east pointing = east arrow 199C; <ITC, 199C>	
102₈	66	42	➤	Arrow, light, duotone, fine barbs, east pointing = east arrow 199E; <ITC, 199E>	
103₈	67	43	⇚	Arrow, medium, west pointing, feathered = west arrow 199D; <ITC, 199D>	

Identifier			Shape	Character description	Character set 354₈: Symbols
Octal	Dec	Hex			
104₈	68	44	→	Arrow, light, east pointing = east arrow 199H; <ITC, 199H>	
105₈	69	45	←	Arrow, bold, west pointing, rounded = west arrow 199K; <ITC, 199K>	
106₈	70	46	✗	Crossout, open; <ITC, 199N>	
107₈	71	47	☞	Hand, right-pointing, outline, female; <ITC, 200>	
110₈	72	48	☛	Hand, right-pointing, solid, female; <ITC, 201>	
111₈	73	49	☞	Hand, right-pointing index (open left hand); <ITC, 204>	
112₈	74	4A	✂	Scissors, solid and outline; <ITC, 206>	
113₈	75	4B	☏	Telephone, reversed; <ITC, 207>	
114₈	76	4C	✏	Pen nib (point), outline, pointing left; <ITC, 209>	
115₈	77	4D	✏	Pencil pointing left; <ITC, 210>	
116₈	78	4E	✓	Check mark, outline; <ITC, 222>	
120₈	80	50	@	At sign, generic sans serif; <ITC, 318>	
121₈	81	51	◖	Semicircle, solid, left; <ITC, 231>	
122₈	82	52	∗	Asterisk, monotone, light; <ITC, 233>	
123₈	83	53	∗	Asterisk, monotone, medium; <ITC, 234>	
124₈	84	54	✲	Asterisk, monotone, medium; <ITC, 236>	
125₈	85	55	✳	Asterisk, monotone, bold; <ITC, 237>	
126₈	86	56	✳	Asterisk, stress variation; <ITC, 240>	
127₈	87	57	✳	Asterisk, stress variation; <ITC, 243>	
130₈	88	58	→	Arrow, light, east pointing = east arrow 275; <ITC, 275>	
131₈	89	59	→	Arrow, light barbs, bold shaft, east pointing = east arrow 276; <ITC, 276>	
132₈	90	5A	→	Arrow, bold barbs, light shaft, east pointing = east arrow 277; <ITC, 277>	
133₈	91	5B	→	Arrow, bold barbs, light shaft, east pointing = east arrow 278; <ITC, 278>	
134₈	92	5C	→	Arrow, monotone, east pointing = east arrow 279; <ITC, 379>	
135₈	93	5D	→	Arrow, monotone, bold, east pointing = east arrow 280; <ITC, 280>	
136₈	94	5E	→	Arrow, monotone, east pointing = east arrow 281; <ITC, 281>	
137₈	95	5F	→	Arrow, monotone, bold, east pointing = east arrow 282; <ITC, 282>	
140₈	96	60	➤	Arrow, bold, thick feathers and barbs = east arrow 284; <ITC, 284>	

Identifier			Shape	Character description	Character set 354₈: Symbols
Octal	Dec	Hex			
141₈	97	61		Arrow, light, with two solid chevrons, east pointing = east arrow 285; <ITC, 285>	
142₈	98	62		Arrow with two solid chevrons and dark head = east arrow 286; <ITC, 286>	
143₈	99	63		Arrow, light, dotted, east pointing = east arrow 287; <ITC, 287>	
144₈	100	64		Arrow, medium, dotted, east pointing = east arrow 288; <ITC, 288>	
145₈	101	65		Arrow, medium, with tapered shaft, east pointing = east arrow 290; <ITC, 290>	
146₈	102	66		Arrow, medium, monotone, east pointing = east arrow 294; <ITC,294 >	
147₈	103	67		Arrow with five chevrons = east arrow 296; <ITC, 296>	
150₈	104	68		Arrow with three chevrons = east arrow 297; <ITC, 297>	
151₈	105	69		Arrow with dark tail = east arrow 298; <ITC, 298>	
152₈	106	6A		Arrow with heavy tail, east pointing = east arrow 299; <ITC, 299>	
153₈	107	6B		Arrow with split tail, east pointing = east arrow 299B; <ITC, 299B>	
154₈	108	6C		Arrow with tear drop shape, east pointing = east arrow 299C; <ITC, 299C>	
155₈	109	6D		Arrow, outline, southeast pointing = southeast arrow 299J; <ITC, 299J>	
156₈	110	6E		Arrow, bold, west pointing = west arrow 299K; <ITC, 299K>	
157₈	111	6F		Arrow, ragged, east pointing = east arrow 299L; <ITC, 299L>	
160₈	112	70		Check mark, medium brush; <ITC, 299M>	
161₈	113	71		Crossout, brushed; <ITC, 299N>	
162₈	114	72		Ornament, quadruplicate heart; <ITC, 299P>	
163₈	115	73		Plus sign medium; <ITC, 299Q>	
164₈	116	74		Heart, bold, solid, left pointing; <ITC, 299S>	
165₈	117	75		Hand, male, solid, right-pointing index (closed left hand with cuff); <ITC, 300>	
166₈	118	76		Hand, outline, right-pointing (left hand with cuff); <ITC, 301>	
167₈	119	77		Hand, solid, left-pointing (closed hand with cuff); <ITC, 303>	
170₈	120	78		Scissors, solid, top half, leftward; <ITC, 305>	
171₈	121	79		Scissors, solid, top half, rightward; <ITC, 306>	

Identifier			Shape	Character description	Character set 354₈: Symbols
Octal	Dec	Hex			
172₈	122	7A	⟂	Paragraph mark, outline; <ITC, 312>	
173₈	123	7B	✣	Ornament, quaduplicate closed circle; <ITC, 339>	
174₈	124	7C	�	Ornament, sextuplicate balloon; <ITC, 347>	
175₈	125	7D	✕	Multiplication sign, medium; <ITC, 371>	
176₈	126	7E	✕	Multiplication sign, bold; <ITC, 372>	
241₈	161	A1	⇨	Arrow, outline, east pointing = east arrow 375; <ITC, 375>	
242₈	162	A2	⇨	Arrow, outline, east pointing = east arrow 376; <ITC, 376>	
243₈	163	A3	⇨	Arrow, outline, east pointing = east arrow 377; <ITC, 377>	
244₈	164	A4	⇛	Arrow, outline, east pointing = east arrow 379; <ITC, 379>	
245₈	165	A5	⇛	Arrow, outline, east pointing = east arrow 380; <ITC, 380>	
246₈	166	A6	⇛	Arrow, outline, east pointing = east arrow 381; <ITC, 381>	
247₈	167	A7	⇛	Arrow, outline, east pointing = east arrow 382; <ITC, 382>	
250₈	168	A8	⇦	Arrow, outline, 3-D, west pointing = west arrow 384; <ITC, 384>	
251₈	169	A9	⇨	Arrow, outline, 3-D, bullet, east pointing = east arrow 386; <ITC, 386>	
252₈	170	AA	←	Arrow, monotone, light, west pointing = west arrow 399A; <ITC, 399A>	
253₈	171	AB	←	Arrow, monotone, medium, west pointing = west arrow 399B; <ITC, 399B>	
254₈	172	AC	←	Arrow, monotone, bold, west pointing = west arrow 399C; <ITC, 399C>	
255₈	173	AD	←	Arrow, west pointing = west arrow 399D; <ITC, 399D>	
256₈	174	AE	←	Arrow, west pointing = west arrow 399E; <ITC, 399E>	
257₈	175	AF	◄	Arrow, west pointing = west arrow 399F; <ITC, 399F>	
260₈	176	B0	◄	Arrow, west pointing = west arrow 399G; <ITC, 399G>	
261₈	177	B1	⇐	Arrow, outline, west pointing = west arrow 399H; <ITC, 399H>	
262₈	178	B2	⇜	Arrow, west pointing = west arrow 399J; <ITC, 399J>	
263₈	179	B3	⇜	Arrow, west pointing = west arrow 399K; <ITC, 399K>	
264₈	180	B4	//	Vertical brush strokes; <ITC, 399L>	
265₈	181	B5	√	Check mark, light brush, spotted; <ITC, 399M>	
266₈	182	B6	☆	Star, outline, medium, 8 points, 2 points up, down, left, right; <ITC, 399T>	
267₈	183	B7	✳	Ornament, sextuplicate tear ornament with closed center dot; <ITC, 399U>	

Identifier			Shape	Character description	Character set 354₈: Symbols
Octal	Dec	Hex			
270₈	184	B8	①	Circled number 1, open circle, generic serif; <ITC, 251>	
271₈	185	B9	②	Circled number 2, open circle, generic serif; <ITC, 252>	
272₈	186	BA	③	Circled number 3, open circle, generic serif; <ITC, 253>	
273₈	187	BB	④	Circled number 4, open circle, generic serif; <ITC, 254>	
274₈	188	BC	⑤	Circled number 5, open circle, generic serif; <ITC, 255>	
275₈	189	BD	⑥	Circled number 6, open circle, generic serif; <ITC, 256>	
276₈	190	BE	⑦	Circled number 7, open circle, generic serif; <ITC, 257>	
277₈	191	BF	⑧	Circled number 8, open circle, generic serif; <ITC, 258>	
300₈	192	C0	⑨	Circled number 9, open circle, generic serif; <ITC, 259>	
301₈	193	C1	⑩	Circled number 10, open circle, generic serif; <ITC, 260>	
302₈	194	C2	①	Circled number 1, open circle, generic sans serif; <ITC, 151>	
303₈	195	C3	②	Circled number 2, open circle, generic sans serif; <ITC, 152>	
304₈	196	C4	③	Circled number 3, open circle, generic sans serif; <ITC, 153>	
305₈	197	C5	④	Circled number 4, open circle, generic sans serif; <ITC, 154>	
306₈	198	C6	⑤	Circled number 5, open circle, generic sans serif; <ITC, 155>	
307₈	199	C7	⑥	Circled number 6, open circle, generic sans serif; <ITC, 156>	
310₈	200	C8	⑦	Circled number 7, open circle, generic sans serif; <ITC, 157>	
311₈	201	C9	⑧	Circled number 8, open circle, generic sans serif; <ITC, 158>	
312₈	202	CA	⑨	Circled number 9, open circle, generic sans serif; <ITC, 159>	
313₈	203	CB	⑩	Circled number 10, open circle, generic sans serif; <ITC, 160>	
314₈	204	CC	❶	Circled number 1, reversed, generic sans serif; <ITC, 161>	
315₈	205	CD	❷	Circled number 2, reversed, generic sans serif; <ITC, 162>	
316₈	206	CE	❸	Circled number 3, reversed, generic sans serif; <ITC, 163>	
317₈	207	CF	❹	Circled number 4, reversed, generic sans serif; <ITC, 164>	
320₈	208	D0	❺	Circled number 5, reversed, generic sans serif; <ITC, 165>	
321₈	209	D1	❻	Circled number 6, reversed, generic sans serif; <ITC, 166>	
322₈	210	D2	❼	Circled number 7, reversed, generic sans serif; <ITC, 167>	
323₈	211	D3	❽	Circled number 8, reversed, generic sans serif; <ITC, 168>	
324₈	212	D4	❾	Circled number 9, reversed, generic sans serif; <ITC, 169>	
325₈	213	D5	❿	Circled number 10, reversed, generic sans serif; <ITC, 170>	
340₈	224	E0	●	Harvey ball, full	
341₈	225	E1	◕	Harvey ball, three quarters full	
342₈	226	E2	◒	Harvey ball, bottom half full	
343₈	227	E3	◑	Harvey ball, right half full	

Identifier			Shape	Character description	Character set 354₈: Symbols
Octal	Dec	Hex			
344₈	228	E4	◔	Harvey ball, one quarter full	
345₈	229	E5	○	Harvey ball, empty	
346₈	230	E6	🍎	Apple symbol, closed	
347₈	231	E7	♥	Apple symbol, open	
360₈	240	F0	0	Zero dot (IBM)	

Character Set 355₈ = 237₁₀ = ED₁₆: ITC Dingbats 1

Character Set 355₈ begins a series of two character sets that contain ITC Dingbats.

The following are character codes (low-order byte) within Character Set 355₈ (see reference charts in appendix B):

Identifier			Shape	Character description	Character set 355₈: Symbols
Octal	Dec	Hex			
41₈	33	21	✂	Scissors, solid, broken on bottom; <ITC, >104	
42₈	34	22	✄	Scissors, solid, open; <ITC, 103>	
43₈	35	23	✀	Scissors, solid, broken on top	
44₈	36	24	✂	Scissors, outlined; <ITC, 304>	
45₈	37	25	☎	Telephone, solid; <ITC, 108>	
46₈	38	26	✆	Telephone handset; <ITC, 208>	
47₈	39	27	✇	Magnetic tape symbol; <ITC, 344>	
50₈	40	28	✈	Airplane, solid, top view; <ITC, 199V>	
51₈	41	29	✉	Envelope, wax sealed; <ITC, 109>	
52₈	42	2A	☛	Hand (fist), right-pointing; <ITC, 203>	
53₈	43	2B	☞	Hand (fist), right-pointing index, coat and cuff; <ITC, 202>	
54₈	44	2C	✌	Victory sign, outline, right hand; <ITC, 299U>	
55₈	45	2D	✍	Hand with pencil, male, outline, right hand; <ITC, 309>	
56₈	46	2E	✎	Pencil, pointing southeast; <ITC, 310>	
57₈	47	2F	✐	Pencil pointing right; <ITC, 210A>	
60₈	48	30	✏	Pencil pointing northeast; <ITC, 310A>	
61₈	49	31	✑	Pen nib (point), outline, pointing right; <ITC, 200A>	
62₈	50	32	✒	Pen nib (point), solid, pointing right; <ITC, 110A>	
63₈	51	33	✔	Check mark, solid; <ITC, 221>	
64₈	52	34	✕	Multiplication sign, light, monotone; <ITC, 227>	
65₈	53	35	✖	Multiplication sign, bold, monotone; <ITC, 228>	

Identifier Octal Dec Hex	Shape	Character description	Character set 355₈: Symbols
67₈ 55 37	✗	Crossout, solid, heavy, brush stroke; <ITC, 199M>	
70₈ 56 38	⬧	Crossed lines, solid, outlined; <ITC, 399Q>	
71₈ 57 39	➕	Plus sign, bold, monotone; <ITC, 128>	
72₈ 58 3A	✛	Crossed lines, solid, medium, monotone, open center; <ITC, 336>	
73₈ 59 3B	✜	Crossed lines, solid, heavy, monotone, open center; <ITC, 337>	
74₈ 60 3C	†	Cross, solid, medium, monotone; <ITC, 199Q>	
75₈ 61 3D	⸸	Cross, outline, shadow; <ITC, 199R>	
76₈ 62 3E	✝	Cross, solid, medium, monotone, outlined; <ITC, 399R>	
77₈ 63 3F	✡	Star of David; <ITC, 399S>	
100₈ 64 40	✜	Ornament, solid, quadruplicate tear shaped; <ITC, 199P>	
101₈ 65 41	✛	Ornament, solid, quadruplicate balloon shaped with solid center circle; <ITC, 338>	
102₈ 66 42	♣	Ornament, solid, quadruplicate balloon shaped; <ITC, 340>	
103₈ 67 43	✛	Ornament, solid, quadruplicate clubs; <ITC, 399N>	
104₈ 68 44	◆	Star, solid, 4 points; <ITC, 328>	
105₈ 69 45	◇	Star, outlined, 4 points; <ITC, 199U>	
106₈ 70 46	☆	Star, open, stress variation, 5 points; <ITC, 149>	
107₈ 71 47	✪	Star, open, 5 points, in solid circle; <ITC, 136>	
110₈ 72 48	☆	Star, solid, 5 points, open-circle center; <ITC, 143>	
111₈ 73 49	✬	Star, open, stress variation, 5 points, solid center circle; <ITC, 150>	
112₈ 74 4A	✭	Star, solid, 5 points, in outlined star; <ITC, 148>	
113₈ 75 4B	✩	Star, solid, 5 points, in heavy outlined star; <ITC, 141>	
114₈ 76 4C	✫	Star, solid and open, 5 points; <ITC, 147>	
115₈ 77 4D	☆	Star, open, 5 points with shadow; <ITC, 146>	
116₈ 78 4E	✳	Asterisk, solid, heavy, monotone, squared ends; <ITC, 235>	
117₈ 79 4F	✻	Asterisk, solid, medium, monotone, concave ends, open center; <ITC, 399P>	
120₈ 80 50	✳	Asterisk, solid, light, stress variation, square ends; <ITC, 335>	
121₈ 81 51	✳	Star, solid, 8 points; <ITC, 342>	
122₈ 82 52	✺	Star, solid and open, 8 points; <ITC, 341>	
123₈ 83 53	✶	Star, solid, 6 points; <ITC, 140>	

Identifier			Shape	Character description	Character set 355₈: Symbols
Octal	Dec	Hex			
124₈	84	54	✳	Star, solid, medium, 8 points, 2 points up, down, right, left; <ITC, 145>	
125₈	85	55	✳	Star, solid, heavy, 8 points, 2 points up, down, right, left; <ITC, 238>	
126₈	86	56	✳	Star, solid, 12 points; <ITC, 239>	
127₈	87	57	✳	Ornament, circular, 16 spokes; <ITC, 343>	
130₈	88	58	✳	Ornament, solid, sextuplicate, tear shaped, solid center circle; <ITC, 242>	
131₈	89	59	✳	Ornament, solid, sextuplicate, tear shaped, open center circle; <ITC, >333	
132₈	90	5A	✳	Ornament, solid, heavy sextuplicate, tear shaped; <ITC, 241>	
133₈	91	5B	✿	Ornament, outline and solid petals; <ITC, 244>	
134₈	92	5C	✿	Ornament, solid, penta-circle shaped, open center circle; <ITC, 334>	
135₈	93	5D	✿	Ornament, flower, penta-petal, solid center circle; <ITC, 346>	
136₈	94	5E	✿	Ornament, flower, octa-petal, open center circle; <ITC, 250>	
137₈	95	5F	✪	Star, open, 8 points, on solid circle, open circle center; <ITC, 345>	
140₈	96	60	✳	Ornament, solid and open, sextuplicate, tear shaped; <ITC, 245>	
141₈	97	61	❉	Ornament, snowflake; <ITC, 350>	
142₈	98	62	❉	Ornament, snowflake, outline; <ITC, 348>	
143₈	99	63	❉	Ornament, snowflake, light stems, bold branches; <ITC, 349>	
144₈	100	64	✳	Ornament, solid, alternating 4 light and 4 medium strokes, solid circle center; <ITC, 246>	
145₈	101	65	✳	Ornament, solid, alternating 4 light straight strokes and 4 heavy tear–shaped strokes, solid circle center; <ITC, 247>	
146₈	102	66	✳	Asterisk, sextuplicate light lines, solid circle ends; <ITC, 138>	
147₈	103	67	✳	Asterisk, light, 8 tear–shaped strokes, solid circle center; <ITC, 249>	
150₈	104	68	✳	Asterisk, medium, 8 tear–shaped strokes, solid circle center; <ITC, 248>	
151₈	105	69	○	Circle, open, shadow; <ITC, 171>	
152₈	106	6A	❏	Box, open, shadowed southeast; <ITC, 272>	
153₈	107	6B	❐	Box, open, shadowed northeast; <ITC, 272A>	
154₈	108	6C	❏	Box, open, 3-D, shaded southeast; <ITC, 271>	
155₈	109	6D	❐	Box, open, 3-D, shaded northeast; <ITC, 271A>	

Identifier			Shape	Character description	Character set 355₈: Symbols
Octal	*Dec*	*Hex*			
156₈	110	6E	❖	Ornament, solid diamond, with white cross; <ITC, 199J>	
157₈	111	6F	◗	Semicircle, solid, right; <ITC, 232>	
160₈	112	70	▮	Bar, vertical, solid, medium; <ITC, 326>	
161₈	113	71	▮	Bar, vertical, solid, bold; <ITC, 327>	
162₈	114	72	¶	Paragraph sign, single stem, curved terminal; <ITC, 311>	
163₈	115	73	❗	Exclamation mark, solid, fat; <ITC, 322>	
164₈	116	74	❣	Exclamation mark, solid, heart shaped, heavy; <ITC, 321>	
165₈	117	75	♥	Heart, solid, wide; <ITC, 373>	
166₈	118	76	♥	Heart, solid, wide, pointing right; <ITC, 299T>	
167₈	119	77	❦	Leaf, solid, vertical; <ITC, 211>	
170₈	120	78	❧	Leaf, solid, horizontal; <ITC, 212>	
171₈	121	79	❶	Circled number 1, reversed, generic serif; <ITC, 261>	
172₈	122	7A	❷	Circled number 2, reversed, generic serif; <ITC, 262>	
173₈	123	7B	❸	Circled number 3, reversed, generic serif; <ITC, 263>	
174₈	124	7C	❹	Circled number 4, reversed, generic serif; <ITC, 264>	
175₈	125	7D	❺	Circled number 5, reversed, generic serif;<ITC, 265>	
176₈	126	7E	❻	Circled number 6, reversed, generic serif; <ITC, 266>	
241₈	161	A1	❼	Circled number 7, reversed, generic serif; <ITC, 267>	
242₈	162	A2	❽	Circled number 8, reversed, generic serif; <ITC, 268>	
243₈	163	A3	❾	Circled number 9, reversed, generic serif; <ITC, 269>	
244₈	164	A4	❿	Circled number 10, reversed, generic serif; <ITC, 270>	
245₈	165	A5	→	Arrow, dark, rightward arrow = east arrow 295; <ITC, 295>	
246₈	166	A6	↘	Arrow, southeast pointing = southeast arrow 299F; <ITC, 299F>	
247₈	167	A7	→	Arrow, east pointing = east arrow 291; <ITC, 291>	
250₈	168	A8	↗	Arrow, northeast pointing = northeast arrow 299F; <ITC, 299G-1>	
251₈	169	A9	➤	Arrow, east pointing = east arrow 199F; <ITC, 199F>	
252₈	170	AA	→	Arrow, east pointing = east arrow 178; <ITC, 178>	
253₈	171	AB	→	Arrow, east pointing = east arrow 179; <ITC, 179>	
254₈	172	AC	→	Arrow, east pointing = east arrow 181; <ITC, 181>	
255₈	173	AD	➡	Arrow, east pointing = east arrow 387; <ITC, 387>	
256₈	174	AE	➡	Arrow, east pointing = east arrow 388; <ITC, 388>	
257₈	175	AF	➢	Arrowhead, east pointing = east arrowhead 273; <ITC, 273>	

| Identifier | | | Shape | Character description | Character set 355₈: Symbols |
Octal	Dec	Hex			
260₈	176	B0	⟩	Arrowhead, east pointing = east arrowhead 273 upside-down; <ITC, 273A>	
261₈	177	B1	➤	Arrow, solid, east pointing = east arrowhead 274; <ITC, 274>	
262₈	178	B2	➡	Arrow, solid, curved shaft, east pointing = east arrow 199A; <ITC, 199A>	
263₈	179	B3	➡	Arrow, solid, curved shaft, east pointing = east arrow 199B; <ITC, 199B>	
264₈	180	B4	▸	Arrow, solid, east pointing = east arrow 183; <ITC, 183>	
265₈	181	B5	➡	Arrow, solid, east pointing = east arrow 292; <ITC, 292>	
266₈	182	B6	⇨	Arrow, outline, shaded, 3-D, east pointing = east arrow 383; <ITC, 383>	
267₈	183	B7	⇨	Arrow, outline, shaded, 3-D, east pointing; <ITC, 383A>	
270₈	184	B8	⇨	Arrow, outline, shaded, 3-D, east pointing = east arrow 385; <ITC, 385>	
271₈	185	B9	⇨	Arrow, outline, shaded, 3-D, east pointing = east arrow 385 upside down; <ITC, 385A>	
272₈	186	BA	⇨	Arrow, outline, shaded, 3-D, east pointing = east arrow 389; <ITC, 389>	
273₈	187	BB	⇨	Arrow, outline, shaded, 3-D, east pointing = east arrow 389 upside down; <ITC, 389A>	
274₈	188	BC	⇨	Arrow, outline, 3-D, east pointing = east arrow 390; <ITC, 390>	
275₈	189	BD	⇨	Arrow, outline, 3-D, east pointing = east arrow 390 upside down; <ITC, 390A>	
276₈	190	BE	⊃	Arrow, reversed in circle, east pointing = east arrow 391; <ITC, 391>	
277₈	191	BF	➣	Arrow, east pointing = east arrow 293; <ITC, 293>	
300₈	192	C0	↘	Arrow, southeast pointing = southeast arrow 299G; <ITC, 299G>	
301₈	193	C1	➡	Arrow, solid, split tail, east pointing = east arrow 299A; <ITC, 299A>	
302₈	194	C2	↗	Arrow, solid, split tail, northeast pointing = northeast arrow 299G; <ITC, 299K-1>	
303₈	195	C3	↘	Arrow, solid, southeast pointing = southeast arrow 299H; <ITC, 299H>	
304₈	196	C4	➡	Arrow, solid, east pointing = east arrow 193; <ITC, 193>	

Identifier			Shape	Character description	Character set 355₈: Symbols
Octal	Dec	Hex			
305₈	197	C5	✔	Arrow, solid, northeast pointing = northeast arrow 299H upside down; <ITC, 299L-1>	
306₈	198	C6	→	Arrow, solid, east pointing = east arrow 299D; <ITC, 299D>	
307₈	199	C7	↦	Arrow, solid, east pointing = east arrow 299E; <ITC, 299E>	
310₈	200	C8	➡	Arrow, solid, east pointing = east arrow 283;<ITC, 283>	
311₈	201	C9	➤	Arrow, solid, east pointing = east arrow 191; <ITC, 191>	
312₈	202	CA	⇒	Arrow, outline, east pointing = east arrow 289; <ITC, 289>	
313₈	203	CB	⟨	Bracket, angled, begin, light; <ITC, 129A>	
314₈	204	CC	⟩	Bracket, angled, end, light; <ITC, 129>	
315₈	205	CD	⒈	Square number 1, outline box, solid number, generic sans serif; <ITC, 351>	
316₈	206	CE	⒉	Square number 2, outline box, solid number, generic sans serif; <ITC, 352>	
317₈	207	CF	⒊	Square number 3, outline box, solid number, generic sans serif; <ITC, 353>	
320₈	208	D0	⒋	Square number 4, outline box, solid number, generic sans serif; <ITC, 354>	
321₈	209	D1	⒌	Square number 5, outline box, solid number, generic sans serif; <ITC, 355>	
322₈	210	D2	⒍	Square number 6, outline box, solid number, generic sans serif; <ITC, 356>	
323₈	211	D3	⒎	Square number 7, outline box, solid number, generic sans serif; <ITC, 357>	
324₈	212	D4	⒏	Square number 8, outline box, solid number, generic sans serif; <ITC, 358>	
325₈	213	D5	⒐	Square number 9, outline box, solid number, generic sans serif; <ITC, 359>	
326₈	214	D6	⒑	Square number 10, outline box, solid number, generic sans serif; <ITC, 360>	
327₈	215	D7	■	Square number 1, solid box, reverse number, generic sans serif; <ITC, 361>	
330₈	216	D8	■	Square number 2, solid box, reverse number, generic sans serif; <ITC, 362>	
331₈	217	D9	■	Square number 3, solid box, reverse number, generic sans serif; <ITC, 363>	
332₈	218	DA	■	Square number 4, solid box, reverse number, generic sans serif; <ITC, 364>	

Identifier Octal Dec Hex	Shape	Character description	Character set 355₈: Symbols
333₈ 219 DB	**5**	Square number 5, solid box, reverse number, generic sans serif; <ITC, 365>	
334₈ 220 DC	**6**	Square number 6, solid box, reverse number, generic sans serif; <ITC, 366>	
335₈ 221 DD	**7**	Square number 7, solid box, reverse number, generic sans serif; <ITC, 367>	
336₈ 222 DE	**8**	Square number 8, solid box, reverse number, generic sans serif; <ITC, 368>	
337₈ 223 DF	**9**	Square number 9, solid box, reverse number, generic sans serif; <ITC, 369>	
340₈ 224 E0	**10**	Square number 10, solid box, reverse number, generic sans serif; <ITC, 370>	
341₈ 225 E1	◖	Quotation mark, beginning, single, square; <ITC, 115>	
342₈ 226 E2	◗	Quotation mark, closing, single, square; <ITC, 116>	
343₈ 227 E3	●	Quotation mark, beginning, single, curved, bold; <ITC, 213>	
344₈ 228 E4	●	Quotation mark, closing, single, curved, bold; <ITC, 214>	
345₈ 229 E5	6	Quotation mark, beginning, single, curved, bold outline; <ITC, 215>	
346₈ 230 E6	9	Quotation mark, closing, single, curved, bold, outline; <ITC, 216>	
347₈ 231 E7	(	Parenthesis, bold, begin; <ITC, 219>	
350₈ 232 E8	)	Parenthesis, bold, end; <ITC, 220>	
351₈ 233 E9	{	Brace, bold, begin; <ITC, 329>	
352₈ 234 EA	}	Brace, bold, end; <ITC, 330>	
353₈ 235 EB	⊛	Made in U.S.A. sign; <ITC, 299V>	
354₈ 236 EC	(	Parenthesis, solid, medium, begin; <ITC, 319>	
355₈ 237 ED	)	Parenthesis, solid, medium, end; <ITC, 320>	
356₈ 238 EE	⊛	Printed in U.S.A. sign; <ITC, 399V>	
357₈ 239 EF	✂	Scissors, light, monotone; <ITC, 205>	
360₈ 240 F0	✭	Star of David, solid; <ITC, 142>	
361₈ 241 F1	〈	Bracket, angled, begin, bold; <ITC, 131A>	
362₈ 242 F2	〉	Bracket, angled, end, bold; <ITC, 131>	
363₈ 243 F3	⟨	Chevron, begin, light; <ITC, 229A>	
364₈ 244 F4	⟩	Chevron, end, light; <ITC, 229>	
365₈ 245 F5	⟨	Chevron, begin, medium; <ITC, 230A>	

Identifier			Shape	Character description	Character set 355₈: Symbols
Octal	Dec	Hex			
366₈	246	F6	❭	Chevron, end, medium; <ITC, 230>	

Character Set 356₈ = 238₁₀ = EE₁₆: General and technical symbols 2

Character Set 356 is one of a series of three consecutive character sets that contain "symbols" not traditionally considered part of linguistic punctuation.

The following are character codes (low-order byte) within Character Set 356₈ (see reference charts in appendix B):

Identifier			Shape	Character description	Character set 356₈: Symbols
Octal	Dec	Hex			
41₈	33	21	n̲ n̲	Thick space = 3-em space (normally nonprinting)	
42₈	34	22	n̲ n̲	4-em space (normally nonprinting)	
43₈	35	23	n̲ n̲	Hair space (fixed and normally nonprinting)	
44₈	36	24	n̲ n̲	Punctuation space (fixed, device dependent, and normally nonprinting)	
45₈	37	25	·	Hyphenation point—(not normally imaged)	
46₈	38	26	∟	Crop top right	
47₈	39	27	⌐	Crop top left	
50₈	40	28	⌐	Crop bottom right	
51₈	41	29	⌐	Crop bottom left	
52₈	42	2A	▌	Histogram sign.	
53₈	43	2B	∔	Direct sum; <AMS, dotplus>	
54₈	44	2C	,	Arabic thousands separating delimiter = thousands separator	
55₈	45	2D	−	Minus sign	
56₈	46	2E	.	Arabic decimal point = radix point = decimal point	
57₈	47	2F	ℏ	Dirac h; Planck's constant divided by 2π; <AMS, hbar>	
60₈	48	30	∲	"Plaintiff" symbol Also: between; <AMS, between>	
61₈	49	31	a/c	"Account of" symbol	
62₈	50	32	♦	Bottle symbol	
63₈	51	33	☏	Telephone symbol, open	
64₈	52	34	:	Ratio symbol	
65₈	53	35	!	Factorial sign	
66₈	54	36	⊢	Assertion sign (math logic) Also: Reduced to	
67₈	55	37	≐	Symmetry sign (ANSI TC10)	

Identifier			Shape	Character description	Character set 356₈: Symbols
Octal	Dec	Hex			
70₈	56	38	↗	Total runout (ANSI Y14.5)	
71₈	57	39	Ƶ	Impedance	
72₈	58	3A	⌂	Small house	
73₈	59	3B	∸	Symmetric difference; <AMS, dotminus>	
74₈	60	3C	∖	Set minus; <AMS, smallsetminus>	
75₈	61	3D	≙	Estimates or is estimated by Also: corresponds to	
76₈	62	3E	≙	Equiangular	
77₈	63	3F	⨯	Crossed division sign; <AMS, divideontimes>	
100₈	64	40	c/u	Cada una (Spanish)—means each one	
101₈	65	41	▣	Inverse (357₈ | 146₈) centered bullet	
102₈	66	42	≎	Geometrically equivalent to; <AMS, Bumpeq>	
103₈	67	43	ℛ	Riemann integral	
104₈	68	44	ℒ	Laplace symbol	
105₈	69	45	Δ	Increment Also: Laplace operator	
106₈	70	46	◊	Lozenge	
107₈	71	47	∧	Caret	
110₈	72	48	₵	Centerline	
111₈	73	49	—	Straightness (ANSI Y14.5)	
112₈	74	4A	▱	Flatness (ANSI Y14.5)	
113₈	75	4B	⌀⁄	Cylindricity (ANSI Y14.5)	
114₈	76	4C	⌒	Profile of a line (ANSI Y14.5)	
115₈	77	4D	⌓	Profile of a surface (ANSI Y14.5)	
116₈	78	4E	⌀	All-around profile (ANSI Y14.5)	
117₈	79	4F	⊕	Position (ANSI Y14.5)	
120₈	80	50	⇄	Right arrow over left arrow; <AMS, rightleftarrows>	
121₈	81	51	⇕	Double arrow, up and down; <AMS, Updownarrow>	
122₈	82	52	⊏	Image of; square contained in; <AMS, sqsubset>	
123₈	83	53	⊐	Original of; square contains; <AMS, sqsupset>	
124₈	84	54	ƒ	Function symbol	
125₈	85	55	◉	Inverse (42₈ | 176₈) large circle	
126₈	86	56	⋂	Intersection of classes (intersection of a collection of sets A_1, ..., A_n); big intersection	

Identifier			Shape	Character description	Character set 356₈: Symbols
Octal	Dec	Hex			
				Also: Product of classes or sets between limits; <AMS, bigcap>	
127₈	87	57	U	Union of classes or sets (Union of a collection of sets A_1, ..., A_n); big union Also: Sum of classes or sets between limits; <AMS, bigcup>	
130₈	88	58	⊡	"Square" checkplot sign	
131₈	89	59	◇	"Diamond" checkplot sign	
132₈	90	5A	△	"Triangle" checkplot sign	
133₈	91	5B	⊕	"Circle" checkplot sign	
134₈	92	5C	⬡	"Hexagon" checkplot sign	
135₈	93	5D	⋈	"Hourglass" checkplot sign	
136₈	94	5E	⯂	"Tree" checkplot sign	
137₈	95	5F	⋊	"Picnic table" checkplot sign	
140₈	96	60	░	Light shade	
141₈	97	61	▓	Dark shade	
142₈	98	62	⋒	Double cap; <AMS, Cap>; <AMS, doublecap>	
143₈	99	63	⋓	Double cup; <AMS, Cup>; <AMS, doublecup>	
144₈	100	64	∺	Geometric proportion	
145₈	101	65	≴	Not less than nor equal to, type 2 Alternates: type 1 = (41₈ | 340₈), type 3 = (41₈ | 360₈)	
146₈	102	66	≵	Not greater than nor equal to, type 2 Alternates: type 1 = (41₈ | 341₈), type 3 = (41₈ | 361₈)	
147₈	103	67	∘	Jot (APL, sometimes called null)	
150₈	104	68	≎	Inverted "asymptotically equal to"	
151₈	105	69	∁	Complement; <AMS, complement>	
152₈	106	6A	⌐	Start of line symbol	
153₈	107	6B	′	Computer forward single delimiter	
154₈	108	6C	≶	Less than or greater than; <AMS, lessgtr>	
155₈	109	6D	≷	Greater than or less than; <AMS, gtrless>	
156₈	110	6E	≲	Less than or similar to; <AMS, lesssim>	
157₈	111	6F	≳	Greater than or equivalent to; <AMS, gtrsim>	
160₈	112	70	⊤	Upside down perpendicular (APL); <AMS, top>	
161₈	113	71	∄	Does not exist; <AMS, nexists>	
162₈	114	72	≢	Not identical with; not equivalent	
163₈	115	73	⌈	Top portion of left bracket	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 356₈: Symbols
164₈	116	74	⌊	Bottom portion of left bracket	
165₈	117	75	│	Center portion of left and right bracket	
166₈	118	76	⌉	Top portion of right bracket	
167₈	119	77	⌋	Bottom portion of right bracket	
170₈	120	78	≅	Asymptotic or equal to; <AMS, approxeq>	
171₈	121	79	≏	Approximately equal to—*not* Libra (357₈ | 370₈); <AMS, bumpeq>	
172₈	122	7A	!!	Double exclamation mark	
173₈	123	7B	`	Computer backward single delimiter Also: reversed prime	
174₈	124	7C	|	Absolute value Also: such that, type 2 Alternate: such that, type 1 = (357₈ | 114₈)	
175₈	125	7D	*	Multiplication operator Also: centered asterisk	
176₈	126	7E	~	Similar to (geometry) = equivalent to Also: asymptotic to; <AMS, sim>	
241₈	161	A1	⊤	Intercalate; <AMS, intercal>	
242₈	162	A2	.	One-dot leader on an en body	
243₈	163	A3	..	Two-dot leader on an en body	
244₈	164	A4	➡	Large rightward arrow, closed Also: Dingbat (arrow, large, rightward, closed); <ITC, 197>	
245₈	165	A5	⬅	Large leftward arrow, closed	
246₈	166	A6	⬆	Large upward arrow, closed	
247₈	167	A7	⬇	Large downward arrow, closed	
250₈	168	A8	⇨	Large rightward arrow, open Also: Dingbat (arrow, large, rightward, open); <ITC, 378>	
251₈	169	A9	⇦	Large leftward arrow, open	
252₈	170	AA	⇧	Large upward arrow, open	
253₈	171	AB	⇩	Large downward arrow, open	
254₈	172	AC	←	Relata of a relation—*not* west arrow (0₈ | 254₈); <AMS, leftarrow>; <AMS, gets>	
255₈	173	AD	↑	Increases to; exponent—*not* north arrow (0₈ | 255₈); <AMS, uparrow>	
256₈	174	AE	→	Approaches—*not* east arrow (0₈ | 256₈); <AMS, rightarrow>; <AMS, to>	

Identifier			Shape	Character description	Character set 356₈: Symbols
Octal	Dec	Hex			
257₈	175	AF	↓	Decreases to—*not* south arrow (0₈ | 257₈); <AMS, downarrow>	
260₈	176	B0	▶	Black point-right triangle = filled triangle pointing right; <AMS, blacktriangleright>	
261₈	177	B1	◀	Black point-left triangle = filled triangle pointing left; <AMS, blacktriangleleft>	
262₈	178	B2	▷	White point-right triangle; contains as normal subgroup; <AMS, vartriangleright>	
263₈	179	B3	◁	White point-left triangle; normal subgroup of; <AMS, vartriangleleft>	
264₈	180	B4	·	Scalar product—*not* centered dot (0₈ | 267₈)	
265₈	181	B5	↕	North-South arrow Also: Dingbat (arrow, north-south); <AMS, updownarrow>; <ITC, 189>	
266₈	182	B6	↨	North-south arrow perpendicular	
267₈	183	B7	⍲	Nand (APL)	
270₈	184	B8	⍱	Nor (APL)	
271₈	185	B9	■	Solid fill character	
272₈	186	BA	▬	Solid fill character, bottom half	
273₈	187	BB	▐	Solid fill character, right half	
274₈	188	BC	▌	Solid fill character, left half	
275₈	189	BD	▬	Solid fill character, top half	
276₈	190	BE	◀	Backward indicator arrow	
277₈	191	BF	▶	Forward indicator arrow Also: Dingbat (arrow, forward indicator); <ITC, 185>	
300₈	192	C0	⍫	Del tilde (APL)	
301₈	193	C1	⍒	Del stile (APL)	
302₈	194	C2	⍋	Delta stile (APL)	
303₈	195	C3	⌽	Circle stile (APL)	
304₈	196	C4	⍉	Circle slope (APL)	
305₈	197	C5	⊛	Circle star	
306₈	198	C6	⍞	Quote quad (APL)	
307₈	199	C7	⌹	Quad divide (APL)	
310₈	200	C8	⌿	Slash bar (APL)	
311₈	201	C9	⍀	Slope bar (APL)	
312₈	202	CA	⩟	Wedge with overbarx; <AMS, barwedge>	

Identifier Octal Dec Hex	Shape	Character description	Character set 356₈: Symbols
313₈ 203 CB	♤	Open (357₈ | 313₈) spades Also: Dingbat (spades (playing card) outline); <ITC, 396>	
314₈ 204 CC	♥	Solid (357₈ | 314₈) hearts Also: Dingbat (hearts (playing card) solid); <ITC, 393>	
315₈ 205 CD	♦	Solid (357₈ | 315₈) diamonds Also: Dingbat (diamonds (playing card) solid); <ITC, 394>	
316₈ 206 CE	♧	Open (357₈ | 316₈) clubs Also: Dingbat (clubs (playing card) outline); <ITC, 399>	
317₈ 207 CF	☼	Compass symbol—*not* sun (357₈ | 347₈)	
320₈ 208 D0	⊥	Base null (APL)	
321₈ 209 D1	⊤	Top null (APL)	
322₈ 210 D2	∩	Cap null (APL)	
323₈ 211 D3	I	I-beam (APL)	
324₈ 212 D4	⌹	Quad jot (APL, sometimes called Quad Null)	
325₈ 213 D5	♫	Double eighth note	
326₈ 214 D6	⋉	Semidirect product with normal factor on right; <AMS, ltimes>	
327₈ 215 D7	⋊	Semidirect product with normal factor on right; <AMS, rtimes>	
330₈ 216 D8	⋋	Semidirect product (left); <AMS, leftthreetimes>	
331₈ 217 D9	⋌	Semidirect product (right); <AMS, rightthreetimes>	
332₈ 218 DA	⩟	And double overbar; <AMS, doublebarwedge>	
333₈ 219 DB	⊻	Or underbar; <AMS, veebar>	
334₈ 220 DC	▯	Vertical rectangle Also: Left bracket right bracket (APL, sometimes called squished quad)	
335₈ 221 DD	∟	Right angle symbol	
336₈ 222 DE	▬	Solid horizontal rectangle	
337₈ 223 DF	☻	Dark (357₈ | 337₈) smile face	
340₈ 224 E0	⎫	Top portion of right brace	
341₈ 225 E1	⎪	Vertical portion of a multiline brace	
342₈ 226 E2	⎬	Center portion of right brace	
343₈ 227 E3	⎭	Bottom portion of right brace	
344₈ 228 E4	⎧	Top portion of left brace	
345₈ 229 E5	⎩	Bottom portion of left brace	
346₈ 230 E6	⎨	Center portion of left brace	
347₈ 231 E7	∫	First part of a two line brace (upper portion of the left brace and the lower portion of the right brace)	

Identifier			Shape	Character description	Character set 356₈: Symbols
Octal	Dec	Hex			
350₈	232	E8	↓	Second part of a two line brace (lower portion of the left brace and the upper portion of the right brace)	
351₈	233	E9	⋏	Curly wedge; < AMS, curlywedge >	
352₈	234	EA	⋎	Curly vee; < AMS, curlyvee >	
353₈	235	EB	⊴	Is subgroup of; < AMS, trianglelefteq >	
354₈	236	EC	⊵	Contains normal subgroup; < AMS, trianglerighteq >	
355₈	237	ED	⌠	Top portion of integral sign (356₈ | 165₈)	
356₈	238	EE	⌡	Bottom portion of integral sign (356₈ | 165₈)	
357₈	239	EF	⎮	Center portion of integral sign (356₈ | 165₈)	
360₈	240	F0	⍂	Quad slope (APL)	
361₈	241	F1	𝑊	OUT Symbol (APL) (possibly obsolete)	
362₈	242	F2	↶	Maps to, curved arrow to left; < AMS, curvearrowleft >	
363₈	243	F3	↷	Maps to, curved arrow to right; < AMS, curvearrowright >	
364₈	244	F4	↺	Maps into itself (counterclockwise); < AMS, circlearrowleft >	
365₈	245	F5	↻	Maps into itself (clockwise); < AMS, circlearrowright >	
366₈	246	F6	⇌	Reversible reaction, type 3; < AMS, leftrightharpoons > Alternates: type 1 = (357₈ | 121₈), type 2 = (357₈ | 120₈)	
367₈	247	F7	↚	Not left arrow; < AMS, nleftarrow >	
370₈	248	F8	↛	Not right arrow; < AMS, nrightarrow >	
371₈	249	F9	↮	Not symmetrical horizontal arrow; < AMS, nleftrightarrow >	
372₈	250	FA	⇍	Is not implied by; < AMS, nLeftarrow >	
373₈	251	FB	⇏	Does not imply; < AMS, nRightarrow >	
374₈	252	FC	⇎	Is not equivalent to; < AMS, nLeftrightarrow >	
375₈	253	FD	⋍	Reverse approximately equals; underlined reversed tilde; < AMS, backsimeq >	
376₈	254	FE	≁	Not equivalent to, type 2 Alternates: type 1 = (41₈ | 260₈)	

Character Set 357₈ = 239₁₀ = EF₁₆: General and technical symbols 1

Character Set 357₈ begins a series of three consecutive character sets that contain "symbols" not traditionally considered part of linguistic punctuation.

Some of these symbols, for instance the circle, have a large number of different applications or interpretations (see guides such as *Shepherd's Glossary of Graphic Signs and Symbols* [13]). Only the most common applications are mentioned below.

The following are character codes (low-order byte) within Character Set 357₈ (see reference chart in appendix B):

Identifier			Shape	Character description	Character set 357₈: Symbols
Octal	Dec	Hex			
41₈	33	21	n̄ n̄	Nonbreaking space (normally nonprinting)	
42₈	34	22	-	Nonbreaking hyphen	
43₈	35	23	-	Discretionary hyphen	
44₈	36	24	–	En dash	
45₈	37	25	—	Em dash	
46₈	38	26	‒	Figure dash	
47₈	39	27	'	Neutral single quote	
50₈	40	28	„	Lowered left double quote (European usage)	
51₈	41	29	"	German right double quote	
52₈	42	2A	‹	Single "guillemet" left quote—*not* "less than" (0₈ | 74₈)	
53₈	43	2B	›	Single "guillemet" right quote—*not* "greater than" (0₈ | 76₈)	
54₈	44	2C	n̄ n̄	En quad	
55₈	45	2D	n̄ n̄	Em quad	
56₈	46	2E	n̄ n̄	Figure space = numeric space (normally nonprinting)	
57₈	47	2F	n̄ n̄	Thin space = 5-em space (normally nonprinting)	
60₈	48	30	†	Dagger; <AMS, dag> (as ordinary character); <AMS, dagger> (as a binary operator); <ITC, 173>	
61₈	49	31	‡	Double dagger Also: Dingbat (dagger, double); <AMS, ddag> (as ordinary character); <AMS, ddagger> (as a binary operator); <ITC, 174>	
62₈	50	32	⟨	Bra Also: Dingbat (bracket, angled, beginning, light); <AMS, langle>; <ITC, 132>	
63₈	51	33	⟩	Ket Also: Dingbat (bracket, angled, close, light); <AMS, rangle>; <ITC, 130>	
64₈	52	34	☞	Right-pointing index Also: Dingbat (hand, right pointing, outline); <ITC, 302>	
65₈	53	35	☜	Left-pointing index Also: hand, left pointing, outline	
66₈	54	36	⊢	Left perpendicular (perp) Also: Proves; <AMS, vdash>	
67₈	55	37	⊣	Right perpendicular (perp) Also: Reverse turnstile; <AMS, dashv>	
70₈	56	38	⊨	Left 2 perpendicular (perp) Also: Satisfies; <AMS, vDash>	

Identifier			Shape	Character description	Character set 357₈: Symbols
Octal	Dec	Hex			
71₈	57	39	⊣	Right 2 perpendicular (perp)	
72₈	58	3A	〖	Left white lenticular bracket (Chinese)	
73₈	59	3B	〗	Right white lenticular bracket (Chinese)	
74₈	60	3C	↖	Northwest arrow; < AMS, nwarrow >	
75₈	61	3D	↘	Southeast arrow; < AMS, searrow >	
76₈	62	3E	↗	Northeast arrow; < AMS, nearrow >	
77₈	63	3F	↙	Southwest arrow; < AMS, swarrow >	
100₈	64	40	℅	Care of	
101₈	65	41	‰	Per thousand = per mil	
102₈	66	42	≪	Much less than—*not* left guillemet (0₈ | 253₈)	
103₈	67	43	≫	Much greater than—*not* right guillemet (0₈ | 273₈)	
104₈	68	44	≮	Not less than	
105₈	69	45	≯	Not greater than	
106₈	70	46	∣	Divides—*not* vertical bar (0₈ | 174₈); < AMS, mid >	
107₈	71	47	∤	Does not divide, type 1; < AMS, nmid >; Alternate: type 2 = (41₈ | 265₈)	
110₈	72	48	∥	Double slash = parallel sign, type 2 Alternate: type 1 = (41₈ | 102₈)	
111₈	73	49	∦	Not parallel, type 1; < AMS, nparallel > Alternate: type 2 = (41₈ | 266₈)	
112₈	74	4A	∈	Is a member of—*not* Greek "epsilon" (46₈ | 146₈); < AMS, in >	
113₈	75	4B	∉	Is not a member of; < AMS, notin >	
114₈	76	4C	∋	Contains as a member Also: Such that, type 1; < AMS, ni >; < AMS, owns > Alternate: such that, type 2 = (356₈ | 174₈)	
115₈	77	4D	⇐	Double back arrow = is implied by; < AMS, Leftarrow >	
116₈	78	4E	⇔	Double double arrow = iff; < AMS, Leftrightarrow >	
117₈	79	4F	⇒	Double right arrow = implies; < AMS, Rightarrow >	
120₈	80	50	⇌	Reversible reaction, type 2; < AMS, rightleftharpoons > Alternates: type 1 = (357₈ | 121₈); type 3 = (356₈ | 366₈)	
121₈	81	51	⇆	Reversible reaction, type 1; left arrow over right arrow Also: Electric current; < AMS, leftrightarrows > Alternates: type 2 = (357₈ | 120₈); type 3 = (356₈ | 366₈)	
122₈	82	52	↔	Double arrow = Arrow, double Also: If and only if (variant); < AMS, leftrightarrow >; < ITC, 188 >	
123₈	83	53	⤳	Functional relationship; curly arrow; < AMS, rightsquigarrow >	

Identifier Octal Dec Hex			Shape	Character description	Character set 357₈: Symbols
124₈	84	54	⊋	Contains [A contains every element of B, but A does not equal B] Also: does not contain or equal, type 3 (variant); <AMS, varsupsetneq> Alternate: type 2=(357₈ | 132₈)	
125₈	85	55	⊊	Contained in [every element of B belongs to A, but B is not equal to A] Also: Not contained in or equal to, type 3 (variant); <AMS, varsubsetneq> Alternate: type 2=(357₈ | 133₈)	
126₈	86	56	∩	Intersection [The set of all elements that belong to both A and B] Also: Product of intersection of classes (math logic) or sets (algebra); <AMS, cap>	
127₈	87	57	∪	Union [The set of all elements that belong to A or to B or to A and B] = sum or union of classes (math logic) or sets (algebra) Also: Logical sum; <AMS, cup>	
130₈	88	58	⊇	"Contains or equals" [A contains every element of B] Also: Improper superset; <AMS, supseteq>	
131₈	89	59	⊆	"Contained in or equals" [Every element of B belongs to A] Also: Improper subset; <AMS, subseteq>	
132₈	90	5A	⊃	Properly includes in set [A contains every element of B, but A does not equal B] Also: Superset or implies; contains, type 2; <AMS, supset>	
133₈	91	5B	⊂	Proper inclusion in set [every element of B belongs to A, but B is not equal to A] Also: Subset or is implied by; is properly contained in; <AMS, subset>	
134₈	92	5C	⊉	Neither contains nor is equal to [A does not include C as a subset] Also: Does not contain as a subset; does not contain or equal, type 1; <AMS, nsupseteq>; Alternates: type 2=(41₈ | 304₈), type 3=(357₈ | 124₈), type 4=(41₈ | 310₈)	
135₈	93	5D	⊈	Neither contained in nor is equal to Also: Not contained in or equal to, type 1; <AMS, nsubseteq>; Alternates: type 2=(41₈ | 303₈), type 3=(357₈ | 125₈), type 4=(41₈ | 307₈)	
136₈	94	5E	⊅	Does not contain = does not properly include in set	
137₈	95	5F	⊄	Is not contained in = nonproper inclusion in set	
140₈	96	60	⊠	Checked ballot box	
141₈	97	61	∅	Null set—*not* Norwegian/Danish o with slash (0₈ | 371₈) Also: Diameter (ANSI Y14.5); <AMS, varnothing>	

Identifier			Shape	Character description	Character set 357₈: Symbols
Octal	Dec	Hex			
142_8	98	62	⊕	Abstract + = Earth = Sign of composition	
143_8	99	63	⊖	Abstract -	
144_8	100	64	⊗	Abstract x	
145_8	101	65	⊘	Abstract /	
146_8	102	66	●	Centered bullet—*not* black circle (41_8 | 174_8); <AMS, bullet>	
147_8	103	67	°	Centered ring—*not* white circle (41_8 | 173_8); <AMS, circ>	
150_8	104	68	ℏ	Planck's constant divided by 2π; <AMS, hslash>	
151_8	105	69	ℓ	Liter Also: Cursive small letter l; <AMS, ell>	
152_8	106	6A	¬	Logical Not = End of line symbol; <AMS, neg>; <AMS, lnot>	
153_8	107	6B	¦	Broken vertical bar	
154_8	108	6C	∠	Angle—*not* "less than" (0_8 | 74_8) Also: Angularity (ANSI Y14.5); <AMS, angle>	
155_8	109	6D	∢	Spherical angle Also: measured angle; <AMS, measuredangle>	
156_8	110	6E	∷	"Identical"; <AMS, colon>	
157_8	111	6F	∵	Because; <AMS, because>	
160_8	112	70	⊥	Perpendicular to Also: Perpendicularity (ANSI Y14.5); <AMS, perp> (as a relation, for example, A⊥B)	
161_8	113	71	∝	Is proportional to; <AMS, varpropto>	
162_8	114	72	≡	Identically equal = equivalent Also: Congruent to; <AMS, equiv>	
163_8	115	73	≐	Equal by definition; <AMS, doteq>	
164_8	116	74	≟	Questioned equality	
165_8	117	75	∫	Integral; <AMS, int>	
166_8	118	76	∮	Contour integral; <AMS, oint>	
167_8	119	77	≃	Asymptotically equal to Also: Approximately equal, type 1; <AMS, simeq> Alternates: type 2=(357_8 | 171_8), type 3=(42_8 | 142_8), type 5=(41_8 | 251_8)	
170_8	120	78	≅	Isomorphic = congruent; <AMS, cong>	
171_8	121	79	≈	Asymptotic to Also: Approximately equal, type 2; <AMS, approx> Alternates: type 1=(357_8 | 167_8), type 3=(42_8 | 142_8), type 5=(41_8 | 251_8)	

Identifier Octal Dec Hex	Shape	Character description	Character set 357₈: Symbols
172₈ 122 7A	Σ	Summation—*not* uppercase Greek "sigma" (46₈ | 126₈) Also: Sum = summation operator; <AMS, sum>	
173₈ 123 7B	Π	Product—*not* uppercase Greek "pi" (46₈ | 123₈) Also: Product operator; <AMS, prod>	
174₈ 124 7C	√	Radical = root Also: Square root; <AMS, surd>	
175₈ 125 7D	∓	"Minus or plus"; <AMS, mp>	
176₈ 126 7E	▓	Shade (medium)	
241₈ 161 A1	₡	Cruzeiro (Brazilian)	
242₈ 162 A2	ƒ	Florin = Guilder (Dutch)	
243₈ 163 A3	₣	Francs	
244₈ 164 A4	₧	Pesetas (Spanish)	
245₈ 165 A5	₠	European currency symbol	
246₈ 166 A6	\$	Milreis = Escudo (Portuguese)	
247₈ 167 A7	ℵ	Generic Infinity Sign—*not* Hebrew "aleph" (341₈ | 100₈)	
250₈ 168 A8	№	Number	
251₈ 169 A9	℞	Take Also: Recipe (prescription)	
252₈ 170 AA	ᵀᴱᴸ	TEL (telephone)	
253₈ 171 AB	ȝ	Yogh (Old English) = dram	
254₈ 172 AC	ℂ	Complex number	
255₈ 173 AD	ℕ	Natural number	
256₈ 174 AE	ℝ	Real number = reluctance	
257₈ 175 AF	ℤ	Integer	
260₈ 176 B0	⌈	Left ceiling; <AMS, lceil>	
261₈ 177 B1	⌉	Right ceiling; <AMS, rceil>	
262₈ 178 B2	⌊	Left floor; <AMS, lfloor>	
263₈ 179 B3	⌋	Right floor; <AMS, rfloor>	
264₈ 180 B4	∃	There exists; <AMS, exists>	
265₈ 181 B5	∀	For all; <AMS, forall>	
266₈ 182 B6	∧	And Also: Big disjunction; <AMS, bigwedge>	
267₈ 183 B7	∨	Or Also: Big conjunction; <AMS, bigvee>	
270₈ 184 B8	▶	QED; <ITC, 184>	
271₈ 185 B9	∇	Nabla = del = differential operator; <AMS, nabla>	

Identifier			Shape	Character description	Character set 357₈: Symbols
Octal	**Dec**	**Hex**			
272₈	186	BA	∂	Partial derivative; <AMS, partial>	
273₈	187	BB	⌡	OCR hook	
274₈	188	BC	⨈	OCR fork	
275₈	189	BD	⊓	OCR chair	
276₈	190	BE	⌣	Alternating current	
277₈	191	BF	=	Double low bar (spacing character)	
300₈	192	C0	⌒	Arc Also: Musical slur; concatenation	
301₈	193	C1	I	Fixed-pitch Roman numeral I as independent from letter I	
302₈	194	C2	II	Fixed-pitch Roman numeral II	
303₈	195	C3	III	Fixed-pitch Roman numeral III	
304₈	196	C4	IV	Fixed-pitch Roman numeral IV	
305₈	197	C5	V	Fixed-pitch Roman numeral V as independent from letter V	
306₈	198	C6	VI	Fixed-pitch Roman numeral VI	
307₈	199	C7	VII	Fixed-pitch Roman numeral VII	
310₈	200	C8	VIII	Fixed-pitch Roman numeral VIII	
311₈	201	C9	IX	Fixed-pitch Roman numeral IX	
312₈	202	CA	X	Fixed-pitch Roman numeral X as independent from letter X	
313₈	203	CB	♠	Solid or black spades = spade suit symbol Also: Dingbat (spades (playing card) solid); <AMS, spadesuit>; <ITC, 392>	
314₈	204	CC	♡	Open hearts = heart suit symbol Also: Dingbat (hearts (playing card) outline); <AMS, heartsuit>; <ITC, 397>	
315₈	205	CD	◇	Open or white diamonds = diamond suit symbol Also: Dingbat (diamonds (playing card) outline); <AMS, diamondsuit>; <ITC, 398>	
316₈	206	CE	♣	Solid or black clubs = club suit symbol Also: Dingbat (clubs [playing card) solid]; <AMS, clubsuit>; <ITC, 395>	
317₈	207	CF	✓	Check mark = yes <AMS, checkmark>; <ITC, 122>	
320₈	208	D0	✗	X mark = no Also: Dingbat (crossout, solid, medium, brush stroke); <ITC, 199L>	
321₈	209	D1	①	Circled number 1	
322₈	210	D2	②	Circled number 2	
323₈	211	D3	③	Circled number 3	

Identifier Octal Dec Hex	Shape	Character description	Character set 357₈: Symbols
324₈ 212 D4	④	Circled number 4	
325₈ 213 D5	⑤	Circled number 5	
326₈ 214 D6	⑥	Circled number 6	
327₈ 215 D7	⑦	Circled number 7	
330₈ 216 D8	⑧	Circled number 8	
331₈ 217 D9	⑨	Circled number 9	
332₈ 218 DA	⑩	Circled number 10	
333₈ 219 DB	⊖→	Circled east (right) arrow	
334₈ 220 DC		Circled east-then-south (right-then-down) arrow	
335₈ 221 DD		Circled south-then-west (down-then-left) arrow	
336₈ 222 DE	☮	Peace symbol	
337₈ 223 DF	☺	Smile face = "have a nice day!"	
340₈ 224 E0	☠	Skull and crossbones	
341₈ 225 E1	❘	Thick vertical line Also: Bar, vertical, bold	
342₈ 226 E2	▬	Thick horizontal line Also: Bar, horizontal, bold	
343₈ 227 E3	✚	Thick intersecting lines	
344₈ 228 E4	│	Thin vertical line = Center box bar vertical Also: Bar, vertical, light	
345₈ 229 E5	─	Thin horizontal line = Center box bar horizontal Also: Bar, horizontal, light	
346₈ 230 E6	┼	Thin intersecting lines = Box intersection	
347₈ 231 E7	☉	Sun = abstract multiplication	
350₈ 232 E8	☽	First quarter moon	
351₈ 233 E9	☾	Third quarter moon	
352₈ 234 EA	☿	Mercury	
353₈ 235 EB	♃	Jupiter	
354₈ 236 EC	♄	Saturn	
355₈ 237 ED	♅	Uranus	
356₈ 238 EE	♆	Neptune	
357₈ 239 EF	♇	Pluto	
360₈ 240 F0	♒	Aquarius	
361₈ 241 F1	♓	Pisces	
362₈ 242 F2	♈	Aries	

Identifier Octal Dec Hex	Shape	Character description	Character set 357₈: Symbols
363₈ 243 F3	♉	Taurus	
364₈ 244 F4	♊	Gemini	
365₈ 245 F5	♋	Cancer	
366₈ 246 F6	♌	Leo	
367₈ 247 F7	♍	Virgo	
370₈ 248 F8	♎	Libra	
371₈ 249 F9	♏	Scorpio = minim	
372₈ 250 FA	♐	Sagittarius	
373₈ 251 FB	♑	Capricorn	
374₈ 252 FC	☎	Closed telephone symbol Also: Dingbat (telephone, solid); <ITC, 307>	
375₈ 253 FD	⅓	Fraction one third, en set as independent character	
376₈ 254 FE	⅔	Fraction two thirds, en set as independent character	

4.   Rendering character codes

Recall from the "Scope" section of chapter 1 that the standard assigns codes to rendering characters (characters other than graphic or control characters) which can include any of the following:

— A non-conventional representation of a control code

— A sequence of graphic characters, such as ligature or accented character

— A contextually dependent alternate representation for a graphic character, that is, initial, medial, or final form for an alphabet, such as Arabic

— A "variant" representation for a graphic character, for example, the rendering character $\overline{\text{A}}$ instead of the graphic character "A."

Recall further that rendering entities which may be associated with text characters (logos, signatures, etc.) are not addressed in this document, but that a portion of the rendering code space is reserved for private use for this purpose. Our intent is to enable incorporation of logos, signatures, and specialized graphics within strings destined for printers.

Given that there are several classes of rendering characters, rendering entities should be defined as precisely as possible. Most important are those rendering character codes which can be substituted algorithmically for graphic character codes. In this standard, rendering characters and their numerical codes are defined to be:

> A single character or collection of characters which can be substituted algorithmically for a graphic character or characters to alter the displayed or printed appearance of the normal graphic character or characters in conformance with predetermined typographic, linguistic, or formatting rules.

The definition of rendering character includes "variant" representations for a graphic character; however, some variant representations for a graphic character are excluded by the formal definition of a rendering character. An example of a variant that fails to qualify as a rendering character is the non-general look known as Swash. There is no consistency among typeface suppliers as to what graphic characters may have the Swash appearance. As a consequence, automatic substitution cannot be accomplished successfully.

In the case of the non-general look known as Old Style, selected entities qualify as rendering character candidates. Old Style includes certain numerals which, when used within text, improve readability; however, they are not recommended when figures appear in tables. Since there is universal agreement on which numerals may have the Old Style look, these numerals qualify as

rendering characters—the key phrase in the definition of a rendering character is *substituted algorithmically*.

The goal of formal definition is to allow for automatic substitution where necessary, and specification by formatters when desired.

Rendering entity code space

Rendering characters

Rendering character codes can always be distinguished from graphic character codes, as the high order byte is always larger than the higher order byte for graphic character codes. Rendering Code Sets 360_8 through 375_8 are reserved for rendering characters as defined in the previous section. Using this definition, the codespace is allocated primarily for ligatures and accented characters. A reasonable estimate of future assignments is as follows:

Arabic	450
Devanagari	300
Korean	400
Roman	350
Other languages	approximately 500.

For other classes of renderings, requirements are less than 200 for each category.

Private use rendering entities

The Rendering Code Set 376_8 is unique in that entities assigned to this set do not satisfy the definition of a rendering code. The assignment within this character set of logos, signatures, and certain variant representations (those having non-general looks), is for local use. As such, the communicant is responsible for administrating and using this code space.

There is no reason to assume that entities in this character set on a given printer or display will match, in any way, with entities on another printer or display for identical codes. The intent is to allow for code assignments that are unique to a device. This permits clients to incorporate specialized or non-standard entities conveniently within their systems or printers.

Entities assigned within the private use codespace cannot be used in some forms of communication interchange. Refer to the "How to use this standard" section in chapter 1 for communication of non-rendering character codes.

The rendering character code sets

To discuss one rendering character as distinct from another, we can refer to it by its traditional name(s), by its role(s) in a traditional alphabet or symbol system, or by the context(s) in which it is traditionally used. This collection of traditional usage

information which identifies the rendering character can be referred to in brief as its *semantic*.

To indicate a rendering, it also helps to show a picture of it. In some cases, however, this can be misleading since different renderings can look very similar or even identical. In the listing which follows, sometimes a picture is shown; but it is the *semantic* information which takes precedence in defining the identity of the rendering character.

In some cases, we go so far as to specify what the rendering character is *not*, in order to distinguish it from other rendering characters which look similar or identical. In other cases, we use an "=" sign to indicate either synonymous names or alternative applications for the same Xerox character.

We use a notation such as (360_8 | 45_8) to depict the two-byte structure of a rendering character code. For example, (360_8 | 45_8) refers to the rendering character in Character Set 360_8, which has the 8-bit code 45_8 within that character set.

Character Set $360_8 = 240_{10} = F0_{16}$: Ligatures and field format symbols

The following are rendering codes (low-order byte) within Character Set 360_8 (see reference chart in appendix B):

Identifier Octal	Dec	Hex	Shape	Character description	Character set 360_8: Ligatures
41_8	33	21	ff	Ligature ff	
42_8	34	22	ffi	Ligature ffi	
43_8	35	23	ffl	Ligature ffl	
44_8	36	24	fi	Ligature fi	
45_8	37	25	fl	Ligature fl	
46_8	38	26	ſt	Ligature st (Quaint character)	
47_8	39	27	fj	Ligature f and j (Icelandic, Scandinavian)	
50_8	40	28	ct	Ligature c and t	
51_8	41	29	st	Ligature s and t	
160_8	112	70	¼	Fraction one quarter = Alternate rendition of a sequence:	
161_8	113	71	½	Fraction one half = Alternate rendition of a sequence:	
162_8	114	72	¾	Fraction three quarters = Alternate rendition of a sequence:	

160_8 · 112 · 70 · ¼ · Fraction one quarter = Alternate rendition of a sequence:

      1   /   4

  (0_8 | 61_8)   (0_8 | 57_8)   (0_8 | 64_8)

161_8 · 113 · 71 · ½ · Fraction one half = Alternate rendition of a sequence:

      1   /   2

  (0_8 | 61_8)   (0_8 | 57_8)   (0_8 | 62_8)

162_8 · 114 · 72 · ¾ · Fraction three quarters = Alternate rendition of a sequence:

      3   /   4

  (0_8 | 63_8)   (0_8 | 57_8)   (0_8 | 64_8)

Identifier			Shape	Character description	Character set 360$_8$: Ligatures
Octal	Dec	Hex			
163$_8$	115	73	⅓	Fraction one third = Alternate rendition of a sequence: 1 / 3 (0$_8$ | 61$_8$)　(0$_8$ | 57$_8$)　(0$_8$ | 63$_8$)	
164$_8$	116	74	⅔	Fraction two thirds = Alternate rendition of a sequence: 2 / 3 (0$_8$ | 62$_8$)　(0$_8$ | 57$_8$)　(0$_8$ | 63$_8$)	
165$_8$	117	75	⅛	Fraction one eighth = Alternate rendition of a sequence: 1 / 8 (0$_8$ | 61$_8$)　(0$_8$ | 57$_8$)　(0$_8$ | 70$_8$)	
166$_8$	118	76	⅜	Fraction three eighths = Alternate rendition of a sequence: 3 / 8 (0$_8$ | 63$_8$)　(0$_8$ | 57$_8$)　(0$_8$ | 70$_8$)	
167$_8$	119	77	⅝	Fraction five eighths = Alternate rendition of a sequence: 5 / 8 (0$_8$ | 65$_8$)　(0$_8$ | 57$_8$)　(0$_8$ | 70$_8$)	
170$_8$	120	78	⅞	Fraction seven eighths = Alternate rendition of a sequence: 7 / 8 (0$_8$ | 67$_8$)　(0$_8$ | 57$_8$)　(0$_8$ | 70$_8$)	
171$_8$	121	79	⅟	Numeric fraction one with fraction bar	
250$_8$	168	A8	^V_T	Graphic entity representative of VERTICAL TABULATION	
251$_8$	169	A9	^H_T	Graphic entity representative of HORIZONTAL TABULATION	
252$_8$	170	AA	^L_F	Graphic entity representative of LINE FEED	
253$_8$	171	AB	^F_F	Graphic entity representative of FORM FEED	
254$_8$	172	AC	^C_R	Graphic entity representative of CARRIAGE RETURN	
255$_8$	173	AD	^N_L	Graphic entity representative of NEW LINE	
260$_8$	176	B0	ū	Graphic entity representative of IBM NULL CHARACTER (NUL)	
261$_8$	177	B1	ᶾ	Graphic entity representative of thick space or 3-em space (356$_8$ | 41$_8$)	
262$_8$	178	B2		Graphic entity representative of 4-em space (356$_8$ | 42$_8$)	
263$_8$	179	B3		Graphic entity representative of thin space or 5-em space (357$_8$ | 57$_8$)	
264$_8$	180	B4	n	Graphic entity representative of en quad (357$_8$ | 54$_8$)	
265$_8$	181	B5	m	Graphic entity representative of em quad (357$_8$ | 55$_8$)	
266$_8$	182	B6		Graphic entity representative of punctuation space (356$_8$ | 44$_8$)	
267$_8$	183	B7	9	Graphic entity representative of figure or numeric space (357$_8$ | 56$_8$)	
270$_8$	184	B8	↓	Graphic entity representative of VERTICAL TABULATION	

Identifier			Shape	Character description	Character set 360₈: Ligatures
Octal	Dec	Hex			
271₈	185	B9	→	Graphic entity representative of HORIZONTAL TABULATION	
272₈	186	BA	⅂	Graphic entity representative of LINE FEED (LF), Type 1	
273₈	187	BB	↓	Graphic entity representative of FORM FEED	
274₈	188	BC	←	Graphic entity representative of CARRIAGE RETURN, Type 1	
275₈	189	BD	↵	Graphic entity representative of NEW LINE (NL)	
276₈	190	BE	↲	Graphic entity representative of CARRIAGE RETURN, Type 2	
277₈	191	BF	↶	Graphic entity representative of LINE FEED, Type 2	
300₈	192	C0	‖	Graphic entity representative of hair space (356₈ | 43₈)	
301₈	193	C1	−	Graphic entity representative of TIMING CHARACTER	
302₈	194	C2	⊞	Graphic entity representative of PAGE FORMAT CHARACTER (PFC)	
303₈	195	C3	▶	Graphic entity representative of START OF DOCUMENT (SOD)	
304₈	196	C4	•	Graphic entity representative of STOP CHARACTER	
305₈	197	C5	―	Graphic entity representative of GROUP ERASE (OCR-A & B)	
306₈	198	C6	■	Graphic entity representative of CHARACTER ERASE (OCR-A & B)	
307₈	199	C7	ℕ	Replacement symbol (for undefined code points)	
312₈	202	CA	▮	Graphic entity representative of "SUBSTITUTE" character	
313₈	203	CB	⸭	Graphic entity representative of ERROR	
314₈	204	CC	⚹	Graphic entity representative of IBM DUPLICATE (DUP)	
316₈	206	CE	⁏	Graphic entity representative of IBM FIELD MARK (FM)	
331₈	217	D9	⇒	Graphic entity representative of PARAGRAPH-TAB	
335₈	221	DD	⇶	Graphic entity representative of NEW PARAGRAPH (NP)	
341₈	225	E1	▨	Graphic for Field Format: Match box null	
342₈	226	E2	⧄	Graphic for Field Format: Match box not	
343₈	227	E3	⊡	Graphic for Field Format: Match box ellipsis	
344₈	228	E4	⊡→	Graphic for Field Format: Match box range	
345₈	229	E5	⊠x	Graphic for Field Format: Match box upper X	
346₈	230	E6	Ⓐ	Graphic for Field Format: Match box upper A	
347₈	231	E7	⑨	Graphic for Field Format: Match box digit 9	
350₈	232	E8	ℤ	Graphic for Field Format: Match box upper Z	
351₈	233	E9	⊡*	Graphic for Field Format: Match box asterisk	
354₈	236	EC	⊞	Graphic for Field Format: Match box plus	

Identifier Octal Dec Hex	Shape	Character description	Character set 360₈: Ligatures
355₈ 237 ED	⊟	Graphic for Field Format: Match box minus	
356₈ 238 EE	[.]	Graphic for Field Format: Match box period	
357₈ 239 EF	[,]	Graphic for Field Format: Match box comma	
366₈ 246 F6	γ̲	Graphic for Field Format: Any Greek Letter	
367₈ 247 F7	я̲	Graphic for Field Format: Any Russian Letter	
370₈ 248 F8	ひ̲	Graphic for Field Format: Any Hiragana character	
371₈ 249 F9	カ̲	Graphic for Field Format: Any Katakana character	
372₈ 250 FA	漢̲	Graphic for Field Format: Any Kanji character	
373₈ 251 FB	和̲	Graphic for Field Format: Any Japanese character	
374₈ 252 FC	•	Graphic entity representative of Space, Type 1	
375₈ 253 FD	ƀ	Graphic entity representative of Space, Type 2	
376₈ 254 FE	⎵	Graphic entity representative of Space, Type 3	

Character Set 361₈: Accented Latin characters 1

The following are character codes (low-order byte) within Character Set 361₈ (see reference chart in appendix B):

Identifier Octal Dec Hex	Shape	Character description	Character set 361₈: Latin
41₈ 33 21	À	Grave A	
42₈ 34 22	Á	Acute A	
43₈ 35 23	Â	Circumflex A	
44₈ 36 24	Ã	Tilde A	
45₈ 37 25	Ā	Macron A	
46₈ 38 26	Ă	Breve A	
47₈ 39 27	Ä	Diaeresis A = umlaut A	
50₈ 40 28	Å	Ring A = angstrom A; <AMS, AA>	
51₈ 41 29	Ą	Ogonek A	
52₈ 42 2	Ć	Acute C	
53₈ 43 2B	Ĉ	Circumflex C	
54₈ 44 2C	Ċ	High dot C	
55₈ 45 2D	Ç	Cedilla C	
56₈ 46 2E	Č	Hachek C = caron C	
57₈ 47 2F	Ď	Hachek D = caron D	
60₈ 48 30	È	Grave E	

Identifier			Shape	Character description	Character set 361_8: Latin
Octal	*Dec*	*Hex*			
61_8	49	31	É	Acute E	
62_8	50	32	Ê	Circumflex E	
63_8	51	33	Ē	Macron E	
64_8	52	34	Ė	High dot E	
65_8	53	35	Ë	Diaeresis E = umlaut E	
66_8	54	36	Ę	Ogonek E	
67_8	55	37	Ě	Hachek E = caron E	
70_8	56	38	Ǵ	Acute G	
71_8	57	39	Ĝ	Circumflex G	
72_8	58	3A	Ğ	Breve G	
73_8	59	3B	Ġ	High dot G	
74_8	60	3C	Ģ	Cedilla G	
75_8	61	3D	Ĥ	Circumflex H	
76_8	62	3E	Ì	Grave I	
77_8	63	3F	Í	Acute I	
100_8	64	40	Î	Circumflex I	
101_8	65	41	Ĩ	Tilde I	
102_8	66	42	Ī	Macron I	
103_8	67	43	İ	High dot I	
104_8	68	44	Ï	Diaeresis I = umlaut I	
105_8	69	45	Į	Ogonek I	
106_8	70	46	Ĵ	Circumflex J	
107_8	71	47	Ķ	Cedilla K	
110_8	72	48	Ĺ	Acute L	
111_8	73	49	Ļ	Cedilla L	
112_8	74	4A	Ľ	Hachek L = caron L	
113_8	75	4B	Ń	Acute N	
114_8	76	4C	Ñ	Tilde N	
115_8	77	4D	Ņ	Cedilla N	
116_8	78	4E	Ň	Hachek N = caron N	
117_8	79	4F	Ò	Grave O	
120_8	80	50	Ó	Acute O	
121_8	81	51	Ô	Circumflex O	
122_8	82	52	Õ	Tilde O	

Identifier			Shape	Character description	Character set 361₈: Latin
Octal	Dec	Hex			
123₈	83	53	Ō	Macron O	
124₈	84	54	Ö	Diaeresis O = umlaut O	
125₈	85	55	Ő	Double acute O	
126₈	86	56	Ŕ	Acute R	
127₈	87	57	Ŗ	Cedilla R	
130₈	88	58	Ř	Hachek R = caron R	
131₈	89	59	Ś	Acute S	
132₈	90	5A	Ŝ	Circumflex S	
133₈	91	5B	Ş	Cedilla S	
134₈	92	5C	Š	Hachek S = caron S	
135₈	93	5D	Ţ	Cedilla T	
136₈	94	5E	Ť	Hachek T = caron T	
137₈	95	5F	Ù	Grave U	
140₈	96	60	Ú	Acute U	
141₈	97	61	Û	Circumflex U	
142₈	98	62	Ũ	Tilde U	
143₈	99	63	Ū	Macron U	
144₈	100	64	Ŭ	Breve U	
145₈	101	65	Ü	Diaeresis U = umlaut U	
146₈	102	66	Ů	Ring U	
147₈	103	67	Ű	Double acute U	
150₈	104	68	Ų	Ogonek U	
151₈	105	69	Ŵ	Circumflex W	
152₈	106	6A	Ỳ	Grave Y	
153₈	107	6B	Ý	Acute Y	
154₈	108	6C	Ŷ	Circumflex Y	
155₈	109	6D	Ÿ	Diaeresis Y = umlaut Y	
156₈	110	6E	Ź	Acute Z	
157₈	111	6F	Ż	High dot Z	
160₈	112	70	Ž	Hachek Z = caron Z	
161₈	113	71	Ľ	Alternate rendition of Character8 = 112₈ in this charset, Hachek L	
162₈	114	72	T'	Alternate rendition of Character8 = 136₈ in this charset, Hachek T	
163₈	115	73	D'	Alternate rendition of Character8 = 57₈ in this charset, Hachek D	
164₈	116	74	Ọ	Dot below O	

| Identifier | | | Shape | Character description | Character set 361₈: Latin |
Octal	Dec	Hex			
165₈	117	75	Ȳ	Macron Y	
166₈	118	76	Ǣ	Macron AE	
167₈	119	77	Œ̄	Macron OE	
170₈	120	78	Ă	Breve macron A	
171₈	121	79	Ǎ	Hachek A	
172₈	122	7A	Ĕ	Breve E	
173₈	123	7B	Ẹ̄	Macron E underdot	
174₈	124	7C	Ě	Breve macron E	
175₈	125	7D	Ǧ	Hachek G	
176₈	126	7E	Ĭ	Breve I	
241₈	161	A1	à	Grave a	
242₈	162	A2	á	Acute a	
243₈	163	A3	â	Circumflex a	
244₈	164	A4	ã	Tilde a	
245₈	165	A5	ā	Macron a	
246₈	166	A6	ă	Breve a	
247₈	167	A7	ä	Diaeresis a = umlaut a	
250₈	168	A8	å	Ring a; <AMS, aa>	
251₈	169	A9	ą	Ogonek a	
252₈	170	AA	ć	Acute c	
253₈	171	AB	ĉ	Circumflex c	
254₈	172	AC	ċ	High dot c	
255₈	173	AD	ç	Cedilla c	
256₈	174	AE	č	Hachek c = caron c	
257₈	175	AF	ď	Hachek d = caron d	
260₈	176	B0	è	Grave e	
261₈	177	B1	é	Acute e	
262₈	178	B2	ê	Circumflex e	
263₈	179	B3	ē	Macron e	
264₈	180	B4	ė	High dot e	
265₈	181	B5	ë	Diaeresis e = umlaut e	
266₈	182	B6	ę	Ogonek e	
267₈	183	B7	ě	Hachek e = caron e	
270₈	184	B8	ǵ	Acute g	

Identifier			Shape	Character description	Character set 361₈: Latin
Octal	Dec	Hex			
271₈	185	B9	ĝ	Circumflex g	
272₈	186	BA	ğ	Breve g	
273₈	187	BB	ġ	High dot g	
274₈	188	BC	ģ	Cedilla g	
275₈	189	BD	ĥ	Circumflex h	
276₈	190	BE	ì	Grave i	
277₈	191	BF	í	Acute i	
300₈	192	C0	î	Circumflex i	
301₈	193	C1	ĩ	Tilde i	
302₈	194	C2	ī	Macron i	
304₈	196	C4	ï	Diaeresis i = umlaut i	
305₈	197	C5	į	Ogonek i	
306₈	198	C6	ĵ	Circumflex j	
307₈	199	C7	ķ	Cedilla k	
310₈	200	C8	ĺ	Acute l	
311₈	201	C9	ļ	Cedilla l	
312₈	202	CA	ľ	Hachek l = caron l	
313₈	203	CB	ń	Acute n	
314₈	204	CC	ñ	Tilde n	
315₈	205	CD	ņ	Cedilla n	
316₈	206	CE	ň	Hachek n = caron n	
317₈	207	CF	ò	Grave o	
320₈	208	D0	ó	Acute o	
321₈	209	D1	ô	Circumflex o	
322₈	210	D2	õ	Tilde o	
323₈	211	D3	ō	Macron o	
324₈	212	D4	ö	Diaeresis o = umlaut o	
325₈	213	D5	ő	Double acute o	
326₈	214	D6	ŕ	Acute r	
327₈	215	D7	ŗ	Cedilla r	
330₈	216	D8	ř	Hachek r = caron r	
331₈	217	D9	ś	Acute s	
332₈	218	DA	ŝ	Circumflex s	
333₈	219	DB	ş	Cedilla s	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 361_8 Latin
334_8	220	DC	š	Hachek s = caron s	
335_8	221	DD	ţ	Cedilla t	
336_8	222	DE	ť	Hachek t = caron t	
337_8	223	DF	ù	Grave u	
340_8	224	E0	ú	Acute u	
341_8	225	E1	û	Circumflex u	
342_8	226	E2	ũ	Tilde u	
343_8	227	E3	ū	Macron u	
344_8	228	E4	ŭ	Breve u	
345_8	229	E5	ü	Diaeresis u = umlaut u	
346_8	230	E6	ů	Ring u	
347_8	231	E7	ű	Double acute u	
350_8	232	E8	ų	Ogonek u	
351_8	233	E9	ŵ	Circumflex w	
352_8	234	EA	ỳ	Grave y	
353_8	235	EB	ý	Acute y	
354_8	236	EC	ŷ	Circumflex y	
355_8	237	ED	ÿ	Diaeresis y = umlaut y	
356_8	238	EE	ź	Acute z	
357_8	239	EF	ż	High dot z	
360_8	240	F0	ž	Hachek z = caron z	
361_8	241	F1	ľ	Alternate rendition of Character8 = 312_8 in this charset, Hachek l	
362_8	242	F2	ť	Alternate rendition of Character8 = 336_8 in this charset, Hachek t	
363_8	243	F3	ď	Alternate rendition of Character8 = 257_8 in this charset, Hachek d	
364_8	244	F4	ọ	Dot below o	
365_8	245	F5	ȳ	Macron y	
366_8	246	F6	ǣ	Macron ae	
367_8	247	F7	œ̄	Macron oe	
370_8	248	F8	ā̆	Breve macron a	
371_8	249	F9	ǎ	Hachek a	
372_8	250	FA	ĕ	Breve e	
373_8	251	FB	ẹ̄	Macron e underdot	
374_8	252	FC	ē̆	Breve macron e	
375_8	253	FD	ǧ	Hachek g	

Identifier Octal Dec Hex	Shape	Character description	Character set 361₈: Latin
376₈ 254 FE	ĭ	Breve	

Character Set 362₈ = 242₁₀ = F2₁₆: Accented Latin characters 2

The following are character codes (low-order byte) within Character Set 362₈ (see reference chart in appendix B). This is the first of two sets:

Identifier Octal Dec Hex	Shape	Character description	Character set 362₈: Latin
41₈ 33 21	Ĭ̄	Breve macron I	
42₈ 34 22	Ǐ	Hachek I	
43₈ 35 23	N̄	Macron N	
44₈ 36 24	M̄	Macron M	
45₈ 37 25	Ǒ	Hachek O	
46₈ 38 26	Ŏ	Breve O	
47₈ 39 27	Ŏ̄	Breve macron O	
50₈ 40 28	Ọ̄	Macron O underdot	
51₈ 41 29	Ǫ	Ogonek O	
52₈ 42 2A	Ǔ	Hachek U	
53₈ 43 2B	Ŭ̄	Breve macron U	
54₈ 44 2C	Y̆	Breve Y	
55₈ 45 2D	Y̆̄	Breve macron Y	
56₈ 46 2E	Y̌	Hachek Y	
57₈ 47 2F	D̲	Underbar D	
60₈ 48 30	T̲	Underbar T	
61₈ 49 31	Ḍ	Underdot D	
62₈ 50 32	Ḥ	Underdot H	
63₈ 51 33	Ṣ	Underdot S	
64₈ 52 34	Ṭ	Underdot T	
65₈ 53 35	Ḏ̣	D underbar underdot	
241₈ 161 A1	ĭ̄	Breve macron i	
242₈ 162 A2	ǐ	Hachek i	
243₈ 163 A3	n̄	Macron n	
244₈ 164 A4	m̄	Macron m	
245₈ 165 A5	ǒ	Hachek o	
246₈ 166 A6	ŏ	Breve o	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 362₈: Latin
247₈	167	A7	ŏ̄	Breve macron o	
250₈	168	A8	ō̤	Macron o underdot	
251₈	169	A9	ǫ	Ogonek o	
252₈	170	AA	ǔ	Hachek u	
253₈	171	AB	ŭ̄	Breve macron u	
254₈	172	AC	y̆	Breve y	
255₈	173	AD	y̆̄	Breve macron y	
256₈	174	AE	y̌	Hachek y	
257₈	175	AF	d̲	Underbar d	
260₈	176	B0	t̲	Underbar t	
261₈	177	B1	ḍ	Underdot d	
262₈	178	B2	ḥ	Underdot h	
263₈	179	B3	ṣ	Underdot s	
264₈	180	B4	ṭ	Underdot t	
265₈	181	B5	ḏ̣	d underbar underdot	

Character Set 363₈ = 243₁₀ = F3₁₆: Accented Greek characters 1

The following are character codes (low-order byte) within Character Set 363₈ (see reference chart in appendix B). This is the first of two sets:

Identifier Octal	Dec	Hex	Shape	Character description	Character set 363₈: Greek
41₈	33	21	ἁ	Lowercase asper Alpha	
42₈	34	22	Ἁ	Capital asper Alpha	
43₈	35	23	ἀ	Lowercase lenis Alpha	
44₈	36	24	Ἀ	Capital lenis Alpha	
45₈	37	25	ά	Lowercase acute Alpha	
46₈	38	26	Ά	Capital acute Alpha	
47₈	39	27	ὰ	Lowercase grave Alpha	
50₈	40	28	Ὰ	Capital grave Alpha	
51₈	41	29	ᾶ	Lowercase tilde Alpha	
52₈	42	2A	Α͂	Capital tilde Alpha	
53₈	43	2B	ἅ	Lowercase asper acute Alpha	
54₈	44	2C	Ἅ	Capital asper acute Alpha	
55₈	45	2D	ἃ	Lowercase asper grave Alpha	

Identifier			Shape	Character description	Character set 363₈: Greek
Octal	Dec	Hex			
56₈	46	2E	Ἃ	Capital asper grave Alpha	
57₈	47	2F	ἇ	Lowercase tilde asper Alpha	
60₈	48	30	Ἇ	Capital tilde asper Alpha	
61₈	49	31	ἄ	Lowercase lenis acute Alpha	
62₈	50	32	Ἄ	Capital lenis acute Alpha	
63₈	51	33	ἂ	Lowercase lenis grave Alpha	
64₈	52	34	Ἂ	Capital lenis grave Alpha	
65₈	53	35	ἆ	Lowercase tilde lenis Alpha	
66₈	54	36	Ἆ	Capital tilde lenis Alpha	
67₈	55	37	ᾳ	Lowercase Alpha iota	
70₈	56	38	ᾼ	Capital Alpha iota	
71₈	57	39	ᾁ	Lowercase asper Alpha iota	
72₈	58	3A	ᾉ	Capital asper Alpha iota	
73₈	59	3B	ᾀ	Lowercase lenis Alpha iota	
74₈	60	3C	ᾈ	Capital lenis Alpha iota	
75₈	61	3D	ᾴ	Lowercase acute Alpha iota	
76₈	62	3E	ΆΙ	Capital acute Alpha iota	
77₈	63	3F	ᾲ	Lowercase grave Alpha iota	
100₈	64	40	ᾺΙ	Capital grave Alpha iota	
101₈	65	41	ᾷ	Lowercase tilde Alpha iota	
102₈	66	42	Α͂Ι	Capital tilde Alpha iota	
103₈	67	43	ᾅ	Lowercase asper acute Alpha iota	
104₈	68	44	ᾍ	Capital asper acute Alpha iota	
105₈	69	45	ᾃ	Lowercase asper grave Alpha iota	
106₈	70	46	ᾋ	Capital asper grave Alpha iota	
107₈	71	47	ᾇ	Lowercase tilde asper Alpha iota	
110₈	72	48	ᾏ	Capital tilde asper Alpha iota	
111₈	73	49	ᾄ	Lowercase lenis acute Alpha iota	
112₈	74	4A	ᾌ	Capital lenis acute Alpha iota	
113₈	75	4B	ᾂ	Lowercase lenis grave Alpha iota	
114₈	76	4C	ᾊ	Capital lenis grave Alpha iota	
115₈	77	4D	ᾆ	Lowercase tilde lenis Alpha iota	
116₈	78	4E	ᾎ	Capital tilde lenis Alpha iota	
117₈	79	4F	ἑ	Lowercase asper Epsilon	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 363₈: Greek
120₈	80	50	Ἑ	Capital asper Epsilon	
121₈	81	51	ἐ	Lowercase lenis Epsilon	
122₈	82	52	Ἐ	Capital lenis Epsilon	
123₈	83	53	έ	Lowercase acute Epsilon	
124₈	84	54	Έ	Capital acute Epsilon	
125₈	85	55	ὲ	Lowercase grave Epsilon	
126₈	86	56	Ὲ	Capital grave Epsilon	
127₈	87	57	ἕ	Lowercase asper acute Epsilon	
130₈	88	58	Ἕ	Capital asper acute Epsilon	
131₈	89	59	ἓ	Lowercase asper grave Epsilon	
132₈	90	5A	Ἓ	Capital asper grave Epsilon	
133₈	91	5B	ἔ	Lowercase lenis acute Epsilon	
134₈	92	5C	Ἔ	Capital lenis acute Epsilon	
135₈	93	5D	ἒ	Lowercase lenis grave Epsilon	
136₈	94	5E	Ἒ	Capital lenis grave Epsilon	
137₈	95	5F	ἡ	Lowercase asper Eta	
140₈	96	60	Ἡ	Capital asper Eta	
141₈	97	61	ἠ	Lowercase lenis Eta	
142₈	98	62	Ἠ	Capital lenis Eta	
143₈	99	63	ή	Lowercase acute Eta	
144₈	100	64	Ή	Capital acute Eta	
145₈	101	65	ὴ	Lowercase grave Eta	
146₈	102	66	Ὴ	Capital grave Eta	
147₈	103	67	ῆ	Lowercase tilde Eta	
150₈	104	68	Η͂	Capital tilde Eta	
151₈	105	69	ἥ	Lowercase asper acute Eta	
152₈	106	6A	Ἥ	Capital asper acute Eta	
153₈	107	6B	ἣ	Lowercase asper grave Eta	
154₈	108	6C	Ἣ	Capital asper grave Eta	
155₈	109	6D	ᾗ	Lowercase tilde asper Eta	
156₈	110	6E	Ἧ	Capital tilde asper Eta	
157₈	111	6F	ᾔ	Lowercase lenis acute iota Eta	
160₈	112	70	Ἤ	Capital lenis acute Eta	
161₈	113	71	ἢ	Lowercase lenis grave Eta	

Identifier			Shape	Character description	Character set 363₈: Greek
Octal	Dec	Hex			
162₈	114	72	῍Η	Capital lenis grave Eta	
163₈	115	73	ῇ	Lowercase tilde lenis Eta	
164₈	116	74	῏Η	Capital tilde lenis Eta	
165₈	117	75	ῃ	Lowercase Eta iota	
166₈	118	76	Η	Capital Eta iota	
167₈	119	77	ῇ	Lowercase asper Eta iota	
170₈	120	78	῾Η	Capital asper Eta iota	
171₈	121	79	ῃ	Lowercase lenis Eta iota	
172₈	122	7A	᾽Η	Capital lenis Eta iota	
173₈	123	7B	ῄ	Lowercase acute Eta iota	
174₈	124	7C	ῌ	Capital acute Eta iota	
175₈	125	7D	ῂ	Lowercase grave Eta iota	
176₈	126	7E	ῌ	Capital grave Eta iota	
241₈	161	A1	ῇ	Lowercase tilde Eta iota	
242₈	162	A2	῟Η	Capital tilde Eta iota	
243₈	163	A3	ᾅ	Lowercase asper acute Eta iota	
244₈	164	A4	῞Η	Capital asper acute Eta iota	
245₈	165	A5	ᾃ	Lowercase asper grave Eta iota	
246₈	166	A6	῝Η	Capital asper grave Eta iota	
247₈	167	A7	ᾇ	Lowercase tilde asper Eta iota	
250₈	168	A8	῟Η	Capital tilde asper Eta iota	
251₈	169	A9	ᾄ	Lowercase lenis acute Eta iota	
252₈	170	AA	῎Η	Capital lenis acute Eta iota	
253₈	171	AB	ᾂ	Lowercase lenis grave Eta iota	
254₈	172	AC	῍Η	Capital lenis grave Eta iota	
255₈	173	AD	ᾆ	Lowercase tilde lenis Eta iota	
256₈	174	AE	῏Η	Capital tilde lenis Eta iota	
257₈	175	AF	ἱ	Lowercase asper Iota	
260₈	176	B0	Ἱ	Capital asper Iota	
261₈	177	B1	ἰ	Lowercase lenis Iota	
262₈	178	B2	Ἰ	Capital lenis Iota	
263₈	179	B3	ί	Lowercase acute Iota	
264₈	180	B4	Ί	Capital acute Iota	
265₈	181	B5	ὶ	Lowercase grave Iota	

| Identifier | | | Shape | Character description | Character set 363₈: Greek |
Octal Dec	Hex				
266₈	182	B6	Ἲ	Capital grave Iota	
267₈	183	B7	ῖ	Lowercase tilde Iota	
270₈	184	B8	Ι͂	Capital tilde Iota	
271₈	185	B9	ἵ	Lowercase asper acute Iota	
272₈	186	BA	Ἵ	Capital asper acute Iota	
273₈	187	BB	ἳ	Lowercase asper grave Iota	
274₈	188	BC	Ἳ	Capital asper grave Iota	
275₈	189	BD	ἷ	Lowercase tilde asper Iota	
276₈	190	BE	Ἷ	Capital tilde asper Iota	
277₈	191	BF	ἴ	Lowercase lenis acute Iota	
300₈	192	C0	Ἴ	Capital lenis acute Iota	
301₈	193	C1	ἲ	Lowercase lenis grave Iota	
302₈	194	C2	Ἲ	Capital lenis grave Iota	
303₈	195	C3	ἶ	Lowercase tilde lenis Iota	
304₈	196	C4	Ἶ	Capital tilde lenis Iota	
305₈	197	C5	ΐ	Lowercase acute diaeresis Iota	
306₈	198	C6	Ϊ́	Capital acute diaeresis Iota	
307₈	199	C7	ῒ	Lowercase grave diaeresis Iota	
310₈	200	C8	Ϊ̀	Capital grave diaeresis Iota	
311₈	201	C9	ῗ	Lowercase tilde diaeresis Iota	
312₈	202	CA	Ϊ͂	Capital tilde diaeresis Iota	
313₈	203	CB	ὁ	Lowercase asper Omicron	
314₈	204	CC	Ὁ	Capital asper Omicron	
315₈	205	CD	ὀ	Lowercase lenis Omicron	
316₈	206	CE	Ὀ	Capital lenis Omicron	
317₈	207	CF	ό	Lowercase acute Omicron	
320₈	208	D0	Ό	Capital acute Omicron	
321₈	209	D1	ὸ	Lowercase grave Omicron	
322₈	210	D2	Ὸ	Capital grave Omicron	
323₈	211	D3	ὅ	Lowercase asper acute Omicron	
324₈	212	D4	Ὅ	Capital asper acute Omicron	
325₈	213	D5	ὃ	Lowercase asper grave Omicron	
326₈	214	D6	Ὃ	Capital asper grave Omicron	
327₈	215	D7	ὄ	Lowercase lenis acute Omicron	

Identifier			Shape	Character description	Character set 363₈: Greek
Octal	Dec	Hex			
330₈	216	D8	᾿Ο	Capital lenis acute Omicron	
331₈	217	D9	ὄ	Lowercase lenis grave Omicron	
332₈	218	DA	᾿Ο	Capital lenis grave Omicron	
333₈	219	DB	ὑ	Lowercase asper Upsilon	
334₈	220	DC	῾Υ	Capital asper Upsilon	
335₈	221	DD	ὐ	Lowercase lenis Upsilon	
336₈	222	DE	᾿Υ	Capital lenis Upsilon	
337₈	223	DF	ύ	Lowercase acute Upsilon	
340₈	224	E0	΄Υ	Capital acute Upsilon	
341₈	225	E1	ὺ	Lowercase grave Upsilon	
342₈	226	E2	῾Υ	Capital grave Upsilon	
343₈	227	E3	ῦ	Lowercase tilde Upsilon	
344₈	228	E4	῀Υ	Capital tilde Upsilon	
345₈	229	E5	ὕ	Lowercase asper acute Upsilon	
346₈	230	E6	῞Υ	Capital asper acute Upsilon	
347₈	231	E7	ὓ	Lowercase asper grave Upsilon	
350₈	232	E8	῝Υ	Capital asper grave Upsilon	
351₈	233	E9	ὗ	Lowercase tilde asper Upsilon	
352₈	234	EA	῟Υ	Capital tilde asper Upsilon	
353₈	235	EB	ῧ	Lowercase tilde diaeresis Upsilon	
354₈	236	EC	῀Ϋ	Capital tilde diaeresis Upsilon	
355₈	237	ED	ὔ	Lowercase lenis acute Upsilon	
356₈	238	EE	᾿Υ	Capital lenis acute Upsilon	
357₈	239	EF	ὒ	Lowercase lenis grave Upsilon	
360₈	240	F0	᾿Υ	Capital lenis grave Upsilon	
361₈	241	F1	ὖ	Lowercase tilde lenis Upsilon	
362₈	242	F2	᾿Υ	Capital tilde lenis Upsilon	
363₈	243	F3	ΰ	Lowercase acute diaeresis Upsilon	
364₈	244	F4	΄Ϋ	Capital acute diaeresis Upsilon	
365₈	245	F5	ῢ	Lowercase grave diaeresis Upsilon	
366₈	246	F6	῾Ϋ	Capital grave diaeresis Upsilon	
367₈	247	F7	ὡ	Lowercase asper Omega	
370₈	248	F8	῾Ω	Capital asper Omega	
371₈	249	F9	ὠ	Lowercase lenis Omega	

Identifier			Shape	Character description	Character set 363₈: Greek
Octal	Dec	Hex			
372₈	250	FA	Ὠ	Capital lenis Omega	
373₈	251	FB	ώ	Lowercase acute Omega	
374₈	252	FC	Ὤ	Capital acute Omega	
375₈	253	FD	ὼ	Lowercase grave Omega	
376₈	254	FE	Ὢ	Capital grave Omega	

Character Set 364₈ = 254₁₀ = FE₁₆: Accented Greek characters 2

The following are character codes (low-order byte) within Character Set 364₈ (see reference chart in appendix B). Second of two character sets:

Identifier			Shape	Character description	Character set 364₈: Greek
Octal	Dec	Hex			
41₈	33	21	ῶ	Lowercase tilde Omega	
42₈	34	22	Ὦ	Capital tilde Omega	
43₈	35	23	ὥ	Lowercase asper acute Omega	
44₈	36	24	Ὥ	Capital asper acute Omega	
45₈	37	25	ὣ	Lowercase asper grave Omega	
46₈	38	26	Ὣ	Capital asper grave Omega	
47₈	39	27	ὧ	Lowercase tilde asper Omega	
50₈	40	28	Ὧ	Capital tilde asper Omega	
51₈	41	29	ὤ	Lowercase lenis acute Omega	
52₈	42	2A	Ὤ	Capital lenis acute Omega	
53₈	43	2B	ὢ	Lowercase lenis grave Omega	
54₈	44	2C	Ὢ	Capital lenis grave Omega	
55₈	45	2D	ὦ	Lowercase tilde lenis Omega	
56₈	46	2E	Ὦ	Capital tilde lenis Omega	
57₈	47	2F	ῳ	Lowercase Omega iota	
60₈	48	30	ῼ	Capital Omega iota	
61₈	49	31	ῷ	Lowercase asper Omega iota	
62₈	50	32	ᾨ	Capital asper Omega iota	
63₈	51	33	ῴ	Lowercase lenis Omega iota	
64₈	52	34	ᾨ	Capital lenis Omega iota	
65₈	53	35	ῴ	Lowercase acute Omega iota	
66₈	54	36	ᾼ	Capital acute Omega iota	
67₈	55	37	ῲ	Lowercase grave Omega iota	

Identifier			Shape	Character description	Character set 364₈: Greek
Octal	Dec	Hex			
70₈	56	38	Ὼͅ	Capital grave Omega iota	
71₈	57	39	ῷ̃	Lowercase tilde Omega iota	
72₈	58	3A	ᾮ	Capital tilde Omega iota	
73₈	59	3B	ᾥ	Lowercase asper acute Omega iota	
74₈	60	3C	ᾭ	Capital asper acute Omega iota	
75₈	61	3D	ᾣ	Lowercase asper grave Omega iota	
76₈	62	3E	ᾫ	Capital asper grave Omega iota	
77₈	63	3F	ᾧ	Lowercase tilde asper Omega iota	
100₈	64	40	ᾯ	Capital tilde asper Omega iota	
101₈	65	41	ᾤ	Lowercase lenis acute Omega iota	
102₈	66	42	ᾬ	Capital lenis acute Omega iota	
103₈	67	43	ᾢ	Lowercase lenis grave Omega iota	
104₈	68	44	ᾪ	Capital lenis grave Omega iota	
105₈	69	45	ᾦ	Lowercase tilde lenis Omega iota	
106₈	70	46	ᾮ	Capital tilde lenis Omega iota	
107₈	71	47	ῥ	Lowercase asper Rho	
110₈	72	48	Ῥ	Capital asper Rho	
111₈	73	49	ῤ	Lowercase lenis Rho	
112₈	74	4A	᾿Ρ	Capital lenis Rho	

Character Set 365₈ = 245₁₀ = F5₁₆: Initial, medial, and final Arabic characters

The following are character codes (low-order byte) within Character Set 365₈ (see reference chart in appendix B):

Identifier			Shape	Character description	Character set 365₈: Arabic
Octal	Dec	Hex			
41₈	33	21	آ	Final Alef with Maddah	
42₈	34	22	أ	Final Alef with high Hamza	
43₈	35	23	ؤ	Final Waw with Hamza	
44₈	36	24	إ	Final Alef with low Hamza	
45₈	37	25	ئ	Initial seat with Hamza	
46₈	38	26	ئ	Medial seat with Hamza	
47₈	39	27	ئ	Final seat with Hamza	
50₈	40	28	ا	Final Alef	
51₈	41	29	ب	Initial BA′	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 365₈: Arabic
52₈	42	2A	ـٮ	Medial BA'	
53₈	43	2B	ـب	Final BA'	
54₈	44	2C	ـة	Final Ta' Marbuta	
55₈	45	2D	ت	Initial TA'	
56₈	46	2E	ـت	Medial TA'	
57₈	47	2F	ـت	Final TA'	
60₈	48	30	ث	Initial THA'	
61₈	49	31	ـث	Medial THA'	
62₈	50	32	ـث	Final THA'	
63₈	51	33	جـ	Initial JEEM	
64₈	52	34	ـجـ	Medial JEEM	
65₈	53	35	ـج	Final JEEM	
66₈	54	36	حـ	Initial HA'	
67₈	55	37	ـحـ	Medial HA'	
70₈	56	38	ـح	Final HA'	
71₈	57	39	خـ	Initial KHA'	
72₈	58	3A	ـخـ	Medial KHA'	
73₈	59	3B	ـخ	Final KHA'	
74₈	60	3C	ـد	Final DAL	
75₈	61	3D	ـذ	Final THAL	
76₈	62	3E	ـر	Final RA	
77₈	63	3F	ـز	Final ZAIN	
100₈	64	40	سـ	Initial SEEN	
101₈	65	41	ـسـ	Medial SEEN	
102₈	66	42	ـس	Final SEEN	
103₈	67	43	شـ	Initial SHEEN	
104₈	68	44	ـشـ	Medial SHEEN	
105₈	69	45	ـش	Final SHEEN	
106₈	70	46	صـ	Initial SAD	
107₈	71	47	ـصـ	Medial SAD	
110₈	72	48	ـص	Final SAD	
111₈	73	49	ضـ	Initial DAD	
112₈	74	4A	ـضـ	Medial DAD	
113₈	75	4B	ـض	Final DAD	

Identifier			Shape	Character description	Character set 365₈: Arabic
Octal	Dec	Hex			
114₈	76	4C	ط	Initial TAH	
115₈	77	4D	ط	Medial TAH	
116₈	78	4E	ط	Final TAH	
117₈	79	4F	ظ	Initial DHAH	
120₈	80	50	ظ	Medial DHAH	
121₈	81	51	ظ	Final DHAH	
122₈	82	52	ع	Initial AIN	
123₈	83	53	ع	Medial AIN	
124₈	84	54	ع	Final AIN	
125₈	85	55	غ	Initial GHAIN	
126₈	86	56	غ	Medial GHAIN	
127₈	87	57	غ	Final GHAIN	
130₈	88	58	ف	Initial FA'	
131₈	89	59	ف	Medial FA'	
132₈	90	5A	ف	Final FA'	
133₈	91	5B	ق	Initial QAF	
134₈	92	5C	ق	Medial QAF	
135₈	93	5D	ق	Final QAF	
136₈	94	5E	ک	Initial CAF	
137₈	95	5F	ک	Medial CAF	
140₈	96	60	ك	Final CAF	
141₈	97	61	ل	Initial LAM	
142₈	98	62	ل	Medial LAM	
143₈	99	63	ل	Final LAM	
144₈	100	64	م	Initial MEEM	
145₈	101	65	م	Medial MEEM	
146₈	102	66	م	Final MEEM	
147₈	103	67	ن	Initial NOON	
150₈	104	68	ن	Medial NOON	
151₈	105	69	ن	Final NOON	
152₈	106	6A	ه	Initial HA	
153₈	107	6B	ه	Medial HA	
154₈	108	6C	ه	Final HA	
155₈	109	6D	و	Final WAW	

Identifier Octal Dec Hex			Shape	Character description	Character set 365₈: Arabic
156₈	110	6E	ى	Final Alef-maqsura	
157₈	111	6F	ﻳ	Initial YA	
160₈	112	70	ﻴ	Medial YA	
161₈	113	71	ﻲ	Final YA	
162₈	114	72	ﻵ	Ligature Lam + Alef with Maddah	
163₈	115	73	ﻶ	Final ligature Lam + Alef with Maddah	
164₈	116	74	ﻷ	Ligature Lam + Alef with high Hamzah	
165₈	117	75	ﻸ	Final ligature Lam + Alef with high Hamzah	
166₈	118	76	ﻹ	Ligature Lam + Alef with low Hamzah	
167₈	119	77	ﻺ	Final ligature Lam + Alef with low Hamzah	
170₈	120	78	ﻻ	Ligature Lam + Alef	
171₈	121	79	ﻼ	Final ligature Lam + Alef	
172₈	122	7A	۴	Variant form of numeral 4 (Urdu)	
173₈	123	7B	۴	Variant form of numeral 4 (Farsi)	
174₈	124	7C	۵	Variant form of numeral 5 (Farsi and Urdu)	
175₈	125	7D	۶	Variant form of numeral 6 (Farsi and Urdu)	
176₈	126	7E	۷	Variant form of numeral 7 (Urdu)	

Character Set $375_8 = 253_{10} = FD_{16}$: Variant representations for graphic characters

The following are character codes (low-order byte) within Character Set 375₈ (see reference chart in appendix B):

Identifier Octal Dec Hex			Shape	Character description	Character set 375₈: Graphic
45₈	37	25	—	3/4 Em dash on an Em width	
54₈	44	2C	.	Alternate rendition of "Arabic thousands separating delimiter" (356₈ | 54₈)	
56₈	46	2E	,	Alternate rendition of "decimal point = radix point" (356₈ | 56₈)	
57₈	47	2F	·	High decimal	
60₈	48	30	o	Numeral 0, Old Style design = Alternate rendition of "digit 0" (0₈ | 60₈)	
61₈	49	31	ɪ	Numeral 1, Old Style design = Alternate rendition of "digit 1" (0₈ | 61₈)	
62₈	50	32	2	Numeral 2, Old Style design = Alternate rendition of "digit 2" (0₈ | 62₈)	
63₈	51	33	3	Numeral 3, Old Style design = Alternate rendition of "digit 3" (0₈ | 63₈)	
64₈	52	34	4	Numeral 4, Old Style design = Alternate rendition of "digit 4" (0₈ | 64₈)	
65₈	53	35	5	Numeral 5, Old Style design = Alternate rendition of "digit 5" (0₈ | 65₈)	
66₈	54	36	6	Numeral 6, Old Style design = Alternate rendition of "digit 6" (0₈ | 66₈)	

| Identifier | | | Shape | Character description | Character set 375₈: Graphic |
Octal	Dec	Hex			
67₈	55	37	7	Numeral 7, Old Style design = Alternate rendition of "digit 7" (0_8 | 67_8)	
70₈	56	38	8	Numeral 8, Old Style design = Alternate rendition of "digit 8" (0_8 | 70_8)	
71₈	57	39	9	Numeral 9, Old Style design = Alternate rendition of "digit 9" (0_8 | 71_8)	
100₈	64	40	Y	Alternate rendition of Greek "Capital letter upsilon" (46_8 | 131_8)	
120₈	80	50	Æ	Small cap letter AE = Alternate rendition of "small letter ae" (0_8 | 361_8)	
121₈	81	51	Œ	Small cap letter OE = Alternate rendition of "small letter oe" (0_8 | 372_8)	
122₈	82	52	&	Small cap ampersand	
123₈	83	53	'	Small cap apostrophe	
124₈	84	54	(	Small cap opening parenthesis	
125₈	85	55	)	Small cap closing parenthesis	
126₈	86	56	?	Small cap question mark	
127₈	87	57	!	Small cap exclamation mark	
133₈	91	5B	ε	Alternate rendition of Greek "small letter epsilon" (46_8 | 146_8); <AMS, varepsilon>	
134₈	92	5C	ϖ	Alternate rendition of Greek "small letter pi" (46_8 | 163_8); <AMS, varpi>	
135₈	93	5D	ϑ	Alternate rendition of Greek "small letter theta" (46_8 | 153_8); <AMS, vartheta>	
136₈	94	5E	ϱ	Alternate rendition of Greek "small letter rho" (46_8 | 165_8); <AMS, varrho>	
137₈	95	5F	φ	Alternate rendition of Greek "small letter phi" (46_8 | 172_8); <AMS, varphi>	
140₈	96	60	ϰ	Alternate rendition of Greek "small letter kappa" (46_8 | 155_8); <AMS, varkappa>	
141₈	97	61	A	Small cap letter A = Alternate rendition of "small letter a" (0_8 | 141_8)	
142₈	98	62	B	Small cap letter B = Alternate rendition of "small letter b" (0_8 | 142_8)	
143₈	99	63	C	Small cap letter C = Alternate rendition of "small letter c" (0_8 | 143_8)	
144₈	100	64	D	Small cap letter D = Alternate rendition of "small letter d" (0_8 | 144_8)	
145₈	101	65	E	Small cap letter E = Alternate rendition of "small letter e" (0_8 | 145_8)	
146₈	102	66	F	Small cap letter F = Alternate rendition of "small letter f" (0_8 | 146_8)	
147₈	103	67	G	Small cap letter G = Alternate rendition of "small letter g" (0_8 | 147_8)	
150₈	104	68	H	Small cap letter H = Alternate rendition of "small letter h" (0_8 | 150_8)	
151₈	105	69	I	Small cap letter I = Alternate rendition of "small letter i" (0_8 | 151_8)	
152₈	106	6A	J	Small cap letter J = Alternate rendition of "small letter j" (0_8 | 152_8)	
153₈	107	6B	K	Small cap letter K = Alternate rendition of "small letter k" (0_8 | 153_8)	
154₈	108	6C	L	Small cap letter L = Alternate rendition of "small letter l" (0_8 | 154_8)	

Identifier Octal	Dec	Hex	Shape	Character description	Character set 375_8: Graphic
155_8	109	6D	M	Small cap letter M = Alternate rendition of "small letter m" (0_8 | 155_8)	
156_8	110	6E	N	Small cap letter N = Alternate rendition of "small letter n" (0_8 | 156_8)	
157_8	111	6F	O	Small cap letter O = Alternate rendition of "small letter o" (0_8 | 157_8)	
160_8	112	70	P	Small cap letter P = Alternate rendition of "small letter p" (0_8 | 160_8)	
161_8	113	71	Q	Small cap letter Q = Alternate rendition of "small letter q" (0_8 | 161_8)	
162_8	114	72	R	Small cap letter R = Alternate rendition of "small letter r" (0_8 | 162_8)	
163_8	115	73	S	Small cap letter S = Alternate rendition of "small letter s" (0_8 | 163_8)	
164_8	116	74	T	Small cap letter T = Alternate rendition of "small letter t" (0_8 | 164_8)	
165_8	117	75	U	Small cap letter U = Alternate rendition of "small letter u" (0_8 | 165_8)	
166_8	118	76	V	Small cap letter V = Alternate rendition of "small letter v" (0_8 | 166_8)	
167_8	119	77	W	Small cap letter W = Alternate rendition of "small letter w" (0_8 | 167_8)	
170_8	120	78	X	Small cap letter X = Alternate rendition of "small letter x" (0_8 | 170_8)	
171_8	121	79	Y	Small cap letter Y = Alternate rendition of "small letter y" (0_8 | 171_8)	
172_8	122	7A	Z	Small cap letter Z = Alternate rendition of "small letter z" (0_8 | 172_8)	
173_8	123	7B	$\lambda\!\!\!-$	Lambda bar; slashed lowercase lambda; <AMS, lambdabar>	
174_8	124	7C	$\sqrt{\ }$	Alternate rendition of "radical = root" (357_8 | 174_8)	
175_8	125	7D	α	Alternate rendition of Greek "small letter alpha" (46_8 | 141_8)	
176_8	126	7E	∞	Alternate rendition of "similar to = equivalent to" (356_8 | 176_8)	
241_8	161	A1	^{a}	Superscript a = Alternate rendition of "letter a" (0_8 | 141_8)	
242_8	162	A2	^{e}	Superscript e = Alternate rendition of "letter e" (0_8 | 145_8)	
243_8	163	A3	^{l}	Superscript l = Alternate rendition of "letter l" (0_8 | 154_8)	
244_8	164	A4	^{m}	Superscript m = Alternate rendition of "letter m" (0_8 | 155_8)	
245_8	165	A5	^{o}	Superscript o = Alternate rendition of "letter o" (0_8 | 157_8)	
246_8	166	A6	^{r}	Superscript r = Alternate rendition of "letter r" (0_8 | 162_8)	
247_8	167	A7	^{s}	Superscript s = Alternate rendition of "letter s" (0_8 | 163_8)	
250_8	168	A8	^{n}	Superscript n = Alternate rendition of "letter n" (0_8 | 156_8)	
251_8	169	A9	$^\prime$	Alternate rendition of "left single quote" (0_8 | 251_8)	
252_8	170	AA	$^{\prime\prime}$	Alternate rendition of "left double quote" (0_8 | 252_8)	
253_8	171	AB	$^\pm$	Plus/minus sign, superscript = Alternate rendition of " $\pm$ " (0_8 | 260_8)	
254_8	172	AC	$^<$	Less than, superscript = Alternate rendition of "less-than" (0_8 | 74_8)	
255_8	173	AD	$^>$	Greater than, superscript = Alternate rendition of "greater-than" (0_8 | 76_8)	
256_8	174	AE	$^=$	Equals sign, superscript = Alternate rendition of "equals" (0_8 | 75_8)	
257_8	175	AF	$/$	Fraction bar = Alternate rendition of "slant = slash" (0_8 | 57_8)	
260_8	176	B0	^{0}	Number 0, superscript = Alternate rendition of "digit 0" (0_8 | 60_8)	

Identifier			Shape	Character description	Character set 375₈: Graphic
Octal	Dec	Hex			
261₈	177	B1	¹	Number 1, superscript = Alternate rendition of "digit 1" (0_8 | 61_8)	
262₈	178	B2	²	Number 2, superscript = Alternate rendition of "digit 2" (0_8 | 62_8)	
263₈	179	B3	³	Number 3, superscript = Alternate rendition of "digit 3" (0_8 | 63_8)	
264₈	180	B4	⁴	Number 4, superscript = Alternate rendition of "digit 4" (0_8 | 64_8)	
265₈	181	B5	⁵	Number 5, superscript = Alternate rendition of "digit 5" (0_8 | 65_8)	
266₈	182	B6	⁶	Number 6, superscript = Alternate rendition of "digit 6" (0_8 | 66_8)	
267₈	183	B7	⁷	Number 7, superscript = Alternate rendition of "digit 7" (0_8 | 67_8)	
270₈	184	B8	⁸	Number 8, superscript = Alternate rendition of "digit 8" (0_8 | 70_8)	
271₈	185	B9	⁹	Number 9, superscript = Alternate rendition of "digit 9" (0_8 | 71_8)	
272₈	186	BA	·	Decimal point, superscript = Alternate rendition of "decimal point" (356_8 | 56_8)	
273₈	187	BB	'	Thousands separating delimiter, superscript = Alternate rendition of "thousands separating delimiter" (356_8 | 54_8)	
274₈	188	BC	⁽	Parenthesis, opening, superscript = Alternate rendition of "opening parenthesis" (0_8 | 50_8)	
275₈	189	BD	⁾	Parenthesis, closing, superscript = Alternate rendition of "closing parenthesis" (0_8 | 51_8)	
276₈	190	BE	⁺	Plus sign, superscript = Alternate rendition of "plus sign" (0_8 | 53_8)	
277₈	191	BF	⁻	Minus sign, superscript = Alternate rendition of "minus sign" (356_8 | 55_8)	
301₈	193	C1	`	Alternate rendition of "grave accent" (0_8 | 301_8) (nonspacing uppercase)	
302₈	194	C2	´	Alternate rendition of "acute accent" (0_8 | 302_8) (nonspacing uppercase)	
303₈	195	C3	^	Alternate rendition of "circumflex accent" (0_8 | 303_8) (nonspacing uppercase)	
304₈	196	C4	~	Alternate rendition of "tilde accent" (0_8 | 304_8) (nonspacing uppercase)	
305₈	197	C5	¯	Alternate rendition of "macron accent" (0_8 | 305_8) (nonspacing uppercase)	
306₈	198	C6	˘	Alternate rendition of "breve accent" (0_8 | 306_8) (nonspacing uppercase)	
307₈	199	C7	·	Alternate rendition of "over-dot accent" (0_8 | 307_8) (nonspacing uppercase)	
310₈	200	C8	¨	Alternate rendition of "diaeresis accent" (0_8 | 310_8) (nonspacing uppercase)	
312₈	202	CA	°	Alternate rendition of "over-ring accent" (0_8 | 312_8) (nonspacing uppercase)	
313₈	203	CB	¸	Alternate rendition of "cedilla undermark" (0_8 | 313_8) (nonspacing uppercase)	
315₈	205	CD	˝	Alternate rendition of "double acute accent" (0_8 | 315_8) (nonspacing uppercase)	
316₈	206	CE	˛	Alternate rendition of "ogonek undermark" (0_8 | 316_8) (nonspacing uppercase)	

Identifier Octal Dec Hex	Shape	Character description — Character set 375_8: Graphic
317_8 207 CF	ˇ	Alternate rendition of "hachek accent" (0_8 | 317_8) (nonspacing uppercase)
320_8 208 D0	⎯	Thin horizontal line (top) = Alternate rendition of "thin horizontal line" (357_8 | 345_8) Also: Bar, (line) horizontal, light (top)
321_8 209 D1	⎯	Thin horizontal line (upper middle) = Alternate rendition of "thin horizontal line" (357_8 | 345_8) Also: Bar, (line) horizontal, light (upper middle)
322_8 210 D2	⎯	Thin horizontal line (lower middle) = Alternate rendition of "thin horizontal line" (357_8 | 345_8) Also: Bar, (line) horizontal, light (lower middle)
323_8 211 D3	⎯	Thin horizontal line (bottom) = Alternate rendition of "thin horizontal line" (357_8 | 345_8) Also: Bar, (line) horizontal, light (bottom)
324_8 212 D4	|	Thin vertical line (left) = Alternate rendition of "thin vertical line" (357_8 | 344_8) Also: Bar, (line) vertical, light (left)
325_8 213 D5	|	Thin vertical line (right) = Alternate rendition of "thin vertical line" (357_8 | 344_8) Also: Bar, (line) vertical, light (right)
326_8 214 D6	®	Alternate rendition of "registered sign" (0_8 | 322_8) = registersans (Postscript) Also: Dingbat (Registered sign, superscript, generic sans serif); <ITC, 117>
327_8 215 D7	©	Alternate rendition of "copyright sign" (0_8 | 323_8) = copyrightsans (Postscript) Also: Dingbat (Copyright sign, generic sans serif); <ITC, 118>
330_8 216 D8	™	Alternate rendition of "trademark sign" (357_8 | 344_8) = trademarksans (Postscript) Also: Trademark sign, superscript, generic sans serif
331_8 217 D9	(	Subscript opening parenthesis = Alternate rendition of "opening parenthesis" (0_8 | 50_8) Also: Parenthesis, opening, subscriptp
332_8 218 DA	)	Subscript closing parenthesis = Alternate rendition of "closing parenthesis" (0_8 | 51_8) Also: Parenthesis, close, subscript
333_8 219 DB	$	Superscript dollar sign = Alternate rendition of "dollar sign" (0_8 | 244_8) Also: Dollar sign, superscript
334_8 220 DC	¢	Superscript cent sign = Alternate rendition of "cent sign" (0_8 | 242_8) Also: Cent sign, superscript
335_8 221 DD	≤	Superscript ≤ = Alternate rendition of "less than or equal to" (41_8 | 145_8) Also: Less than or equal to, superscript sign

Identifier			Shape	Character description	Character set 375₈: Graphic
Octal	Dec	Hex			
336₈	222	DE	×	Superscript × = Alternate rendition of "Multiply sign" (0_8 | 264_8) Also: Multiplication sign, superscript	
337₈	223	DF	÷	Superscript ÷ = Alternate rendition of "Divide sign" (0_8 | 270_8) Also: Divide sign, superscript	
340₈	224	E0	0	Number 0, subscript = Alternate rendition of "digit 0" (0_8 | 60_8)	
341₈	225	E1	1	Number 1, subscript = Alternate rendition of "digit 1" (0_8 | 61_8)	
342₈	226	E2	2	Number 2, subscript = Alternate rendition of "digit 2" (0_8 | 62_8)	
343₈	227	E3	3	Number 3, subscript = Alternate rendition of "digit 3" (0_8 | 63_8)	
344₈	228	E4	4	Number 4, subscript = Alternate rendition of "digit 4" (0_8 | 64_8)	
345₈	229	E5	5	Number 5, subscript = Alternate rendition of "digit 5" (0_8 | 65_8)	
346₈	230	E6	6	Number 6, subscript = Alternate rendition of "digit 6" (0_8 | 66_8)	
347₈	231	E7	7	Number 7, subscript = Alternate rendition of "digit 7" (0_8 | 67_8)	
350₈	232	E8	8	Number 8, subscript = Alternate rendition of "digit 8" (0_8 | 70_8)	
351₈	233	E9	9	Number 9, subscript = Alternate rendition of "digit 9" (0_8 | 71_8)	
352₈	234	EA	_	Minus sign, subscript = Alternate rendition of "minus sign" (356_8 | 55_8)	
353₈	235	EB	+	Plus sign, subscript = Alternate rendition of "Plus sign" (0_8 | 53_8)	
354₈	236	EC	=	Equal sign, subscript = Alternate rendition of "Equals" (0_8 | 75_8)	
355₈	237	ED	≥	Greater than or equal to sign, superscript = Alternate rendition of "greater than or equal to" (41_8 | 146_8)	
356₈	238	EE	≠	Does not equal sign, superscript = rendition of "Does not equal" (41_8 | 142_8)	
357₈	239	EF	.	Hyphen, superscript = Alternate rendition of "Hyphen" (41_8 | 76_8)	
360₈	240	F0	0	Digit 0, slashed = Alternate rendition of digit 0 (0_8|60_8)	
361₈	241	F1	c	Superscript c = Alternate rendition of "letter c" (0_8 | 143_8)	
362₈	242	F2	◊	Alternate rendition of "lozenge" (356_8 | 106_8) = PS lozenge (Postscript)	
366₈	246	F6	®	Alternate rendition of "registered sign" (0_8 | 322_8) = registerserif (Postscript) Also: Dingbats (Registered sign, superscript, generic serif); < ITC, 217 >	
367₈	247	F7	©	Alternate rendition of "copyright sign" (0_8 | 323_8) = copyrightserif (Postscript) Also: Dingbats (Copyright sign, generic serif); < ITC, 218 >	
370₈	248	F8	™	Alternate rendition of "trademark sign" (357_8 | 344_8) = trademarkserif (Postscript) Also: Trademark sign, superscript, generic serif	
371₈	249	F9	F	Alternate rendition of "French Franc" (357_8 | 243_8)	
372₈	250	FA	Ps	Alternate rendition of "Pesato" (357_8 | 244_8) Also: Pesatas symbol, alternate rendition	

Purpose

Our assumption is that textual information is to be stored and transmitted in the form of a sequence of numerical codes. This section specifies the forms in which these sequences can be represented and how they are typically used to transmit fragments of text such as names and messages. These fragments are referred to as *strings*; a *Xerox string* consists of character codes defined by this standard.

In many situations, more complex and sophisticated models of text are required to serve functions more complex than the simple transmission of a sequence of characters. To distinguish between these more complex situations and the simple view of text we are presenting, we refer to the format given here as plain text. This standard makes no attempt to define formats for any other types of text.

Normally, character codes are numerical codes in the range 0 to 65,535. Not all values in this range are valid, and the use of higher numbers is not precluded from later versions of this standard. It is useful to regard these numbers as 16-bit entities. The Character Sequence Encoding defines a string as a sequence of *stringlets*, each stringlet consisting of a declaration followed by a body.

There are two types of stringlets: 1-byte, which uses one byte per character, and 2-byte, which uses two bytes per character. The two types of stringlets can be mixed in any combination, except that there is an implicit 1-byte stringlet declaration at the beginning of every string. This means that every string starts with a 1-byte stringlet body, which may be null. To conform to this standard, a device must support both types of stringlets.

The 1-byte stringlet body is defined such that:

1. A sequence of characters is compressed into strings of 8-bit bytes on a one-for-one basis (that is, one 8-bit byte for each 16-bit entity).

2. All sequences of 8-bit ISO 646 characters of high frequency use constitute valid Xerox strings.

The 2-byte stringlet body consists of a sequence of 16-bit codes.

Review of definitions

Recall from the "Character sets" section of chapter 2 that the total range of numbers available for character codes, namely [0 .. 177777_8], is partitioned into 256 blocks of 256 codes each, called *character sets*. Each 16-bit character code consists of two 8-bit bytes, where the high-order byte is the character set code

and the low-order byte is the character's code within the character set, as shown in figure 5-1. The bytes are designated by the terms **CharSet** and **Char8Code**, respectively.

Figure 5-1. **16-bit Xerox character code**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
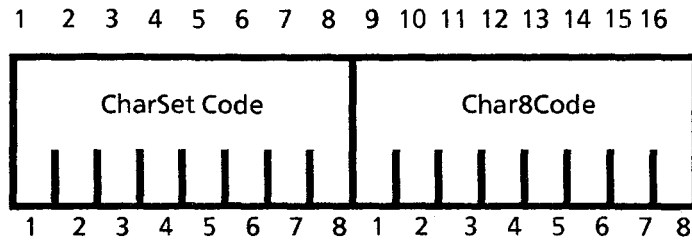
Recall further that the character codes are assigned so that characters within a single character set tend to be related to each other by traditional usage. In normal text, successive characters tend to come from the same character set, usually letters of the same alphabet.

Recall finally that the 8-bit byte **377**$_8$, called the *character set select code*, must never be the high- or low-order byte of any character code.

Given this character code structure, the character sequence coding is a simple run-encoding of the **CharSet** bytes.

We maintain the same character set code space structure within the Xerox standard for ease of conversion between the Xerox standard and existing international standards. We avoid assigning graphic characters outside the outlined structure to minimize the problem with interfacing at the terminal device level. The IRV set, designated in the absence of a working agreement between a sender and recipient of the data, is also used.

Simple encoding examples

Below are a few simple examples of character sequences encoded using character sequence encoding. These will help you understand the formal definitions that follow. The numbers are the successive bytes of the encoded sequence given in octal. The "377" is the character set select; the character set number follows it in italics.

Examples

ASCII based

A	S	C	I	I	<sp>	b	a	s	e	d
101	123	103	111	111	040	142	141	163	145	144

†footnote

			†		f	o	o	t	n	o	t	e
377		*357*	060	**377**	*000*	146	157	157	164	156	157	164	145

a ≠ α — as a 2-byte stringlet

				a		<sp>		≠		<sp>		α
377	*377*	*000*		000	141	000	040	041	142	000	040	046	141

Syntax

The Xerox String Encoding provides a method for encoding any 16-bit (2-byte) number that does not contain the value 377_8 (decimal value 255) in either its left-hand or right-hand byte. Thus, this encoding makes it possible to encode any number in the range [0...65278] that does not leave a remainder of 255 when divided by 256. All legitimate Xerox Character Codes lie within this range. This encoding enables you to encode many numbers that cannot be legitimate Xerox Character Codes; hence, this encoding system encompasses a broader class of 16-bit codes than required for encoding Xerox Character Codes.

The following defines the encoding expressed in a Backus-Naur format.

CSselect::= 377_8
As above.

CharSet8 ::= [0...376_8]
Any 8-bit number other than 377_8 (CSselect). **CharSet8** designates a legal character set (as listed in the "Character sets" section of chapter 2). Any legal character set designator must be in this range, but not all numbers in this range may be legitimate values for **CharSet8** in the Xerox Character Code Standard, which are in the set **[0, 41_8 .. 176_8, 241_8 .. 376_8]**. Also, not all legitimate **CharSet8** values in the Xerox Character Code Standard in this range have yet been designated as legal values for **CharSet8**. This range includes the value 0.

CharSet16 ::= [0...376_8]
An 8-bit number designating a legal 16-bit character set. In this version of the standard, only 0 (zero) is valid. Allowing non-zero values of **CharSet16** would allow addressing of 24-bit characters.

CS8Declaration ::= CSselect CharSet8
A 2-byte sequence to declare a new 188-character code set. If this occurs within a 2-byte encoded sequence, the encoding is changed to 1-byte. If this occurs within a 1-byte encoded sequence, it causes the character set to be changed as defined in this section. 189 possible character sets, of 188 characters each, are designated by the numbers in the set [0, 41_8 .. 176_8, 241_8 .. 376_8].

CS16Declaration :: = CSselect CSselect CharSet16
A 3-byte sequence preceding a sequence of 2-byte encoded characters. In this version of the standard, the only legal value of **CharSet16** is 0 (zero). Therefore, **CS16Declaration** is always (in octal) "377 377 000." Allowing non-zero values of **CharSet16** would allow addressing of 24-bit characters.

Char8Code:: = [0...376$_8$]
Any 8-bit number other than 377$_8$ (CSselect). **Char8Code** is a character's code within its character set (as listed in the "Character sets" section of chapter 2). Any legal character code within its character set must be in this range, but not all numbers in this range are necessarily legal values for **Char8Code**, which are in the set [40$_8$ .. 176$_8$, 241$_8$ .. 376$_8$]. Further, legal values for **Char8Code** are a function of the value for the associated **CharSet** byte. The above range does not include the value 0, but does include 40$_8$.

Char16Code:: = CharSet8 Char8Code
A two-byte 16-bit character code. Not all values of **Char8Code** are necessarily legal. Legal values for **Char8Code** are a function of the value for the associated **CharSet8** byte.

Stringlet8 :: = ∅ | Stringlet8 Char8Code
By default, a **Stringlet8** is interpreted as character codes lying within Character Set 0. This is the 1-byte stringlet body which occurs at the beginning of a string.

**DeclaredStringlet8 :: =   CS8declaration Char8Code |
                            DeclaredStringlet8 Char8Code**

A 1-byte stringlet complete with a specific codespace declaration at its head and a body consisting of a sequence of **Char8Codes**.

**DeclaredStringlet16 :: = CS16declaration Char16Code |
                            DeclaredStringlet16 Char16Code**

A 2-byte stringlet with an explicit **CS16declaration** at its head and a body consisting of a sequence of **Char16Codes**.

**String :: = Stringlet8 |
              DeclaredStringlet8 |
              DeclaredStringlet16 |
              String DeclaredStringlet8|
              String DeclaredStringlet16**

A sequence of DeclaredStringlets, except that the first one may be undeclared (but this may be null; if it is not null then it must be a **Stringlet8**). DeclaredStringlets may be mixed in any combination (apart from the first **Stringlet8**).

Interpretation of the encoding

The syntax above defines both the 1-byte and 2-byte stringlets, but some comments are in order on the process of interpreting the 1-byte stringlet body to get **Char8Code** bytes back into logical 16-bit character codes:

— In interpreting a 1-byte stringlet body, the high-order byte (**CharSet**) for each character code can be considered to come from an 8-bit finite-state machine which tracks the sequence byte-by-byte. The **CharSet** state is initialized to 0 at the beginning of the interpretation. During interpretation, the

finite-state machine is alerted by a **CS8Declaration** to switch state to the indicated CharSet.

— The 1-byte stringlet implies that the number of logical characters in a sequence cannot be assumed to be equal to the number of bytes. Likewise, any process which steps through a sequence of characters encoded by means of the 1-byte stringlet in a-character-at-a-time fashion cannot assume that each byte corresponds to a single character.

As stated before, the default state is initialized to 1-byte stringlet body within character set 0 Character Code Standard at the beginning of the interpretation process.

This definition affects any processes which read a sequence of characters "backwards," from tail-to-head. These processes must locate the beginnings of **DeclaredStringlet8** or **DeclaredStringlet16** segments to know how to interpret each character. This is facilitated by the fact that **CSselect** byte 377_8 is forbidden as the high- or low-order byte of character codes, so the beginnings of **DeclaredStringlet8** or **DeclaredStringlet16** segments may be found simply by scanning for 377_8 bytes (that is, an isolated sequence of the form 377_8 or 377_8 377_8). Since Character Set 377_8 is forbidden, a sequence of more than two 377_8 bytes in succession within a sequence of characters is impossible.

Since a **CS8Declaration** requires 2 bytes, a 1-byte stringlet does not result in compression of a string if the average run-length (number of characters between **CharSet** changes) is less than 2.0 characters. For ordinary European-language text, this is not the case; a 1-byte stringlet is an economical representation. But the situation is different for Japanese and Chinese, with their thousands of kanji characters. Here, a 2-byte stringlet is more economical. This is the main rationale for allowing 2-byte stringlets: so that kanji-based text can be represented and stored with reasonable efficiency.

To use a 2-byte stringlet, because the default is a 1-byte stringlet body, the 2-byte stringlet must be prefixed by a **CS16Declaration**: this functions as an annunciator for the 2-byte stringlet body.

Return from a 2-byte stringlet body is effected by a single "377_8" character, followed by a single byte that designates the high-order byte (**CharSet**) of the subsequent characters. Therefore, no 16-bit 2-byte encoded character code can contain the value 377_8 in any of its byte positions.

Relationship to existing 8-bit encodings

The character sequence encoding specifies the default convention that the bytes are interpreted as **Char8Codes** (that is, a 1-byte stringlet body) within Character Set 0 until a **CS8Declaration** or **CS16Declaration** is encountered. This means that, if the entire Xerox string content consists solely of characters from Character Set 0 as a 1-byte stringlet body, then the Xerox string is nothing more than a sequence of 8-bit **Char8Code** bytes taken from Character Set 0. (Refer to the first example in the "Simple encoding examples" section of this chapter.)

Since Character Set 0 is taken directly from the ASCII/Teletex ISO-based standards, it follows that the overwhelming majority of ASCII, Teletex, and ISO strings are bit-for-bit identical to the Xerox Character Sequence Encoding with 1-byte stringlet body. (The only qualifications relate to "$" in ASCII and "#" and "general currency sign" in CCITT recommendations S.61 and S.100 when compared to ISO 6937.)

Encoding of diacritical marks in strings

The several types of phonetically-marked characters—diacritical markings which are written above, below, within, or next to letters—may be grouped into three general classes:

a. Those that mark certain consonantal and vowel modifications

b. Those used in vowelization

c. Those that mark the significant features of stress, juncture, and pitch.

When phonetic characters are marked or composed of two or more parts, of which one is a qualifying mark, they are encoded as follows:

1. Characters in which the qualifying mark is superimposed upon the basic character are encoded as a single character (for example, uppercase D with stroke, 342_8 in Character Set 0).

2. Characters in which the qualifying mark is separated from, or only touches, the basic character are usually encoded as two or more characters (for example, "ç" = "cedilla" and c or "ç" = 313_8 + 143_8 of Character Set 0).

For case (2), components encoded as two or more characters, the encoding sequence for general classes (a) and (b) above is as follows:

Consonantal modification

Consonantal modifiers commonly are used in Latin-based languages, Cyrillic-based languages, etc. They are small marks traditionally thought of as being applied to some other character, that never appear by themselves in ordinary text. Such marks are assigned their own separate character codes. Examples include the "accent" characters in French and other European languages.

In a string body, consonantal and vowel modification characters always precede the character which they modify. Multiple diacritics are entered in the order in which they appear, reading left to right and top to bottom.

Vowel signs

The string sequence rule for vowel signs, the second class, is different from the rule for consonantal diacritics. When vowelized text is written, the chain of characters in a string is alphabetic character followed by vowel sign—*the vowel sign does not precede it*. In addition, when two or more vowel signs are applied to the base character, a general sequence rule pertaining to all languages does not exist.

Stress, juncture, and pitch

This version of the standard, as we have seen, identifies the sequence rules for consonantal modification and vowelization. For the third class, those that mark the significant features of stress, juncture, and pitch, the sequence remains unspecified.

Examples

Arabic, CharSet8 = 343₈

There are five common vowels in CharSet8 = 343_8:

Name	Code
Fatha	156B
Dammah	157B
Kasrah	160B
Shaddah	161B
Sukun	162B

In addition, there are three vowels that are less common:

Name	Code
Fat'hatan	153B
Dammatan	154B
Kashratan	155B

These vowels are nonspacing. When vowelized text is created, the chain of characters is in the following sequence, reading right to left:

< ... > < vowel sign > < character > < vowel sign > < character >.

When the Shaddah (343_8 | 161_8) is used, the sequence rule, reading right to left, is:

< ... > < vowel sign > < shaddah > < character >.

The vowel Shaddah follows the base character and precedes other vowels. Note that Arabic text is written from right to left and that the sequence is written in the Arabic order, for example, vowels following the base character.

As an example of the inadequacy of a general positioning rule to specify vowel character order, both the Fatha and Kasrah, when used, follow the Shaddah, but the "picture" is as follows:

— Fatha appears directly above the Shaddah
— Kasrah appears directly below the Shaddah.

Hebrew, CharSet8 = 341₈

Hebrew has nine basic vowel signs and three vowel digraphs; seven of the nine vowel signs and all three digraphs are subscripts. The seven subscript signs are:

hireq, sereh, segol, qubbus, qamas, pathah, and shewa.

The three subscript digraphs are:

hataph pathah, hataph segol, and hataph qamas.

All seven subscript signs and three subscript digraphs follow the base character in a string. The remaining two vowels, holem and shuruq, also follow the base character in a string; holem appears in the upper left corner of any character and shuruq appears in the middle of the character vav. All these entities are nonspacing characters.

In rendering, only one vowel is applied to a character. Multiple vowel sequences in Hebrew do not exist.

General encoding example

Below are a few examples of sequences that have been encoded using the full capability of the Xerox Character Encoding. The declarations are shown in italics. For ease of reference, the examples in the "Simple encoding examples" section are repeated here.

Examples

ASCII based   (1-byte stringlet body only)

A	S	C	l	l	<sp>	b	a	s	e	d
101	123	103	111	111	040	142	141	163	145	144

†footnote   (1-byte stringlets only)

			†			f	o	o	t	n	o	t	e
377		*357*	060	**377**	*000*	146	157	157	164	156	157	164	145

a ≠ α

a	<sp>			≠			<sp>			α
141	040	**377**	*041*	142	**377**	*000*	040	**377**	*046*	141

†footnote   (2-byte stringlet only)

			†	f	o	o	t	n	o	t	e
377	*377*	*000*	357 060	000 146	000 157	000 157	000 164	000 156	000 157	000 164	000 145

a ≠ α

			a	<sp>	≠	<sp>	α
377	*377*	*000*	000 141	000 040	041 142	000 040	046 141

cat   (1-byte stringlet followed by 2-byte)

c					a		t
103	**377**	**377**	*000*	000	101	000	124

cat   (2-byte stringlet followed by 1-byte)

				c			a	t
377	*377*	*000*	000	103	**377**	*000*	101	124

A.   References

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B.   Character code charts

This appendix contains reference charts for graphic character codes described in chapter 3 and rendering character codes described in chapter 4.

XEROX Version 2.0 Set Allocation

Each square represents one Character Set
(HIGH - order character code byte)

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00	Latin							JIS II KANJI							Arabic	Lig. and Form.	0
01			Syms 1												Heb-rew	Acc. Latin Ch 1	1
02			Syms 2												IPA	Acc. Latin Ch 2	2
03			Extend Latin												Korean	Acc. Greek No.1	3
04			HIR / BoPoM					Syms 3							Georg. & Armen.	Acc. Greek No.2	4
05			KAT					JIS II							Deva-nag.	Arab Liq. 1	5
06			GRK					Syms 4									6
07			Cyril.	JIS I KANJI	JIS I KANJI	JIS II KANJI	JIS II KANJI				CHINESE			RENDERING CODES			7
10			Forms / Mosaic					FX USER AREA									8
11			Runic/ Gothic														9
12			Extend Cyrillic														A
13															Gen'l Syms No. 3		B
14															ITC Ding. No. 2		C
15															ITC Ding. No. 1	Latin Var.	D
16			Decor. Rules												Gen'l Syms No. 2	Priv. Use Area	E
17			Vert. Chars.												Gen'l Syms No. 1		F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Legend:
- Private Use Area
- Reserved, Unassigned
- Character Set Select Code
- Reserved, Not Used

XEROX
Character Set 000₈
Latin Alphabet and Punctuation

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00	▨	▨	word space	0	@	P	` spacing	p	▨	▨	▨	° degree	▨	— hor. bar	Ω ohms	κ grnlnd	0
01			!	1	A	Q	a	q			¡ spanish	± + or −	` grave	¹ superior	Æ dipth.	æ dipth.	1
02			" neutral	2	B	R	b	r			¢ cent	² superior	´ acute	® register	Đ croatian	đ croatian	2
03			#	3	C	S	c	s			£ pound	³ superior	^ circum.	© cpyright	ª spanish	ð iceland	3
04			¤ currency	4	D	T	d	t			$ dollar	× times	~ tilde	™ tr. mark	Ħ maltese	ħ maltese	4
05			%	5	E	U	e	u			¥ yen	µ micro-	¯ macron	♪ 1/8 note	J dotless j	ı dotless i	5
06			&	6	F	V	f	v			▨	¶ paragr.	˘ breve	▨	IJ dutch	ij dutch	6
07			' apostr.	7	G	W	g	w			§ section	· cent dot	· dot	▨	Ŀ catalan	ŀ catalan	7
10			(	8	H	X	h	x			▨	÷ divide	¨ diaresis	▨	Ł polish	ł polish	8
11			)	9	I	Y	i	y			' left q.	' right q.	▨	▨	Ø norweg.	ø norweg.	9
12			*	:	J	Z	j	z			" left q.	" right q.	° ring	▨	Œ dipth.	œ dipth.	A
13			+	;	K	[	k	{			« left q.	» right q.	¸ cedilla	▨	º spanish	ß german	B
14			,	<	L	\	l	|			←	¼ en frac.	— undrline	⅛ en frac.	Þ iceland	þ iceland	C
15			— neutral	=	M	]	m	}			↑	½ en frac.	˝ db acute	⅜ en frac.	Ŧ lapp	ŧ lapp	D
16			.	>	N	^ spacing	n	~ spacing			→	¾ en frac.	˛ ogonek	⅝ en frac.	Ŋ lapp	ŋ lapp	E
17			/	?	O	_ low bar	o	▨			↓	¿ spanish	ˇ hachek	⅞ en frac.	'n s. africa	▨	F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

▨ Char Set Select Code   ▨ Reserved Not Used   ▨ Reserved Unassigned

XEROX
Character Set 041₈
Symbols 1 - Japanese Punctuation and Mathematical Symbols

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00					⋖	<	≦	≦				⊀	≠	⊀	⊀	⊀	0
01			Kanji space		⋗	>	≧	≧			≼	⋨	⊊	≯	≯	⊁	1
02			､ comma		‖ parallel	⩽	≠ not =	≦			≽	≉	⊋	⋨	⋨	⊁	2
03			｡ period	ヽ rpt kata.	⊩	⩾	≲	⋛			⪷	⋩	⊄	≵	≥	⋩	3
04			, comma	ヾ rpt kata.	… em lead.	⋜	≳	⫙			⪸	⩾	⊅	≴	≴	⊁	4
05			. period	ゝ rpt hira.	‥ em lead.	⋝	≤ < or =	⫛			⌣	≀	⊆	≩	≩	≩	5
06			ゞ rpt hira.	⋘	「 l quote	≥ > or =	‖			⌢	⋈	⊇	⋨	≴	⋨	6
07			〃 ditto	⋙	」 r quote	∞ infinity	⊖				⊢	⊊		≠	≉	7
10			⚏ reduplic.	⟦	『 l. quote	∴ therefor	⊛			÷	⊬	⊋				8
11			⅃ rpt kanji	⟧	』 r. quote	♂ male	☆ star			≗	⊮	⊀				9
12			⚐ shime	⟦	【 l. brack.	♀ female	★ star			⊼	⊭	⊁				A
13			゙ daku-on	○ knji zero	】	】 r. brack.	‴	○ circle			≜	⋪	≣				B
14			゚ handaku	― lng vow.	(l. brack.	⊑	′ minutes	● circle			⋔	⊳	≢				C
15				) r. brack.	⊒	″ seconds	◎ bulls eye			∐	⋬				― Sum. con	D
16			- hyphen	⋚	⊆	℃ celsius	◇ diamon.			⁂	⋭				― Sum conn	E
17				⋛	⊇	⊩				◊	≠					F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 042₈
Symbols 2 - Japanese and Mathematical Symbols

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00	▨	▨	(unassigned)	⊟	⇐	⇁	⇑	△	▨	▨		⊑	^	_P_	(	•	0
01	▨	▨	◆ diamon.	⊠	⇒	↱	⇓	≪	▨	▨	&	⊐	_A_	_Q_	|	⌐	1
02	▨	▨	□ square	⊙	⇈	↜	≑ image of	≫	▨	▨	≡	∧	_B_	_R_	(	⌐	2
03	▨	▨	■ square	(unassigned)	⇊	⊸	≒	⊕	▨	▨	∆	∨	_C_	_S_	|	∟	3
04	▨	▨	△ triangle	(unassigned)	⇐	≔	≍	⊖	▨	▨	1̲	▲	_D_	_T_	)	⌐	4
05	▨	▨	▲ triangle	(unassigned)	⇒	=:	≦	⊗	▨	▨	ε̲	▼	_E_	_U_	|	⊙	5
06	▨	▨	▽ inv. tri.	(unassigned)	⇇	↤	≧	⊘	▨	▨	℘	⊔	_F_	_V_	)	√	6
07	▨	▨	▼ inv. tri.	(unassigned)	⇶	↢	↔	~	▨	▨	∅	∏	_G_	_W_	ℚ	|	7
10	▨	▨	※ kome	(unassigned)	↑	→	⇛	≈	▨	▨	ℜ	◁	_H_	_X_	⊞	╲	8
11	▨	▨	〒 post off.	(unassigned)	↓	→	⇚	α	▨	▨	ℑ	∋	_I_	_Y_	⊕	∠	9
12	▨	▨	'	—	↾	↪	∬ db integ	∫	▨	▨	⊥	ε̄	_J_	_Z_	⊕	╲	A
13	▨	▨	'	⸗	↓	↩	↦	▽	▨	▨	⊎	▷	_K_	|	⊗	╱	B
14	▨	▨	"	*⁄**	↤	←	⋈	℧	▨	▨	⊨	◁	_L_	|	⊙	⌐	C
15	▨	▨	—	⧖	↣	→	★	ℓ	▨	▨	⊔	⊙	_M_	—	£	—	D
16	▨	▨	= geta	‰	↫	⇐	♮	○ lg circle	▨	▨	⊓	⌢	_N_	|	↵	⟩	E
17	▨	▨	田	(unassigned)	↬	⇒	⌣	▨	▨	▨	⊎	⁻	_O_	□	↳	▨	F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code   Reserved Not Used   Reserved Unassigned

XEROX
Character Set 043₈
Extended Latin Alphabet

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00							`					ʻ ayn	? tone				0
01				`	ℬ		ɓ					ʻ alif	∕	᷍ rude			1
02			¨	ʼ	Ɗ		ɗ				ʻ	, l. quote	↔	᷍ l. hook			2
03			´	^	K		ƙ					⁀ tie bar	‾ overline				3
04			¯	~	Oʼ		ɤ					᷃	᷄	˚ lw circle			4
05			˘	¯	Uʼ		ʊ					᷅	᷆	˘ 1/2 circle			5
06			·	˘	Ə		ə					᷇	᷈	. low dot			6
07			ʼ	·	℧		℧					᷉	᷊	¨ db dot			7
10			°	¨	Z		z					→	←				8
11			˜									∕	¨ umlaut	= db udine			9
12			˛	°								ˆ		' vert. bar			A
13			ˇ	˛								˜	, comma	ˆ circum			B
14			˛								♭ flat	# sharp	ʻ inv. com				C
15				˝								ʻ mjagkij		⁀ i. ligat.			D
16				˛			—				℗ snd cpyr.	˝ tverdyj	ʼ horn	⁀ r. ligat.			E
17				ˇ							ʒ Lt. ounce	ˆ		˜ r tilde			F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 044₈
Japanese Hiragana Syllabary and Chinese Bo-po-mo-fo

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				ぐ gu	だ da	ば ba	む mu	ゐ wi				イ ch	ㄤ ang				0
01			あ a	け ke	ち chi	ぱ pa	め me	ゑ we			ㄅ b	ㄕ sh	ㄥ eng				1
02			あ a	げ ge	ぢ ji	ひ hi	も mo	を n			ㄆ p	ㄖ r	ㄦ er				2
03			い i	こ ko	っ tsu	び bi	や ya	ん n			ㄇ m	ㄗ z	ㄧ i				3
04			い i	ご go	つ tsu	ぴ pi	や ya				ㄈ f	ㄘ c	ㄨ u				4
05			う u	さ sa	づ zu	ふ fu	ゆ yu				ㄉ d	ㄙ s	ㄩ iu				5
06			う u	ざ za	て te	ぶ bu	ゆ yu				ㄊ t	ㄚ a	´ tone 2				6
07			え e	し shi	で de	ぷ pu	よ yo				ㄋ n	ㄛ o	ˇ tone 3				7
10			え e	じ ji	と to	へ he	よ yo				ㄌ l	ㄜ e	` tone 4				8
11			お o	す su	ど do	べ be	ら ra				ㄍ g	ㄝ eh	˙ tone 5				9
12			お o	ず zu	な na	ぺ pe	り ri				ㄎ k	ㄞ ai	‾ tone 1				A
13			か ka	せ se	に ni	ほ ho	る ru				ㄏ h	ㄟ ei	ㄫ ng				B
14			が ga	ぜ ze	ぬ nu	ぼ bo	れ re				ㄐ j	ㄠ au					C
15			き ki	そ so	ね ne	ぽ po	ろ ro				ㄑ q	ㄡ ou					D
16			ぎ gi	ぞ zo	の no	ま ma	わ wa				ㄒ x	ㄢ an					E
17			く ku	た ta	は ha	み mi	わ wa				ㄓ zh	ㄣ en					F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 045₈
Japanese Katakana Syllabary

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				グ gu	ダ da	バ ba	ム mu	ヰ w									0
01			ア a	ケ ke	チ chi	パ pa	メ me	ヱ we									1
02			ア a	ゲ ge	ヂ ji	ヒ hi	モ mo	ヲ wo									2
03			イ i	コ ko	ッ tsu	ビ bi	ヤ ya	ン n									3
04			イ i	ゴ go	ッ tsu	ピ pi	ヤ ya	ヴ vu									4
05			ウ u	サ sa	ヅ zu	フ fu	ユ yu	カ ka									5
06			ウ u	ザ za	テ te	ブ bu	ユ yu	ケ ke									6
07			エ e	シ shi	デ de	プ pu	ヨ yo										7
10			エ e	ジ ji	ト to	ヘ he	ヨ yo										8
11			オ o	ス su	ド do	ベ be	ラ ra										9
12			オ o	ズ zu	ナ na	ペ pe	リ ri										A
13			カ ka	セ se	ニ ni	ホ ho	ル ru										B
14			ガ ga	ゼ ze	ヌ nu	ボ bo	レ re										C
15			キ ki	ソ so	ネ ne	ポ po	ロ ro										D
16			ギ gi	ゾ zo	ノ no	マ ma	ワ wa										E
17			ク ku	タ ta	ハ ha	ミ mi	ワ wa										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Legend:
- Char Set Select Code
- Reserved Not Used
- Reserved Unassigned

XEROX
Character Set 046₈
Greek Alphabet

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00					५	N nu	५	ν nu					᛫	Ἀ		ἀ	0
01					A alpha	Ξ xi	α alpha	ξ xi					ᛌ	Ἐ		ἐ	1
02					B beta	O omicron	β beta	o omicron					ᛝ	Ἠ		ἠ	2
03						Π pi	ϐ md beta	π pi					ᛪ	Ἰ		ἰ	3
04			'	' hi prime	Γ gamma	Ϙ koppa	γ gamma	ϙ koppa					ᛘ	Ὀ		ὀ	4
05			' lenis	' lo prime	Δ delta	P rho	δ delta	ρ rho					'	Ὑ		ὑ	5
06			' asper		E epsilon	Σ sigma	ε epsilon	σ sigma					`	Ὠ		ὠ	6
07			ˌ sub-iota		Ϛ stigma		ς stigma	ϛ fi. sigma					~	Ϊ		ϊ	7
10					F digam.	T tau	ϝ digam.	τ tau					ᛦ	Ύ		ϋ	8
11					Z zeta	Y upsilon	ζ zeta	υ upsilon					ᛣ	Ϊ		ϊ	9
12					H eta	Φ phi	η eta	φ phi					ᛠ	Ὺ		ϋ	A
13				· full stop	Θ theta	X chi	θ theta	χ chi					ᛯ				B
14					I iota	Ψ psi	ι iota	ψ psi					ᛞ				C
15					K kappa	Ω omega	κ kappa	ω omega					᛭				D
16					Λ lambda	Ϡ sampi	λ lambda	ϡ sampi					ᛢ				E
17					M mu		μ mu						ᛥ				F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Legend:

- ▧ Char Set Select Code
- ▨ Reserved Not Used
- ▦ Reserved Unassigned

XEROX
Character Set 047$_8$
Cyrillic Alphabet

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00	▨	▨	▨	О (o)	Ю (yu)	▨	о (o)	ю (yu)	▨	▨		Ĕ	Ö	▨	ĕ	ö	0
01	▨	▨	А (a)	П (pe)	Я (ya)	а (a)	п (pe)	я (ya)	▨	▨	Џ (serb. dj)	Ӂ	▨	џ (serb. dj)	ӂ	▨	1
02	▨	▨	Б (be)	Р (er)	Ґ (ukr. g)	б (be)	р (er)	ґ (ukr. g)	▨	▨	Ѣ (yat)	Җ	Ԥ	ѣ (yat)	җ	ԥ	2
03	▨	▨	В (ve)	С (es)	Ђ (serb. dj)	в (ve)	с (es)	ђ (sserb. dj)	▨	▨	Ѳ (flta)	Ӟ	Ç	ѳ (flta)	ӟ	ç	3
04	▨	▨	Г (ghe)	Т (te)	Ѓ (mace. dj)	г (ghe)	т (te)	ѓ (mace. dj)	▨	▨	Ѵ (izhitsa)	Ҙ	Ç	ѵ (izhitsa)	ҙ	ç	4
05	▨	▨	Д (de)	У (u)	Є (ukr.ye)	д (de)	у (u)	є (ukr.ye)	▨	▨	Ѫ (bulg. yus)	Й	Ҭ	ѫ (bulg. yus)	й	ҭ	5
06	▨	▨	Е (e)	Ф (ef)	Ѕ (ma. zeio)	е (e)	ф (ef)	ѕ (ma. zeio)	▨	▨	Q	Й	Ц (Ṯ)	q	й	ц	6
07	▨	▨	Ё (yo)	Х (ha)	І (ukr. i)	ё (yo)	х (ha)	і (ukr. i)	▨	▨	W	Ӣ	У́	w	ӣ	у́	7
10	▨	▨	Ж (zhe)	Ц (tse)	Ї (ukr. T)	ж (zhe)	ц (tse)	ї (ukr. T)	▨	▨	Y	Қ	Ӱ	y	қ	ӱ	8
11	▨	▨	З (ze)	Ч (che)	Ј (serb. je)	з (ze)	ч (che)	ј (serb. je)	▨	▨	Á	Ҝ	Ӳ	á	ҝ	ӳ	9
12	▨	▨	И (i)	Ш (sha)	Љ (serb. l)	и (i)	ш (sha)	љ (serb. l)	▨	▨	Ä	Қ	▨	ä	қ	▨	A
13	▨	▨	Й (short i)	Щ (shcha)	Њ (serb. n)	й (short i)	щ (shcha)	њ (serb.n)	▨	▨	Ă	Ҡ	Ӯ	ă	ҡ	ӯ	B
14	▨	▨	К (ka)	Ъ (er)	Ћ (serb. t)	к (ka)	ъ (er)	ћ (serb. t)	▨	▨	Æ	К̢	Х	æ	к̢	х	C
15	▨	▨	Л (el)	Ы (ery)	Ќ (mace. k)	л (el)	ы (ery)	ќ (mace. k)	▨	▨	F	Ң	Х̧	ғ	ң	х̧	D
16	▨	▨	М (em)	Ь (soft sign)	Ў (byel. u)	м (em)	ь (soft sign)	ў (byel. u)	▨	▨	Ƃ	Ҥ	Ӵ	ƅ	ҥ	ӵ	E
17	▨	▨	Н (en)	Э (rev. e)	▨	н (en)	э (rev. e)	▨	▨	▨	É	Ó	▨	é	ó	▨	F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Legend:
- ▨ Char Set Select Code
- ▨ Reserved Not Used
- ▨ Reserved Unassigned

XEROX
Character Set 050$_8$
Forms & Mosaic Characters

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				⌟	+	⊣	⊩					▪			▪	▬	0
01				∟	⋮	⊣	=				▪	⋮			⋮	▪▪	1
02				⊢	⋮	⊓	⊹				▪	⋮			⋮	▪▬	2
03			⌐	⊤		⊐	⊥				▬	⋮			⋮	▬	3
04			⌐	⊣		⊣	⊥				▪	▮			▪	▙	4
05			⌟	⊥		‖	⊤				▮	▮			▙	▙	5
06			∟			⊓	⊓				▪▪	▟			◂	▟	6
07			⊢	⊢		⊔	⊔				▟	▟			▜	▛	7
10			⊤	⊤		⊔	⊏				▪	▟			▮	▟	8
11			⊣	⊣		⊔	⊏				▪▪	⋰			▜	▜	9
12			⊥	⊥		⊨	⊓				▮	◢			▮	◢	A
13				+		⊩	⊹				◥	◣			◥	◣	B
14				⊢		⊑	⊹				▬	▟			◥	▪	C
15				⊤		⊩					▙	⊩			▙	▟	D
16			▟	⊣		⊥					◢	▟			◢	◢	E
17			◥	⊥		⊤					▪	▟			◥	◥	F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 051$_8$
Runic and Gothic Alphabets

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				Ⱡ	N	+	⅄	ſ				Ⱨ	)			G	0
01			Ⱶ	⅃	N	Φ	ⱶ	B			□	Ⱨ	'		Ⰰ	n	1
02			Ⱶ	R	H	Φ	Ψ	B			X	ȵ	`		ⰼ	п	2
03			Ⱶ	R	⚌	ⱴ	⚌	B			Ⱦ	ȵ	(		г	ц	3
04			ꓵ	R	⚌	N	ı	Ⰱ			Ⱥ	Ⱨ	⊥		ⰴ	ⱦ	4
05			Ⰽ	‹	ł	ℓ	⚌	Ⱶ			Ⱶ	ⱬ	'		є	s	5
06			Ⱶ	∧	⚌	ſ	⚌	Ɱ			Ⱦ	Ⱳ	`		u	т	6
07			Þ	Ⱶ	⚌	Ⱶ	⚌	Ɱ			Ⱶ	Ⱳ	I		z	Y	7
10			Þ	Ⱶ	ℓ	Z	ⱶ	ⱨ			ⱶ	Ⱶ	´		h	Ⱶ	8
11			D	Ⱶ	⚌	Ⱪ	ⱴ	Y			ⱶ	Ⱶ	'		ф	x	9
12			Þ	X	Ⱶ	Ⱪ	3	Ψ			ⱶ	ⱨ	'		ï	ө	A
13			Ⱶ	Ⱶ	l	Ⱪ	ⱴ	İ			Ⱶ	Ж	'		ı	Ω	B
14			Ⱶ	Ⱶ	6	Ⱶ	Ⱶ	Ф			Ⱶ	Ⱶ	¦		к	↑	C
15			ⱦ	Ⱶ	ᵴ	h	ı	Ⱶ			h	Ж	`		λ		D
16			ⱦ	P	Ⱶ	B	↑	◇			h	Ж	¦		м		E
17			Ⱶ	N	ⱱ	Y	1				Ⱶ	l			N		F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Legend:
- Char Set Select Code
- Reserved Not Used
- Reserved Unassigned

XEROX
Character Set 052₈
Extended Cyrillic

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				ҫ	Ғ		ҫ	ғ									0
01			Ч	Ҩ	Ѳ	ч	ҩ	ѳ									1
02			Ҷ	Ý	Ӂ	ҷ	ý	ӂ									2
03			Ҹ	Ұ	Һ	ҹ	ұ	һ									3
04			Ӭ			ӭ											4
05																	5
06			Ю́			ю́											6
07				Ё			ё										7
10			Я́	Ӛ		я́	ӛ										8
11				Ӟ			ӟ										9
12			Ѣ			ѣ											A
13			Ӹ	Ӧ		ӹ	ӧ										B
14			Ы́			ы́											C
15			Э́			э́											D
16			Ә			ә											E
17			ҽ			ҽ											F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 056₈
Decorated Rules

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				∼													0
01			—	≈													1
02			—	∞													2
03			—	⚬													3
04			-----	⫾⫾⫾													4
05			-·-·	⩬													5
06			··-···	⦚⦚⦚													6
07			— —	⦙⦙⦙													7
10			·····	⊶													8
11			═														9
12			=														A
13			═														B
14			▬														C
15			▬														D
16			▬														E
17			∼														F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 057₈
Vertically Written Japanese Symbols

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				⌣	あ	ヤ	‖Λ	‖									0
01			ヽ	⌐	い	ユ	‖V	▮									1
02			°	⌣	う	ヨ	‖	▮									2
03				⌢	え	ワ	|	▮									3
04			|	⌣	お	カ	|	}									4
05			|	˄	つ	ケ	‖	}									5
06			|	˅	や	,	|	⟨									6
07			·	˄	ゆ	·	|	⟨									7
10			⌇	˅	よ	,	|	⟨									8
11			=	⌐	わ	`	⋮	⫶									9
12			—	⌐	ア	″	┊	⫶									A
13			⋮	⌐	イ	"	┊	⫶									B
14			⋮	⌐	ウ	|	┊	⫶									C
15			⌢	▀	エ	╫	⋮	↕									D
16			⌣	▬	オ	Λ	‖	·									E
17			⌢	‖	ツ	V	‖										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 060₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				旭	粟	夷	萎	稲									0
01			亜	葦	裕	委	衣	茨									1
02			唖	芦	安	威	謂	芋									2
03			娃	鯵	庵	尉	違	鰯									3
04			阿	梓	按	惟	遺	允									4
05			哀	圧	暗	意	医	印									5
06			愛	斡	案	慰	井	咽									6
07			挨	扱	闇	易	亥	員									7
10			姶	宛	鞍	椅	域	因									8
11			逢	姐	杏	為	育	姻									9
12			葵	虻	以	畏	郁	引									A
13			茜	飴	伊	異	磯	飲									B
14			穐	絢	位	移	一	淫									C
15			悪	綾	依	維	壱	胤									D
16			握	鮎	偉	緯	溢	蔭									E
17			渥	或	囲	胃	逸										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 061$_8$
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				碓	雲	頴	園	艶									0
01			院	臼	荏	英	堰	苑									1
02			陰	渦	餌	衛	奄	薗									2
03			隠	嘘	叡	詠	宴	遠									3
04			韻	唄	営	鋭	延	鉛									4
05			吋	欝	嬰	液	怨	鴛									5
06			右	蔚	影	疫	掩	塩									6
07			宇	鰻	映	益	援	於									7
10			烏	姥	曳	駅	沿	汚									8
11			羽	厩	栄	悦	演	甥									9
12			迂	浦	永	謁	炎	凹									A
13			雨	瓜	泳	越	焔	央									B
14			卯	閏	洩	閲	煙	奥									C
15			鵜	噂	瑛	榎	燕	往									D
16			窺	云	盈	厭	猿	応									E
17			丑	運	頴	円	縁										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 062₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				屋	伽	火	迦	介									0
01			押	憶	価	珂	過	会									1
02			旺	臆	佳	禍	霞	解									2
03			横	桶	加	禾	蚊	回									3
04			欧	牡	可	稼	俄	塊									4
05			殴	乙	嘉	箇	峨	壊									5
06			王	俺	夏	花	我	廻									6
07			翁	卸	嫁	苛	牙	快									7
10			襖	恩	家	茄	画	怪									8
11			鴬	温	寡	荷	臥	悔									9
12			鴎	穏	科	華	芽	恢									A
13			黄	音	暇	菓	蛾	懐									B
14			岡	下	果	蝦	賀	戒									C
15			沖	化	架	課	雅	拐									D
16			荻	仮	歌	嘩	餓	改									E
17			億	何	河	貨	駕										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 063₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360		Hex
00				外	垣	覚	橿	叶										0
01			魁	咳	柿	角	梶	椛										1
02			晦	害	蛎	赫	鰍	樺										2
03			械	崖	鈎	較	潟	鞄										3
04			海	慨	劃	郭	割	株										4
05			灰	概	嚇	閣	喝	兜										5
06			界	涯	各	隔	恰	竃										6
07			皆	碍	廓	革	括	蒲										7
10			絵	蓋	拡	学	活	釜										8
11			芥	街	撹	岳	渇	鎌										9
12			蟹	該	格	楽	滑	噛										A
13			開	鎧	核	額	葛	鴨										B
14			階	骸	殻	顎	褐	栢										C
15			貝	浬	獲	掛	轄	茅										D
16			凱	馨	確	笠	且	萱										E
17			劾	蛙	穫	樫	鰹											F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F		

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 064₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				完	汗	莞	巌	基									0
01			粥	官	漢	観	玩	奇									1
02			刈	寛	澗	諌	癌	嬉									2
03			苅	干	潅	貫	眼	寄									3
04			瓦	幹	環	還	岩	岐									4
05			乾	患	甘	鑑	翫	希									5
06			侃	感	監	間	贋	幾									6
07			冠	慣	看	閑	雁	忌									7
10			寒	憾	竿	関	頑	揮									8
11			刊	換	管	陥	顔	机									9
12			勘	敢	簡	韓	願	旗									A
13			勧	柑	緩	館	企	既									B
14			巻	桓	缶	舘	伎	期									C
15			喚	棺	翰	丸	危	棋									D
16			堪	款	肝	含	喜	棄									E
17			姦	歓	艦	岸	器										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 065₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				軌	祇	黍	朽	巨									0
01			機	輝	義	却	求	拒									1
02			帰	飢	蟻	客	汲	拠									2
03			毅	騎	誼	脚	泣	挙									3
04			気	鬼	議	虐	灸	渠									4
05			汽	亀	掬	逆	球	虚									5
06			畿	偽	菊	丘	究	許									6
07			祈	儀	鞠	久	窮	距									7
10			季	妓	吉	仇	笈	鋸									8
11			稀	宜	吃	休	級	漁									9
12			紀	戯	喫	及	糾	禦									A
13			徽	技	桔	吸	給	魚									B
14			規	擬	橘	宮	旧	亨									C
15			記	欺	詰	弓	牛	享									D
16			貴	犠	砧	急	去	京									E
17			起	疑	杵	救	居										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 066$_8$
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				彊	鏡	勤	謹	駒									0
01			供	怯	響	均	近	具									1
02			俠	恐	饗	巾	金	愚									2
03			僑	恭	驚	錦	吟	虞									3
04			兇	挾	仰	斤	銀	喰									4
05			競	教	凝	欣	九	空									5
06			共	橋	尭	欽	倶	偶									6
07			凶	況	暁	琴	句	寓									7
10			協	狂	業	禁	区	遇									8
11			匡	狭	局	禽	狗	隅									9
12			卿	矯	曲	筋	玖	串									A
13			叫	胸	極	緊	矩	櫛									B
14			喬	脅	玉	芹	苦	釧									C
15			境	興	桐	菌	躯	屑									D
16			峡	蕎	粁	衿	駆	屈									E
17			強	郷	僅	襟	駈										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code　　Reserved Not Used　　Reserved Unassigned

XEROX
Character Set 067₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				薫	契	経	劇	倹									0
01			掘	訓	形	継	戟	倦									1
02			窟	群	径	繋	撃	健									2
03			沓	軍	恵	罫	激	兼									3
04			靴	郡	慶	茎	隙	券									4
05			轡	卦	慧	荊	桁	剣									5
06			窪	袈	憩	蛍	傑	喧									6
07			熊	祁	掲	計	欠	圏									7
10			隈	係	携	詣	決	堅									8
11			粂	傾	敬	警	潔	嫌									9
12			栗	刑	景	軽	穴	建									A
13			繰	兄	桂	頚	結	憲									B
14			桑	啓	渓	鶏	血	懸									C
15			鍬	圭	畦	芸	訣	拳									D
16			勲	珪	稽	迎	月	捲									E
17			君	型	系	鯨	件										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 070$_8$
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				鍵	言	湖	伍	乞									0
01			検	険	諺	狐	午	鯉									1
02			権	顕	限	糊	呉	交									2
03			牽	験	乎	袴	吾	佼									3
04			犬	鹸	個	股	娯	侯									4
05			献	元	古	胡	後	候									5
06			研	原	呼	菰	御	倖									6
07			硯	厳	固	虎	悟	光									7
10			絹	幻	姑	誇	梧	公									8
11			県	弦	孤	跨	檎	功									9
12			肩	減	己	鈷	瑚	効									A
13			見	源	庫	雇	碁	勾									B
14			謙	玄	弧	顧	語	厚									C
15			賢	現	戸	鼓	誤	口									D
16			軒	絃	故	五	護	向									E
17			遣	舷	枯	互	醐										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 071₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				弘	浩	腔	項	告									0
01			后	恒	港	膏	香	国									1
02			喉	慌	溝	航	高	穀									2
03			坑	抗	甲	荒	鴻	酷									3
04			垢	拘	皇	行	剛	鵠									4
05			好	控	硬	衡	劫	黒									5
06			孔	攻	稿	講	号	獄									6
07			孝	昂	糠	貢	合	漉									7
10			宏	晃	紅	購	壕	腰									8
11			工	更	紘	郊	拷	甑									9
12			巧	杭	絞	酵	濠	忽									A
13			巷	校	綱	鉱	豪	惚									B
14			幸	梗	耕	砿	轟	骨									C
15			広	構	考	鋼	麹	狛									D
16			庚	江	肯	閤	克	込									E
17			康	洪	肱	降	刻										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 072₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				紺	裟	歳	材	咋									0
01			此	艮	坐	済	罪	搾									1
02			頃	魂	座	災	財	昨									2
03			今	些	挫	采	冴	朔									3
04			困	佐	債	犀	坂	柵									4
05			坤	叉	催	砕	阪	窄									5
06			墾	唆	再	砦	堺	策									6
07			婚	嵯	最	祭	榊	索									7
10			恨	左	哉	斎	肴	錯									8
11			懇	差	塞	細	咲	桜									9
12			昏	査	妻	菜	崎	鮭									A
13			昆	沙	宰	裁	埼	笹									B
14			根	瑳	彩	載	碕	匙									C
15			梱	砂	才	際	鷺	冊									D
16			混	詐	採	剤	作	刷									E
17			痕	鎖	栽	在	削										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 073₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				三	酸	姉	死	諮									0
01			察	傘	饗	姿	氏	資									1
02			拶	参	斬	子	獅	賜									2
03			撮	山	暫	屍	祉	雌									3
04			擦	惨	残	市	私	飼									4
05			札	撒	仕	師	糸	歯									5
06			殺	散	仔	志	紙	事									6
07			薩	桟	伺	思	紫	似									7
10			雑	燦	使	指	肢	侍									8
11			皐	珊	刺	支	脂	児									9
12			鯖	産	司	孜	至	字									A
13			捌	算	史	斯	視	寺									B
14			錆	纂	嗣	施	詞	慈									C
15			鮫	蚕	四	旨	詩	持									D
16			皿	讃	士	枝	試	時									E
17			晒	賛	始	止	誌										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 074₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				式	疾	斜	酌	腫									0
01			次	識	質	煮	釈	趣									1
02			滋	鴫	実	社	錫	酒									2
03			治	竺	蔀	紗	若	首									3
04			爾	軸	篠	者	寂	儒									4
05			璽	宍	偲	謝	弱	受									5
06			痔	雫	柴	車	惹	呪									6
07			磁	七	芝	遮	主	寿									7
10			示	叱	屡	蛇	取	授									8
11			而	執	蕊	邪	守	樹									9
12			耳	失	縞	借	手	綬									A
13			自	嫉	舎	勺	朱	需									B
14			蒔	室	写	尺	殊	囚									C
15			辞	悉	射	杓	狩	収									D
16			汐	湿	捨	灼	珠	周									E
17			鹿	漆	赦	爵	種										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 075₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				衆	柔	出	準	署									0
01			宗	襲	汁	術	潤	書									1
02			就	讐	渋	述	盾	薯									2
03			州	蹴	獣	俊	純	諸									3
04			修	輯	縦	峻	巡	諸									4
05			愁	週	重	春	遵	助									5
06			拾	酋	銃	瞬	醇	叙									6
07			洲	酬	叔	竣	順	女									7
10			秀	集	夙	舜	処	序									8
11			秋	醜	宿	駿	初	徐									9
12			終	什	淑	准	所	恕									A
13			繍	住	祝	循	暑	鋤									B
14			習	充	縮	旬	曙	除									C
15			臭	十	粛	楯	渚	傷									D
16			舟	従	塾	殉	庶	償									E
17			蒐	戎	熟	淳	緒										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 076₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				尚	樟	笑	鉦	情									0
01			勝	庄	樵	粧	鍾	擾									1
02			匠	床	沼	紹	鐘	条									2
03			升	廠	消	肖	障	杖									3
04			召	彰	渉	菖	鞘	浄									4
05			哨	承	湘	蒋	上	状									5
06			商	抄	焼	蕉	丈	畳									6
07			唱	招	焦	衝	丞	穣									7
10			嘗	掌	照	裳	乗	蒸									8
11			奨	捷	症	訟	冗	譲									9
12			妾	昇	省	証	剰	醸									A
13			娼	昌	硝	詔	城	錠									B
14			宵	昭	礁	詳	場	嘱									C
15			将	晶	祥	象	壌	埴									D
16			小	松	称	賞	嬢	飾									E
17			少	梢	章	醤	常										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 077₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				唇	神	塵	逗	瑞									0
01			拭	娠	秦	壬	吹	髄									1
02			植	寝	紳	尋	垂	崇									2
03			殖	審	臣	甚	帥	嵩									3
04			燭	心	芯	尽	推	数									4
05			織	慎	薪	腎	水	枢									5
06			職	振	親	訊	炊	趨									6
07			色	新	診	迅	睡	雛									7
10			触	晋	身	陣	粋	据									8
11			食	森	辛	靭	翠	杉									9
12			蝕	榛	進	笥	衰	椙									A
13			辱	浸	針	諏	遂	菅									B
14			尻	深	震	須	酔	頗									C
15			伸	申	人	酢	錐	雀									D
16			信	疹	仁	図	錘	裾									E
17			侵	真	刃	厨	随										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 100$_8$
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				整	誓	石	窃	扇									0
01			澄	星	請	積	節	撰									1
02			摺	晴	逝	籍	説	栓									2
03			寸	棲	醒	績	雪	栴									3
04			世	栖	青	脊	絶	泉									4
05			瀬	正	静	責	舌	浅									5
06			畝	清	斉	赤	蝉	洗									6
07			是	牲	税	跡	仙	染									7
10			凄	生	脆	蹟	先	潜									8
11			制	盛	隻	碩	千	煎									9
12			勢	精	席	切	占	煽									A
13			姓	聖	惜	拙	宣	旋									B
14			征	声	戚	接	専	穿									C
15			性	製	斥	摂	尖	箭									D
16			成	西	昔	折	川	線									E
17			政	誠	析	設	戦										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 101₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				前	狙	双	操	草									0
01			繊	善	疏	叢	早	荘									1
02			羨	漸	疎	倉	曹	葬									2
03			腺	然	礎	喪	巣	蒼									3
04			舛	全	祖	壮	槍	藻									4
05			船	禅	租	奏	槽	装									5
06			薦	繕	粗	爽	漕	走									6
07			詮	膳	素	宋	燥	送									7
10			賎	糎	組	層	争	遭									8
11			践	噌	蘇	匝	痩	鎗									9
12			選	塑	訴	惣	相	霜									A
13			遷	岨	阻	想	窓	騒									B
14			銭	措	遡	捜	糟	像									C
15			銑	曾	鼠	掃	総	増									D
16			閃	曽	僧	挿	綜	憎									E
17			鮮	楚	創	掻	聡										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 102₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				属	太	対	退	宅									0
01			臓	賊	汰	耐	逮	托									1
02			蔵	族	詫	岱	隊	択									2
03			贈	続	唾	帯	黛	拓									3
04			造	卒	堕	待	鯛	沢									4
05			促	袖	妥	怠	代	濯									5
06			側	其	惰	態	台	琢									6
07			則	揃	打	戴	大	託									7
10			即	存	柁	替	第	鐸									8
11			息	孫	舵	泰	醍	濁									9
12			捉	尊	楕	滞	題	諾									A
13			束	損	陀	胎	鷹	茸									B
14			測	村	駄	腿	滝	凧									C
15			足	遜	騨	苔	瀧	蛸									D
16			速	他	体	袋	卓	只									E
17			俗	多	堆	貸	啄										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 103₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				丹	胆	弛	逐	註									0
01			叩	単	蛋	恥	秩	酎									1
02			但	嘆	誕	智	窒	鋳									2
03			達	坦	鍛	池	茶	駐									3
04			辰	担	団	痴	嫡	樗									4
05			奪	探	壇	稚	着	瀦									5
06			脱	旦	弾	置	中	猪									6
07			巽	歎	断	致	仲	苧									7
10			竪	淡	暖	蜘	宙	著									8
11			辿	湛	檀	遅	忠	貯									9
12			棚	炭	段	馳	抽	丁									A
13			谷	短	男	築	昼	兆									B
14			狸	端	談	畜	柱	凋									C
15			鱈	箪	値	竹	注	喋									D
16			樽	綻	知	筑	虫	寵									E
17			誰	耽	地	蓄	衷										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 104₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				聴	沈	槻	釣	悌									0
01			帖	脹	珍	佃	鶴	抵									1
02			帳	腸	賃	漬	亭	挺									2
03			庁	蝶	鎮	柘	低	提									3
04			弔	調	陳	辻	停	梯									4
05			張	諜	津	蔦	偵	汀									5
06			彫	超	墜	綴	剃	碇									6
07			徴	跳	椎	鍔	貞	禎									7
10			懲	銚	槌	椿	呈	程									8
11			挑	長	追	潰	堤	締									9
12			暢	頂	鎚	坪	定	艇									A
13			朝	鳥	痛	壷	帝	訂									B
14			潮	勅	通	嬬	底	諦									C
15			牒	捗	塚	紬	庭	蹄									D
16			町	直	栂	爪	廷	逓									E
17			眺	朕	掴	吊	弟										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code	Reserved Not Used	Reserved Unassigned

XEROX
Character Set 105₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				徹	点	登	凍	盗									0
01			邸	撤	伝	菟	刀	淘									1
02			鄭	轍	殿	賭	唐	湯									2
03			釘	迭	澱	途	塔	涛									3
04			鼎	鉄	田	都	塘	灯									4
05			泥	典	電	鍍	套	燈									5
06			摘	填	兎	砥	宕	当									6
07			擢	天	吐	砺	島	痘									7
10			敵	展	堵	努	嶋	祷									8
11			滴	店	塗	度	悼	等									9
12			的	添	妬	土	投	答									A
13			笛	纏	屠	奴	搭	筒									B
14			適	甜	徒	怒	東	糖									C
15			鏑	貼	斗	倒	桃	統									D
16			溺	転	杜	党	梼	到									E
17			哲	顛	渡	冬	棟										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 106₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				動	得	鳶	奈	軟									0
01			董	同	徳	苫	那	難									1
02			蕩	堂	涜	寅	内	汝									2
03			藤	導	特	酉	乍	二									3
04			討	憧	督	瀞	凪	尼									4
05			謄	撞	禿	噸	薙	弐									5
06			豆	洞	篤	屯	謎	迩									6
07			踏	瞳	毒	惇	灘	匂									7
10			逃	童	独	敦	捺	賑									8
11			透	胴	読	沌	鍋	肉									9
12			鐙	萄	栃	豚	楢	虹									A
13			陶	道	橡	遁	馴	廿									B
14			頭	銅	凸	頓	縄	日									C
15			騰	峠	突	呑	畷	乳									D
16			闘	鴇	椴	曇	南	入									E
17			働	匿	届	鈍	楠										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 107₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				念	農	俳	楳	柏									0
01			如	捻	覗	廃	煤	泊									1
02			尿	撚	蚤	拝	狽	白									2
03			韮	燃	巴	排	買	箔									3
04			任	粘	把	敗	売	粕									4
05			妊	乃	播	杯	賠	舶									5
06			忍	廼	覇	盃	陪	薄									6
07			認	之	杷	牌	這	迫									7
10			濡	埜	波	背	蝿	曝									8
11			禰	嚢	派	肺	秤	漠									9
12			祢	悩	琶	輩	刎	爆									A
13			寧	濃	破	配	萩	縛									B
14			葱	納	婆	倍	伯	莫									C
15			猫	能	罵	培	剥	駁									D
16			熱	脳	芭	媒	博	麦									E
17			年	膿	馬	梅	拍										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 110₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				醱	叛	采	彼	誹									0
01			函	髮	帆	煩	悲	費									1
02			箱	伐	搬	頒	扉	避									2
03			硲	罰	斑	飯	批	非									3
04			箸	抜	板	挽	披	飛									4
05			肇	筏	氾	晩	斐	樋									5
06			筈	閥	汎	番	比	簸									6
07			櫨	鳩	版	盤	泌	備									7
10			幡	噺	犯	磐	疲	尾									8
11			肌	塙	班	蕃	皮	微									9
12			畑	蛤	畔	蛮	碑	枇									A
13			畠	隼	繁	匪	秘	毘									B
14			八	伴	般	卑	緋	琵									C
15			鉢	判	藩	否	罷	眉									D
16			溌	半	販	妃	肥	美									E
17			発	反	範	庇	被										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 111₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				桧	廟	賓	斧	武									0
01			鼻	姫	描	頻	普	舞									1
02			柊	媛	病	敏	浮	葡									2
03			稗	紐	秒	瓶	父	蕪									3
04			匹	百	苗	不	符	部									4
05			疋	謬	錨	付	腐	封									5
06			髭	俵	鋲	埠	膚	楓									6
07			彦	彪	蒜	夫	芙	風									7
10			膝	標	蛭	婦	譜	葺									8
11			菱	氷	鰭	富	負	蕗									9
12			肘	漂	品	冨	賦	伏									A
13			弼	瓢	彬	布	赴	副									B
14			必	票	斌	府	阜	復									C
15			畢	表	浜	怖	附	幅									D
16			筆	評	瀕	扶	侮	服									E
17			逼	豹	貧	敷	撫										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code / Reserved Not Used / Reserved Unassigned

XEROX
Character Set 112₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				憤	弊	偏	圏	俸									0
01			福	扮	柄	変	捕	包									1
02			腹	焚	並	片	歩	呆									2
03			複	奮	蔽	篇	甫	報									3
04			覆	粉	閉	編	補	奉									4
05			淵	糞	陛	辺	輔	宝									5
06			弗	紛	米	返	穂	峰									6
07			払	雰	頁	遍	募	峯									7
10			沸	文	僻	便	墓	崩									8
11			仏	聞	壁	勉	慕	庖									9
12			物	丙	癖	娩	戊	抱									A
13			鮒	併	碧	弁	暮	捧									B
14			分	兵	別	鞭	母	放									C
15			吻	塀	瞥	保	簿	方									D
16			噴	幣	蔑	舗	菩	朋									E
17			墳	平	箆	鋪	倣										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 113₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				飽	棒	撲	摩	鱒									0
01			法	鳳	冒	朴	磨	桝									1
02			泡	鵬	紡	牧	魔	亦									2
03			烹	乏	肪	睦	麻	俣									3
04			砲	亡	膨	穆	埋	又									4
05			縫	傍	謀	釦	妹	抹									5
06			胞	剖	貌	勃	昧	末									6
07			芳	坊	貿	没	枚	沫									7
10			萌	妨	鉾	殆	毎	迄									8
11			蓬	帽	防	堀	哩	俤									9
12			蜂	忘	吠	幌	槙	繭									A
13			褒	忙	頬	奔	幕	麿									B
14			訪	房	北	本	膜	万									C
15			豊	暴	僕	翻	枕	慢									D
16			邦	望	卜	凡	鮪	満									E
17			鋒	某	墨	盆	柾										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 114₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				耗	明	茂	尤	矢									0
01			漫	民	盟	妄	戻	厄									1
02			蔓	眠	迷	孟	籾	役									2
03			味	務	銘	毛	貰	約									3
04			未	夢	鳴	猛	問	薬									4
05			魅	無	姪	盲	悶	訳									5
06			巳	牟	牝	網	紋	躍									6
07			箕	矛	滅	耗	門	靖									7
10			岬	霧	免	蒙	匁	柳									8
11			密	鵡	棉	儲	也	薮									9
12			蜜	椋	綿	木	冶	鑓									A
13			湊	婿	緬	黙	夜	愉									B
14			蓑	娘	面	目	爺	愈									C
15			稔	冥	麺	杢	耶	油									D
16			脈	名	摸	勿	野	癒									E
17			妙	命	模	餅	弥										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 115₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				涌	誉	熔	沃	乱									0
01			諭	猶	輿	用	浴	卵									1
02			輸	獣	預	窯	翌	嵐									2
03			唯	由	傭	羊	翼	欄									3
04			佑	祐	幼	耀	淀	濫									4
05			優	裕	妖	葉	羅	藍									5
06			勇	誘	容	蓉	螺	蘭									6
07			友	遊	庸	要	裸	覧									7
10			宥	邑	揚	謡	来	利									8
11			幽	郵	揺	踊	莱	吏									9
12			悠	雄	擁	遥	頼	履									A
13			憂	融	曜	陽	雷	李									B
14			揖	夕	楊	養	洛	梨									C
15			有	予	様	慾	絡	理									D
16			柚	余	洋	抑	落	璃									E
17			湧	与	溶	欲	酪										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 116₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				琉	寮	緑	類	齢									0
01			痢	留	料	倫	令	暦									1
02			裏	硫	梁	厘	伶	歴									2
03			裡	粒	涼	林	例	列									3
04			里	隆	猟	淋	冷	劣									4
05			離	竜	療	燐	励	烈									5
06			陸	龍	瞭	琳	嶺	裂									6
07			律	侶	稜	臨	怜	廉									7
10			率	慮	糧	輪	玲	恋									8
11			立	旅	良	隣	礼	憐									9
12			葎	虜	諒	鱗	苓	漣									A
13			掠	了	遼	麟	鈴	煉									B
14			略	亮	量	瑠	隷	簾									C
15			劉	僚	陵	塁	零	練									D
16			流	両	領	涙	霊	聯									E
17			溜	凌	力	累	麗										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code	Reserved Not Used	Reserved Unassigned

XEROX
Character Set 117₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				楼	論	椀											0
01			蓮	榔	倭	湾											1
02			連	浪	和	碗											2
03			錬	漏	話	腕											3
04			呂	牢	歪												4
05			魯	狼	賄												5
06			櫓	篭	脇												6
07			炉	老	惑												7
10			賂	聾	枠												8
11			路	蝋	鷲												9
12			露	郎	亙												A
13			労	六	亘												B
14			婁	麓	鰐												C
15			廊	禄	詫												D
16			弄	肋	藁												E
17			朗	録	蕨												F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 120$_8$
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				舒	刧	佩	俥	偓									0
01			弌	弎	刎	佰	倚	假									1
02			丐	于	仟	侑	倨	會									2
03			丕	亞	价	佯	倔	偕									3
04			个	亟	伉	來	倪	偬									4
05			丱	亠	佚	侖	倥	偈									5
06			丶	亢	估	儘	倅	做									6
07			丼	亰	佛	倪	伜	偖									7
10			丿	亳	佝	俟	俶	偬									8
11			乂	亶	佗	俎	倡	偸									9
12			乖	从	佇	俘	倩	傀									A
13			乘	仍	佶	俛	倬	傚									B
14			亂	仄	侈	俑	俾	傅									C
15			亅	仆	侏	俚	俯	傴									D
16			豫	仂	侘	俐	們	傲									E
17			亊	仗	佻	佛	倆										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

- ▨ Char Set Select Code
- ▨ Reserved Not Used
- ▨ Reserved Unassigned

XEROX
Character Set 121₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				儖	兩	寫	凰	剖									0
01		僉	儕	俞	冪	凵	剔										1
02		僊	儔	兮	冫	函	剪										2
03		傳	儚	冀	決	㐧	剴										3
04		僂	儡	冂	冱	刋	剩										4
05		僖	儺	冋	冲	刔	剳										5
06		僞	儷	冊	冰	刎	剿										6
07		僥	儼	冉	况	刧	剽										7
10		僣	儻	冏	冽	刪	劍										8
11		借	儿	冑	凅	刮	劎										9
12		僮	兀	冓	凉	刳	劒										A
13		價	兒	冕	凜	刹	剣										B
14		僵	兌	一	几	刴	劈										C
15		儉	兔	冤	處	到	劑										D
16		儁	兢	冠	凩	剄	辨										E
17		儂	競	冢	凭	刺											F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 122₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00	▨		(sel)	勧	卆	厥	呀	咒	▨	▨	░	░	░	░	░	░	0
01	▨		辨	勹	卅	厮	听	呻	▨	▨	░	░	░	░	░	░	1
02	▨		劬	匆	丗	厰	吭	咀	▨	▨	░	░	░	░	░	░	2
03	▨		劭	匈	卉	厶	吼	呶	▨	▨	░	░	░	░	░	░	3
04	▨		劫	甸	卍	參	吮	咄	▨	▨	░	░	░	░	░	░	4
05	▨		劵	匍	凖	簒	吶	咐	▨	▨	░	░	░	░	░	░	5
06	▨		勁	匐	卞	雙	吩	咆	▨	▨	░	░	░	░	░	░	6
07	▨		勅	匏	卩	叟	吝	哇	▨	▨	░	░	░	░	░	░	7
10	▨		勖	匕	卮	曼	呎	咢	▨	▨	░	░	░	░	░	░	8
11	▨		勞	匚	夘	燮	咏	咸	▨	▨	░	░	░	░	░	░	9
12	▨		勣	匣	卻	叮	呵	咥	▨	▨	░	░	░	░	░	░	A
13	▨		勤	匯	卷	叨	咎	咬	▨	▨	░	░	░	░	░	░	B
14	▨		飭	匱	厂	叭	呟	哄	▨	▨	░	░	░	░	░	░	C
15	▨		勠	匳	厖	叺	呱	哈	▨	▨	░	░	░	░	░	░	D
16	▨		勳	匸	厠	吁	呷	咨	▨	▨	░	░	░	░	░	░	E
17	▨		勵	區	厦	吽	呰	▨	▨	▨	░	░	░	░	░	▨	F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

▨ Char Set Select Code   ▨ Reserved Not Used   ░ Reserved Unassigned

XEROX
Character Set 123₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				啾	唷	嗤	噫	嚼									0
01			呮	唖	瞀	嗔	噤	囁									1
02			哂	唧	啾	嘔	嘯	囃									2
03			咤	啌	喘	嗷	噎	囀									3
04			咾	售	啣	噴	噪	藝									4
05			咼	啜	單	喉	噛	囐									5
06			听	啅	啼	啾	嚀	囑									6
07			哥	啖	喃	嘛	嚊	囓									7
10			哦	啗	喩	嗹	嚠	□									8
11			唏	唸	喇	嘈	嚥	圮									9
12			唔	唳	喨	器	嚔	囹									A
13			哽	啝	嗚	營	嚨	圀									B
14			哮	喙	嗅	嘴	嚮	囿									C
15			哭	喀	嗟	嘶	嚶	圄									D
16			哺	咯	嘎	嘲	嚴	圉									E
17			哢	喊	嗜	嘸	囂										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 124₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				坩	埒	墅	壖	夭									0
01			圏	埀	堊	堈	壞	本									1
02			國	坌	垁	壚	墾	夸									2
03			圍	坡	埣	墫	壯	夾									3
04			圓	坿	堋	墺	壺	奇									4
05			團	垉	埏	壞	壹	奕									5
06			圖	垓	堝	墻	壻	奐									6
07			嗇	垠	塲	墶	壼	奎									7
10			圜	垳	堡	墮	壽	奚									8
11			圦	垤	塢	甕	夂	奘									9
12			圷	垪	塋	壓	夊	奢									A
13			圸	垰	塗	壑	夐	奠									B
14			坎	埃	毀	壗	夛	奧									C
15			圻	埆	塒	壙	梦	獎									D
16			址	埔	堽	壘	夥	奮									E
17			坏	埒	塹	壢	夬										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 125₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				娑	媽	孃	它	寶									0
01			奸	娜	媽	孅	宦	尅									1
02			妁	娉	嫗	孺	宸	將									2
03			妝	娚	嫦	孑	寃	專									3
04			佞	婀	嫩	孕	寇	對									4
05			俟	姪	嫖	孚	崔	尓									5
06			姒	婉	嫺	孛	寔	尠									6
07			妲	娵	嫻	孥	寐	尢									7
10			姆	娶	嬌	孩	寤	尨									8
11			姨	婢	嬋	孰	實	尸									9
12			姜	婪	嬖	孳	寢	尹									A
13			妍	媚	嬲	孵	寞	屁									B
14			姙	媼	�	學	寥	屆									C
15			姚	媾	嬪	孛	寫	屎									D
16			娥	嫋	嬶	孺	寰	屓									E
17			娟	嫂	孋	宀	寶										F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 126₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				岼	崟	嶄	巫	幟									0
01			屣	岷	崛	嶂	已	幢									1
02			屏	岼	崑	嶢	巵	幣									2
03			屍	岾	崔	嶝	帋	幇									3
04			屬	峇	崢	嶬	帚	开									4
05			屮	峙	崚	嶮	帙	并									5
06			屶	峩	崙	嶽	帑	幺									6
07			屹	峽	崘	嶐	帛	麼									7
10			屺	峭	嵌	嶷	帶	广									8
11			岊	峭	嵒	嶼	帷	庠									9
12			岑	嶌	嵎	巉	幄	廁									A
13			岔	峪	嵋	巍	幃	廂									B
14			妛	崋	嵬	巓	幀	廈									C
15			岫	崕	嵳	巒	幎	廐									D
16			岻	崗	嵶	巖	幗	廏									E
17			岶	嵜	嶇	巛	幔										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 127₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				卄	互	徙	怗	協									0
01			廖	弃	象	俳	恂	恆									1
02			廣	牪	彗	徠	怩	恍									2
03			廝	彜	彙	徨	怎	恋									3
04			廚	彝	彡	徭	忽	恃									4
05			廛	弋	彭	徼	怛	恤									5
06			廢	弑	彳	忖	怕	恂									6
07			廡	弓	彷	忻	怫	恬									7
10			廨	弩	徃	忤	怦	恫									8
11			廩	弭	徂	忸	快	恙									9
12			廬	弸	佛	忱	怺	悁									A
13			麗	彁	徊	忝	恚	悍									B
14			廳	彈	很	悳	恁	惧									C
15			廰	彌	徑	忿	恪	悃									D
16			廴	彎	徇	怡	恊	悚									E
17			廸	弯	從	恠	恟										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 130₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				悵	慇	慚	儢	澝									0
01			悄	惘	愾	慫	憑	懶									1
02			悛	慍	愨	慴	憫	懺									2
03			悖	愕	愧	傷	憮	懴									3
04			悗	愆	慊	慥	懌	懿									4
05			悒	惶	愿	傳	懊	懽									5
06			悧	惷	愼	慟	應	懼									6
07			悋	愀	愬	慝	懷	懾									7
10			惡	惴	愴	慓	懈	戀									8
11			悸	惺	慱	慵	懃	戈									9
12			惠	愃	慂	憙	懆	戉									A
13			惓	惚	慄	憖	憺	戍									B
14			悴	惻	慳	憇	懋	戌									C
15			忰	惱	慷	憬	罹	戔									D
16			悽	愍	慘	憔	懍	戛									E
17			惆	愎	慙	憚	懦										F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 131₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				拝	拈	捐	捩	攝									0
01			憂	抉	拜	挾	掾	搗									1
02			戲	找	拌	捍	揩	搨									2
03			截	抒	拊	搜	揀	搏									3
04			戮	抓	拂	捏	揆	摧									4
05			戰	抖	拇	披	揣	摯									5
06			戲	拔	抛	掎	揉	搏									6
07			戳	扑	拉	掀	插	摎									7
10			扁	抔	搭	掫	揶	攬									8
11			扎	拗	拮	捶	揄	撕									9
12			扦	拑	拱	掣	搖	撓									A
13			扣	抻	挧	掏	搴	撥									B
14			扛	拏	挂	掉	搆	撩									C
15			扠	拿	挈	掟	搓	撈									D
16			扨	拆	拯	捫	搦	撼									E
17			扼	擔	拵	押	搶										F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Char Set Select Code   **Reserved Not Used**   **Reserved Unassigned**

XEROX
Character Set 132₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				攬	收	斠	昗	晟									0
01			據	撨	攸	斫	旻	晢									1
02			擒	擴	攽	斷	杳	晰									2
03			擅	擲	效	斾	昵	朏									3
04			擇	擺	敖	施	昶	暈									4
05			撻	攀	敕	旁	昂	暎									5
06			擘	擽	敍	旄	易	暉									6
07			擂	攘	敘	旌	晏	暄									7
10			擱	攜	敝	旒	晄	暘									8
11			擧	攢	敞	旛	晉	暝									9
12			舉	攤	敲	播	晁	暨									A
13			擠	攣	數	无	晞	暹									B
14			擡	攫	斂	旡	晝	曉									C
15			抬	攴	斃	旱	晤	暾									D
16			擣	攵	變	杲	晧	暼									E
17			攢	攷	斛	昊	晨										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 133₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00			朧	朰	柞	梳	梵										0
01			曄	霸	杍	柝	栫	梏									1
02			暸	朮	杪	柢	桦	梺									2
03			曖	束	枌	枻	档	桠									3
04			曚	朶	枋	枸	桷	棍									4
05			曠	扒	枦	柎	桿	椐									5
06			昡	朸	枡	柆	梟	椁									6
07			曦	初	枅	柧	桔	棊									7
10			曩	杆	枷	檜	梭	椈									8
11			曰	杞	柯	栞	梔	棘									9
12			曵	杠	枴	框	條	椢									A
13			曷	杙	柬	栩	梛	椦									B
14			胐	杣	枳	桀	梃	棡									C
15			朏	杤	柩	桍	檮	椌									D
16			碁	枉	枸	栲	梹	棍									E
17			朦	杰	枴	桎	桴										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 134₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				楔	楡	楊	榍	橾									0
01			楮	椡	楞	槃	槧	楿									1
02			棧	楡	棟	框	樅	橇									2
03			棕	楹	椌	椵	槇	橢									3
04			櫻	楷	楪	榑	樞	橙									4
05			椒	楜	榅	槙	槭	橦									5
06			椄	楸	榮	榜	樸	橈									6
07			棗	楫	槐	榕	樽	樸									7
10			棣	楔	橙	榴	樊	橋									8
11			椥	椱	槁	榧	橏	檐									9
12			棹	楮	槇	槨	橦	檍									A
13			棠	椹	槝	樂	樣	檗									B
14			棯	楴	槎	樛	樓	橄									C
15			椨	椽	寨	槿	橄	檢									D
16			椪	楙	槧	權	橿	檣									E
17			椚	椰	槗	樟	檜										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code	Reserved Not Used	Reserved Unassigned

XEROX
Character Set 135$_8$
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				欅	歐	殝	麾	汾									0
01			檗	薬	歒	彈	氈	汨									1
02			蘗	櫺	歛	殯	岷	汳									2
03			檻	欒	歟	殲	气	沒									3
04			櫃	欖	歡	殱	氛	沐									4
05			欋	鬱	歸	殳	氤	泄									5
06			檸	欞	歹	殷	氣	泱									6
07			檳	欸	殁	殼	汞	泓									7
10			檬	歇	殀	毆	汕	沽									8
11			欀	盜	殄	毋	辻	泗									9
12			櫨	歆	殃	毓	汪	泅									A
13			櫟	飮	殍	毟	沂	泝									B
14			橸	歙	殘	毯	洰	沮									C
15			櫚	歔	殕	毫	沚	沱									D
16			櫪	歟	殞	毳	沁	沾									E
17			櫻	歐	殤	毯	沛										F

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 136₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				冽	淦	湮	滿	溥									0
01			洫	浣	涸	菏	渝	滂									1
02			泛	涓	淆	渙	游	溟									2
03			泯	浤	淬	湲	渳	潁									3
04			泙	浚	淞	湟	溪	漑									4
05			泪	浹	淌	渾	溘	灌									5
06			洟	浙	淨	渣	滉	滬									6
07			衍	涎	凄	湫	潤	滸									7
10			洶	涕	淅	渫	滓	滾									8
11			洫	濤	淺	湶	溽	漿									9
12			洽	涅	淙	湍	溯	滲									A
13			洸	淹	淤	淳	滄	漱									B
14			洙	渕	達	湃	溲	滯									C
15			洵	淵	淪	渺	滔	張									D
16			洳	涵	淮	涵	滕	滌									E
17			洒	淇	渭	渤	溏										F

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 137₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				澎	濱	瀰	烙	煩									0
01			漾	潘	濮	瀾	焉	熨									1
02			漓	濂	濛	潋	烽	熬									2
03			滷	潦	瀉	灑	焜	爛									3
04			澆	澳	潘	灣	焙	熹									4
05			潺	澣	濺	炙	焕	熾									5
06			潸	澡	瀑	炒	熙	燒									6
07			澁	澤	瀁	炯	熙	燉									7
10			澀	澹	瀏	烱	煦	燔									8
11			潯	潰	濾	炬	熒	燎									9
12			潛	澪	瀛	炸	煌	燠									A
13			潛	濟	瀚	炳	煖	燬									B
14			潭	濕	潴	炮	煬	燧									C
15			澂	濬	瀝	烟	熏	燵									D
16			潼	瀰	瀘	休	燻	燼									E
17			潘	濘	瀟	烝	熄										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code	Reserved Not Used	Reserved Unassigned

XEROX
Character Set 140₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00			䂓	牋	狎	猥	玻	瑁									0
01			燹	牘	狒	猾	珀	瑜									1
02			燿	牴	狢	獎	珥	瑩									2
03			爍	牾	狠	獏	珮	瑰									3
04			爐	犂	狡	默	珞	瑣									4
05			爛	犁	狹	獗	璆	瑪									5
06			爨	犇	狷	獪	琅	瑤									6
07			爭	犒	倏	獨	瑯	瑾									7
10			爬	犖	猗	獰	琥	璋									8
11			爰	犢	猊	獸	珸	璞									9
12			爲	犧	猜	獵	琲	璧									A
13			爻	犹	猖	獻	琺	瓊									B
14			爼	犲	猝	獺	瑕	瓏									C
15			爿	狃	猴	珈	琿	瓔									D
16			牀	狆	猯	玳	瑟	珱									E
17			牆	狄	猩	珎	瑙										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 141₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				薨	罦	痂	痼	瘰									0
01			瓠	甕	畫	疛	瘁	瘦									1
02			瓣	甕	畭	痃	痰	癇									2
03			瓪	甞	畸	疵	痺	癈									3
04			瓩	甦	當	疽	痲	癆									4
05			瓮	甬	疆	疸	痳	癜									5
06			瓲	甼	疇	疼	瘋	癘									6
07			瓰	甶	疇	疱	瘍	癡									7
10			瓱	畉	疊	痍	瘉	癢									8
11			瓸	畍	疉	痊	瘟	癨									9
12			瓷	畊	疂	痒	瘧	癩									A
13			甄	畛	疔	痙	瘠	癪									B
14			甃	畆	疚	痣	瘡	癧									C
15			甅	畚	疝	痞	瘢	癬									D
16			甌	畩	疥	痾	瘤	癰									E
17			甎	畤	疣	痿	瘴										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 142₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00			籭	靲	晠	辜	矗	碚									0
01			癲	輝	眩	睹	矚	磙									1
02			烎	皺	眤	瞎	矜	碣									2
03			癸	盂	眞	瞋	矣	碩									3
04			發	盡	皆	瞑	矮	磋									4
05			皀	盖	眦	瞠	矼	磁									5
06			皃	盒	眛	瞞	砌	磑									6
07			皈	盞	眷	瞰	砒	磆									7
10			皋	盡	眸	瞶	礦	磋									8
11			皎	盥	睇	曖	砠	磔									9
12			皖	盧	睡	瞿	礭	碾									A
13			皓	盪	睨	瞼	硅	碼									B
14			皙	薀	睫	瞽	碎	磅									C
15			皚	盼	睛	瞻	硴	磊									D
16			皰	眈	睥	矇	碆	磬									E
17			皴	眇	睿	矍	硼										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 143₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				祕	秬	稈	竇	竦									0
01			磧	袚	秡	穚	竅	竭									1
02			磚	祺	秣	穢	竄	竰									2
03			磽	祿	稈	穩	窿	笂									3
04			磴	禊	稍	穰	邃	笏									4
05			碾	禝	稘	穫	竇	笊									5
06			礒	禧	稙	穵	竊	笆									6
07			礑	齋	稠	窄	冚	笳									7
10			礙	禪	稟	窈	豜	笘									8
11			礬	禮	稟	窗	豴	笙									9
12			礫	襪	稱	窕	毦	笞									A
13			祀	禹	稻	窨	站	笵									B
14			祠	禺	稾	窖	竚	笨									C
15			祗	秉	稷	窩	竝	笑									D
16			崇	秕	裕	竈	竡	筐									E
17			祚	秧	穗	窰	竢										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 144$_8$
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				箘	簀	簣	籥	粽									0
01			筺	箟	篩	簪	籬	糀									1
02			笄	箍	簔	簟	籵	糅									2
03			筍	筌	簑	簷	粃	糂									3
04			筝	箚	篦	簫	粐	糘									4
05			筌	箋	篁	簽	粤	糒									5
06			筅	箒	籠	籌	粭	糜									6
07			筵	筝	簀	籃	粢	糢									7
10			筥	箏	簇	籔	粫	鬻									8
11			筴	箙	篷	簏	粡	糯									9
12			覓	篋	篳	籀	粨	糲									A
13			筰	篁	篷	藤	粳	羅									B
14			筱	篌	築	籐	粲	糴									C
15			筬	篏	簍	籟	粱	糺									D
16			筮	箴	篤	籤	粮	紆									E
17			箝	篆	簣	籤	粹										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code   Reserved Not Used   Reserved Unassigned

XEROX
Character Set 145₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				絨	綫	縊	縹	辮									0
01			紂	絮	總	縣	縺	鑑									1
02			絃	綃	綢	緯	繧	纈									2
03			紕	絣	綯	縒	繝	纉									3
04			紮	經	縣	縱	繖	續									4
05			絅	綉	綸	縟	繞	纎									5
06			紘	絛	綟	縉	繙	纐									6
07			紫	綏	綰	縋	繚	纓									7
10			紲	絽	緘	縢	繹	纔									8
11			紿	綛	緝	繆	繪	纖									9
12			紵	綺	緤	繦	繩	纎									A
13			絆	綮	緞	縻	繼	纛									B
14			絳	綣	緻	縵	繻	纘									C
15			絖	綵	緲	縹	繽	缸									D
16			絎	緇	緡	繃	繿	缺									E
17			絲	綽	緘	縷	繾										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 146₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				羂	贏	耒	聳	胛									0
01			罅	羆	蠡	耘	聲	胥									1
02			罌	羃	翅	耙	聰	胙									2
03			罍	羈	翠	耜	聶	胝									3
04			罎	羇	翊	耡	瞻	胄									4
05			罐	羌	翁	耨	聽	胚									5
06			网	羔	翔	耿	聿	胖									6
07			罕	羞	翡	恥	肄	脉									7
10			罔	羝	翦	聊	肆	胯									8
11			罘	羚	翩	聆	肅	胱									9
12			罟	羣	翳	聒	肛	脛									A
13			罠	羯	翹	聘	肓	脩									B
14			罨	羲	飜	聚	肚	脣									C
15			罩	羹	耆	聟	肭	脯									D
16			罧	羹	耄	聢	冐	腋									E
17			罸	羶	耋	聯	肬										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 147₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				膂	臉	與	艫	苣									0
01			隋	膠	臍	舊	艨	苟									1
02			腆	膕	臑	舍	艪	苒									2
03			脾	膤	臙	舐	艫	苴									3
04			腓	膣	臘	舖	舮	芩									4
05			腑	腟	臈	舩	艱	苺									5
06			胼	腸	臚	舫	艶	苺									6
07			腱	膩	臟	舸	艸	范									7
10			腮	膰	臠	舳	艾	苻									8
11			腥	膵	臧	艀	芍	苹									9
12			腦	膾	臺	艙	芒	苞									A
13			腴	膸	臻	艘	芫	茆									B
14			膃	膽	臾	艝	芟	苜									C
15			膈	臀	舁	艚	芻	茉									D
16			膊	臂	舂	艟	芬	苙									E
17			膀	膺	舅	艤	苡										F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

□ (hatched) Char Set Select Code

□ (diagonal) Reserved Not Used

□ (stippled) Reserved Unassigned

XEROX
Character Set 150$_8$
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				莪	萱	奭	葯	蒡									0
01			茵	苔	菫	淩	葹	蔡									1
02			茴	莢	崑	菻	萵	蓿									2
03			茗	莖	萩	葭	翁	蕁									3
04			茲	莫	萃	莉	蓋	蔗									4
05			茱	莎	菘	蕚	兼	蔘									5
06			荀	莇	萋	蕁	蒿	蔬									6
07			茹	莊	菁	蔻	蒟	蔟									7
10			荐	荼	蔕	葷	蓙	蔕									8
11			荅	莵	莨	葫	蓍	蔔									9
12			茯	荳	菠	蕘	翡	蓼									A
13			茫	荵	菲	葭	蓚	蕀									B
14			茗	莠	萍	蒂	蓐	蕣									C
15			茘	莉	范	葩	蓁	蕘									D
16			莅	茛	萠	葆	蓆	蕈									E
17			莚	菴	莽	萬	甍										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 151₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				薛	蘋	蛀	蛟	蜷									0
01			蕁	蕷	藾	蚪	蛛	蜻									1
02			蘂	蕾	藺	蚋	蛴	蜥									2
03			蕏	薐	蘆	蚌	蜒	蜩									3
04			蕕	藉	龍	蚶	蜆	蜚									4
05			薀	薺	蘇	蚯	蜈	蝠									5
06			薤	藏	蘰	蚰	蜀	蜻									6
07			薈	薹	蘿	蛆	蜃	蝸									7
10			薑	藐	虍	蚰	蛻	蝌									8
11			薊	藕	乕	蛉	蜑	蝎									9
12			薨	藝	虔	蠣	蜉	蝴									A
13			蕭	藥	號	蚫	蜍	蝗									B
14			薔	藜	虧	蛔	蛹	蟲									C
15			薛	藹	虱	蛞	蜊	蝮									D
16			藪	蘊	蚓	蛩	蝪	蝙									E
17			薇	蘓	蚣	蛬	蜿										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 152₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				螳	蠕	袤	袱	裸									0
01			蝓	蟇	蠢	袞	袮	襃									1
02			蝣	蟆	蠡	袒	衍	褞									2
03			蜴	螻	蠱	袿	裔	褥									3
04			蠅	蟯	蠻	袵	裘	褪									4
05			螢	蟲	蠹	衲	裙	褫									5
06			螟	蟠	蠧	袂	裝	襁									6
07			螂	蟣	蠶	衿	裹	襄									7
10			螯	蟥	衂	袒	褂	褻									8
11			蟋	蟾	衄	祢	裼	褶									9
12			螽	蟶	衒	袙	裴	褸									A
13			蟀	蟷	衙	袢	裨	襌									B
14			蟐	蟒	衞	袍	裲	襌									C
15			雛	蟒	衢	袤	褄	襠									D
16			螫	蝶	衫	裊	褌	襞									E
17			蟄	蟖	袁	袿	褊										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 153₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				覼	訐	誂	謼	謳									0
01			襦	覬	訌	誄	諱	鞫									1
02			襤	覯	訛	誨	譴	謦									2
03			襭	覲	訝	誠	誼	謫									3
04			襪	覺	訥	誑	譚	謾									4
05			襯	覽	訶	誥	諷	謨									5
06			襴	覿	詁	誦	諞	譁									6
07			襷	觀	詛	誚	諛	謐									7
10			襾	觚	詒	誣	謌	譏									8
11			覃	觜	詆	諄	謇	譎									9
12			覈	觝	詈	諍	謚	證									A
13			覊	解	詼	諂	諡	譜									B
14			覓	觴	詭	諚	謖	譛									C
15			覘	觸	詬	諫	謐	譚									D
16			覡	訃	詢	諳	謗	譫									E
17			覩	訖	誅	諧	謠										F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 154₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00			谿	貔	賽	赭	跟										0
01			譟	豈	狉	賺	走	跣									1
02			譬	豌	獏	賻	赳	跼									2
03			譯	豎	賊	贄	趁	疎									3
04			譴	豐	贋	贅	趙	跟									4
05			譽	豕	貪	贊	跂	跿									5
06			讀	豢	貽	贇	趾	踝									6
07			讌	豬	貲	贏	趺	踞									7
10			讎	豸	貳	贍	跏	踐									8
11			讒	豺	貮	矓	跚	跼									9
12			讓	貂	貶	齎	跖	踝									A
13			讖	貉	賈	贓	跌	踵									B
14			謹	貅	貢	賍	跛	踰									C
15			讚	貊	賤	贔	跋	踴									D
16			谺	貍	賣	贖	跪	蹊									E
17			豁	貌	賓	赧	跫										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 155₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				蹉	雕	輚	欒	逅									0
01			蹇	躅	轤	輀	轉	迹									1
02			蹉	躄	軋	輌	轤	迺									2
03			蹌	躋	軛	輦	辜	迸									3
04			蹐	躊	軣	輳	辟	逕									4
05			蹈	躓	軼	輻	辣	逡									5
06			蹙	躑	軻	輹	辭	逍									6
07			蹤	躔	軫	轅	辯	逞									7
10			蹠	躙	軾	轂	迂	逖									8
11			踪	躪	輕	輾	迪	逋									9
12			蹣	躡	輅	轌	迴	逧									A
13			蹕	躬	輕	轉	迢	逶									B
14			蹶	躰	輒	轆	迪	逵									C
15			蹲	軆	輙	轎	逑	逹									D
16			蹼	躱	輓	轗	邇	迸									E
17			躁	躾	輜	轜	迥										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 156₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				邂	鄒	醫	釵	鉋									0
01		過	遽	鄙	醢	鉈	鉛										1
02		退	邁	鄲	醪	鈞	衙										2
03		遑	邀	鄰	釀	釿	銖										3
04		遒	邊	酊	醴	鈔	銓										4
05		逎	邉	酖	醺	鈬	銛										5
06		逎	邏	酘	釀	鈕	鉚										6
07		逾	邨	酣	釁	鈑	鋏										7
10		遖	邯	酥	釉	鉞	銹										8
11		遘	邱	酩	釋	鉗	銷										9
12		遞	邵	酳	釐	鉅	鉈										A
13		遨	郢	醒	釖	鉉	鎧										B
14		遯	郤	醋	釟	鉤	銚										C
15		遶	扈	醉	釜	鉈	鋺										D
16		隨	郛	酥	釛	銕	錮										E
17		遲	鄂	醯	釵	鈿											F

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Char Set Select Code	Reserved Not Used	Reserved Unassigned

XEROX
Character Set 157₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				鎔	鐇	鑰	闑	關									0
01			鎇	鎹	鐐	鑵	閏	闡									1
02			錢	鏖	鐶	鑞	関	闢									2
03			錚	鏗	鐯	鑽	閤	闣									3
04			錣	鏨	鐵	鑽	閼	阡									4
05			錺	鏥	鐵	鑼	閣	阤									5
06			鉈	鏘	鐺	鑾	閹	阨									6
07			鈇	鏃	鐽	鑿	闃	阯									7
10			鍛	鏝	鑒	鑿	闊	陂									8
11			鍠	鏐	鑄	閂	潤	陌									9
12			鍼	鏈	鑛	閃	闑	陏									A
13			鍮	鏤	鑠	問	闇	陑									B
14			鍖	鏜	鑪	閔	闌	陷									C
15			鎰	鐔	鑭	閖	闕	陜									D
16			鎬	鏺	鑰	閘	闔	陞									E
17			鎭	鐃	鈩	鬧	闖										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 160₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00			隷	隷	霎	靜	鞈	韶									0
01			陝	隸	霑	靠	鞳	韵									1
02			陟	佳	霏	靤	鞨	頏									2
03			陦	睢	霖	靦	鞦	頌									3
04			陲	雋	霙	醫	鞣	頸									4
05			陬	雉	雷	勒	鞳	頤									5
06			隍	雍	霆	靫	輔	頡									6
07			隘	襍	霰	靭	韃	頷									7
10			隕	雜	霹	鞄	韆	頰									8
11			隗	霍	霽	靹	韈	顆									9
12			險	雕	霾	靼	韋	顏									A
13			隧	雹	靄	鞁	韜	顋									B
14			隱	霄	靆	靺	韭	顫									C
15			隲	霆	靈	鞆	齏	顯									D
16			隰	霈	靂	鞋	韲	顰									E
17			隴	霓	靉	鞏	竟										F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 161₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00	▨	▨		舗	饑	駁	驃	髏	▨	▨							0
01	▨	▨	顱	餘	饒	駱	驕	髑	▨	▨							1
02	▨	▨	顴	餡	饌	駲	驍	髓	▨	▨							2
03	▨	▨	顳	餝	饕	駻	驛	體	▨	▨							3
04	▨	▨	颪	餞	馗	駿	驗	髞	▨	▨							4
05	▨	▨	颯	餤	馘	騁	驟	髟	▨	▨							5
06	▨	▨	颱	餠	馥	騏	驢	髦	▨	▨							6
07	▨	▨	颶	餬	馭	騅	驥	髯	▨	▨							7
10	▨	▨	飄	餮	馮	騈	驤	髫	▨	▨							8
11	▨	▨	飃	餽	馼	騙	驩	髻	▨	▨							9
12	▨	▨	飆	餾	馴	騫	驫	髭	▨	▨							A
13	▨	▨	飩	饂	駛	騷	驪	髮	▨	▨							B
14	▨	▨	飫	饉	駝	驅	肝	髴	▨	▨							C
15	▨	▨	餃	饅	駘	驂	骰	髱	▨	▨							D
16	▨	▨	餉	饐	駑	驀	骼	髷	▨	▨							E
17	▨	▨	餒	饋	駭	驃	髀		▨	▨						▨	F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code   Reserved Not Used   Reserved Unassigned

XEROX
Character Set 162₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				魄	鮴	鯰	鱓	鴃									0
01			髻	魃	鯀	鰕	鰊	鳩									1
02			鬆	魏	鯊	鰔	鰲	鳰									2
03			鬘	魍	鮹	鰉	鱆	鴑									3
04			鬚	魎	鮪	鰓	鰾	鴬									4
05			鬟	魑	鮋	鮨	鱚	鴣									5
06			鬢	魘	鯑	鰆	繪	鴟									6
07			鬣	魴	鮹	鰈	鱧	鵄									7
10			鬥	鮓	鯣	鰒	鱶	鴕									8
11			鬧	鮃	鯢	鰊	鱸	鴒									9
12			鬨	鮑	鯤	鹹	梟	鵁									A
13			鬩	鮖	鯔	鰮	鳧	鴿									B
14			鬪	鮗	鯡	鰮	鴆	鵆									C
15			鬮	鮟	鰺	鰥	鴉	衝									D
16			凵	鮠	鰍	鰤	鴈	鵈									E
17			鬲	鮨	鯱	鰡	鷹										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 163₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				翕	鸚	麩	徽	疕									0
01			鵝	鷄	鸛	麭	厴	齣									1
02			鷔	鴿	鸞	麭	黷	齟									2
03			鶬	鵑	鹵	靡	黹	齠									3
04			鵑	貌	鹹	黌	黻	齡									4
05			鴉	鶻	鹽	黎	黼	齦									5
06			鵙	鷯	麁	黏	黽	齧									6
07			鵲	鶺	塵	黐	鼇	齬									7
10			鶉	鵠	麋	黔	鼈	齪									8
11			鶇	鷲	麌	黜	皷	齷									9
12			鶫	鷗	麒	點	鼕	齲									A
13			鶻	鵠	麕	黝	甶	齶									B
14			鶍	鵳	麑	點	鼬	龕									C
15			鶚	鶺	麝	黥	鼾	龜									D
16			鶤	鶹	麥	黨	齊	龠									E
17			鶩	鸎	麩	黯	齒										F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 164₈
Symbols 3 - Miscellaneous Japanese Symbols

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				適 teki													0
01			㈱ kabu	標 hyou													1
02			㋐ cir. a	項 kou													2
03			㋑ cir. i	特 toku													3
04			㋒ cir. u	増 zou													4
05			㋓ cir. e	減 gen													5
06			㋔ cir. o	基 ki													6
07			㋺ cir. ro	調 tryou													7
10			㋩ cir. ha	優 yuu													8
11			㋥ cir. ni	財 zai													9
12			㋭ cir. ho	秘 hi													A
13			㋬ cir. he	印 in													B
14			㋣ cir. to														C
15			㋢ cir. chi														D
16			㋷ cir. ri														E
17			㋦ cir. nu														F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 165₈
JIS C 6226 - 1983

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00																	0
01			堯														1
02			槇														2
03			遙														3
04			瑤														4
05																	5
06																	6
07																	7
10																	8
11																	9
12																	A
13																	B
14																	C
15																	D
16																	E
17																	F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 166₈
Symbols 4 - Diamond enclosed numbers and circled letters

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				◇0		Ⓟ		ⓟ									0
01				◇1	Ⓐ	Ⓠ	ⓐ	ⓠ									1
02				◇2	Ⓑ	Ⓡ	ⓑ	ⓡ									2
03				◇3	Ⓒ	Ⓢ	ⓒ	ⓢ									3
04				◇4	Ⓓ	Ⓣ	ⓓ	ⓣ									4
05				◇5	Ⓔ	Ⓤ	ⓔ	ⓤ									5
06				◇6	Ⓕ	Ⓥ	ⓕ	ⓥ									6
07				◇7	Ⓖ	Ⓦ	ⓖ	ⓦ									7
10				◇8	Ⓗ	Ⓧ	ⓗ	ⓧ									8
11				◇9	Ⓘ	Ⓨ	ⓘ	ⓨ									9
12				◇10	Ⓙ	Ⓩ	ⓙ	ⓩ									A
13				◇11	Ⓚ		ⓚ										B
14				◇12	Ⓛ		ⓛ										C
15				◇13	Ⓜ		ⓜ										D
16				◇14	Ⓝ		ⓝ										E
17				◇15	Ⓞ		ⓞ										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 167₈
Fuji Xerox Private Use

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				佡	傔	邵	塚	屳									0
01			纘	伃	們	厓	增	岑									1
02			裻	但	僶	厲	憮	崋									2
03			鍈	佖	兊	圾	夋	崧									3
04			銈	侒	櫨	雙	參	崫									4
05			醥	侊	亘	咤	奋	崎									5
06			俉	侚	冾	咮	畣	崋									6
07			炻	俥	凬	咩	爾	崥									7
10			昱	俍	劢	智	妤	嵘									8
11			楮	俠	九	喆	妹	嶹									9
12			銤	健	劦	坙	孖	巇									A
13			舛	俿	劫	坦	宋	岠									B
14			彌	倞	勖	拱	宵	㝵									C
15			丨	倩	匀	埈	寘	惑									D
16			仡	偰	勾	埇	寬	德									E
17			任	偸	匡	峪	嶚										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 170$_8$
Fuji Xerox Private Use

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				摠	晴	欅	泂	濵									0
01			忠	搗	曇	椠	涇	瀅									1
02			恝	擎	暲	榴	浯	瀟									2
03			悦	敎	曦	樰	泣	瀨									3
04			恕	昀	曹	横	滓	炅									4
05			愀	昕	胎	儛	滉	炫									5
06			惕	昂	朗	橪	清	烝									6
07			愠	昉	枚	燥	濾	焄									7
10			惲	昻	枻	欁	淼	煜									8
11			愓	晒	棻	櫓	溜	煆									9
12			愷	昤	披	毖	湜	輝									A
13			愰	晥	柳	氿	渧	熙									B
14			憘	晗	桄	氾	渼	燁									C
15			或	晙	桴	沆	瀣	熏									D
16			抦	晴	桴	泫	澈	犹									E
17			捷	晳	楨	泚	漸										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 171₈
Fuji Xerox Private Use

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				瑢	砅	綷	董	譿									0
01			狋	璉	礰	綠	臈	賭									1
02			猤	璟	礼	緒	薫	賴									2
03			猪	瓶	神	繒	蘺	贊									3
04			獷	晙	祥	罇	蚨	赶									4
05			珣	皂	禔	羨	蟎	赳									5
06			珉	皗	福	羽	裵	軏									6
07			玳	皞	禛	茁	訒	返									7
10			珣	晶	竑	芋	訷	逸									8
11			聿	皦	鵠	歲	詹	達									9
12			琇	益	靖	菇	誧	郎									A
13			珵	晥	竫	華	閶	都									B
14			琦	劝	箞	菓	諟	鄉									C
15			琪	砡	精	蒴	諸	鄧									D
16			瑠	砏	絈	蕓	諶	釚									E
17			琮	硤	絜	蕙	譓										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 172$_8$
Fuji Xerox Private Use

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				鈹	鋅	隖	靜	禮									0
01			釗	鉧	錞	隖	驎	餃									1
02			釙	銑	鍀	隥	高	嵜									2
03			釭	鈺	綜	隆	髯	彥									3
04			釙	鉸	錂	靊	魵	欽									4
05			釤	銀	鍰	霹	魲	粦									5
06			釥	銷	鍗	鼅	鮏	辻									6
07			鉛	鋙	鎤	霾	鮐	吉									7
10			鈴	銾	鑚	靑	鮫	祐									8
11			鉓	鋳	鏞	靖	鰒	眞									9
12			鈺	銡	鐩	顓	鷉	情									A
13			鉀	鈑	鐱	顕	鶙	磨									B
14			鉙	釗	鑠	飯	鶴	邉									C
15			銓	錆	鑭	飼	鷭	鍊									D
16			釼	錡	閒	餧	黑	龍									E
17			鉑	鑒	隆	館	榊										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 173₈
Fuji Private Use

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00																	0
01			社														1
02																	2
03																	3
04																	4
05																	5
06																	6
07																	7
10																	8
11																	9
12																	A
13																	B
14																	C
15																	D
16																	E
17																	F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 174₈
Fuji Xerox Private Use

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00																	0
01																	1
02																	2
03																	3
04																	4
05																	5
06																	6
07																	7
10																	8
11																	9
12																	A
13																	B
14																	C
15																	D
16																	E
17																	F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code	Reserved Not Used	Reserved Unassigned

XEROX
Character Set 175₈
Fuji Xerox Private Use

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00																	0
01																	1
02																	2
03																	3
04																	4
05																	5
06																	6
07																	7
10																	8
11																	9
12																	A
13																	B
14																	C
15																	D
16																	E
17																	F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 176₈
Fuji Xerox Private Use

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00																	0
01			寀														1
02			滲														2
03			圡														3
04			菱														4
05			沪														5
06																	6
07																	7
10																	8
11																	9
12																	A
13																	B
14																	C
15																	D
16																	E
17																	F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 340₈
Arabic Alphabet

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				٠ indian 0		ذ thal	ـ tatweel	kasrah									0
01				١ indian 1	ء hamzah	ر ra	ف fa'	shaddah			ڤ arab. v						1
02				٢ indian 2	آ mad/alef	ز zain	ق qaf	sukun			پ farsi p						2
03				٣ indian 3	أ hm/alef	س seen	ك caf	dag. ale			چ farsi ch						3
04				٤ indian 4	ؤ hm/waw	ش sheen	ل lam	wsla/ale			ژ farsi zh						4
05			٪ per cent	٥ indian 5	إ alef/hm	ص sad	م meem	dec. pnt			گ farsi g						5
06				٦ indian 6	ئ hm/ya'	ض dad	ن noon	1,000's			ة ham. ha						6
07				٧ indian 7	ا alef	ط tah	ه ha										7
10				٨ indian 8	ب ba'	ظ dhah	و waw										8
11				٩ indian 9	ة ta'a mar	ع ain	ى alf-mag.										9
12					ت ta'	غ ghain	ي ya										A
13			؛ semi-col		ث tha'		fathatan										B
14			، comma		ج jeem		damma.									LRZWNJ non-join	C
15					ح ha'		kasratan									RLZWNJ non-join.	D
16					خ kha'		fatha									zero w. joiner	E
17			؟ ques. mk		د dal		damma										F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 341₈
Hebrew Alphabet

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00					**א** aleph	**נ** nun											0
01					**ב** veth	**ס** samekh							hireq				1
02			"		**ג** gimel	**ע** ayin							sereh				2
03					**ד** daleth	**ף** fin. feh							segol				3
04			₪		**ה** heh	**פ** feh							qubbus				4
05					**ו** vav	**ץ** f. tsabi							qamas				5
06					**ז** zayin	**צ** tsadi							pathah				6
07			'		**ח** cheth	**ק** koph							shewa				7
10					**ט** teth	**ר** resh							ht. path				8
11					**י** yod	**ש** shin/sin							ht. sefol				9
12					**ך** f. chaph	**ת** thav							ht. qams				A
13				;	**כ** chaph	**ב** beth											B
14			, comma		**ל** lamed	**כ** kaph											C
15			-		**ם** fin. mem	**פ** peh											D
16					**מ** mem								holem				E
17					**ן** fin. nun								shureq				F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 342₈
International Phonetic Alphabet

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00			·	ˉ			ᶿ					t	r	ʃ	x		0
01			¨	ˏ	_	i	ɵ				m	d	ɾ	ʒ	ɣ		1
02			˜	ˌ	´	y	ɜ				p	θ	ɖ	ʄ	ɯ		2
03			˘	˖	˒	ʅ	ɐ				b	ð	ɟ	ʓ	g		3
04			·	ˍ	ˋ	ɪ	ɰ				ɸ	ʂ	ɕ	ʅ	ɴ		4
05			⌒	�‿	ˎ	ʏ	u				β	ʑ	ʝ	ʐ	ŋ		5
06			˜	˔	^	e	ɷ				ɥ	s	ɲ	ɧ	q		6
07			ˌ	˕	ˇ	ø	ʊ				ʍ	z	ʈ	ɲ	ɢ		7
10			ˌ	˦	ˁ	ɛ	ɤ				w	ʀ	ɗ	c	χ		8
11			˳	˗	ʼ	œ	o				ɓ	ɣ	ʂ	ɟ	ʁ		9
12			ˬ	ː		æ	ʌ				⊙	ɹ	ʐ	ç	ʀ		A
13			¨	˙		a	ɔ				ŋ	ɬ	ɻ	j	ħ		B
14			ˌ	˒		Œ	ɑ				f	ɮ	l	ʎ	ʕ		C
15			˷	˓		ɨ	ɒ				v	ɭ	ɽ	ŋ	ʔ		D
16			ˌ	ˈ		ʉ					ʋ	ɾ	ɕ	k	h		E
17			ˌ	ˌ		ə					n	ɪ	ʐ	g	ɦ		F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code	Reserved Not Used	Reserved Unassigned

XEROX
Character Set 343₈
Korean Hangul

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00														꺊 lh			0
01													ㄱ k	ㅁ m			1
02											₩		ㄲ kk	ㅂ p	ㅏ a	ㅛ yo	2
03													갃 ks	ㅃ pp	ㅐ ai	ㅜ wu	3
04													ㄴ n	ㅄ ps	ㅑ ya	ㅝ we	4
05													ㄵ nc	ㅅ s	ㅒ yai	ㅖ wei	5
06													ㄶ nh	ㅆ ss	ㅓ e	ㅟ wi	6
07													ㄷ t	ㅇ ng	ㅔ ei	ㅠ yu	7
10													ㄸ tt	ㅈ c			8
11													ㄹ l	ㅉ cc			9
12													ㄺ lk	ㅊ ch	ㅕ ye	ㅡ u	A
13													ㄻ lm	ㅋ kh	ㅖ yei	ㅢ ui	B
14													ㄼ lp	ㅌ th	ㅗ o	ㅣ i	C
15													ㄽ ls	ㅍ ph	ㅘ wa	回	D
16													ㄾ lth	ㅎ h	ㅙ wai		E
17													ㄿ lph	쨔	ㅚ oi		F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 344$_8$
Georgian and Armenian Alphabets

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				ო o	ჩ ts							Հ h	Ր r		հ h	ր r	0
01			ა a	პ p	ჰ chh						Ա a	Ձ ts	Ց ts	ա a	ձ ts	ց ts	1
02			ბ b	ჯ j	ხ x						Բ p	Ղ gh	Ւ u,v	բ p	ղ gh	ւ u,v	2
03			გ g	რ r	ჴ xh						Գ k	Ճ j	Փ p	գ k	ճ j	փ p	3
04			დ d	ს s	ჯ j						Դ t	Մ m	Ք k	դ t	մ m	ք k	4
05			ე e	ტ t	ჲ h						Ե e	Յ h,y	Օ o	ե e	յ h,y	օ o	5
06			ვ v	უ u							Զ z	Ն n	Ֆ f	զ z	ն n	ֆ f	6
07			ზ z	ჳ wi							Է e	Շ sh		է e	շ sh		7
10			ჱ h	ჵ ph							Ը a	Ո o		ը a	ո o		8
11			თ th	ქ kh							Թ t	Չ ch		թ t	չ ch		9
12			ი i	ღ gh							Ժ j	Պ b		ժ j	պ b		A
13			კ k	ყ q							Ի i	Ջ ch		ի i	ջ ch		B
14			ლ l	შ sh							Լ l	Ռ r		լ l	ռ r		C
15			მ m	ჩ ch							Խ x	Ս s		խ x	ս s		D
16			ნ n	ც ts							Ծ z	Վ v	` poot	ծ z	վ v		E
17			Ω i	d dz							Կ k	Տ d	՞ ques. mk	կ k	տ d		F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Legend:
- Char Set Select Code
- Reserved Not Used
- Reserved Unassigned

XEROX
Character Set 345$_8$
Devanagari Alphabet

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00												ए	छ	न	श	ॽ	0
01			०								७	ऐ	ज		ष	ॽ	1
02			१								.		ज़	प	स	ॽ	2
03			२								:		झ	फ	ह		3
04			३									ओ	अ	फ़		ो	4
05			४								अ	औ	ट	ब	inv. cons	ौ	5
06			५								आ		ठ	भ	ा	6
07			६								इ	क	ड	म	ि	ॽ	7
10			७								ई	क़	ड़	य	ी	॰	8
11			८								उ	ख	ढ		ॽ	ॽ	9
12			९								ऊ	ख़	ढ़	र	ॽ	ॐ	A
13											ऋ	ग	ण		ॽ	।	B
14											ॠ	ग़	त	ल	ॽ		C
15											ऌ	घ	थ	ळ	ॽ	D
16											ॡ	ङ	द		ॽ	ॽ	E
17												च	ध	व			F

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 353$_8$
General and Technical Symbols 3

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				--→	▮												0
01			ℙ	≡	⚕												1
02			ℋ	∪	ϑ												2
03			ℐ	⊂	∝												3
04			≈	♮	☯												4
05			⊜	♭	☹												5
06			ℰ	♯♯	♿												6
07			—	♯♯♯	▪												7
10			?	☾													8
11			⌘	☽													9
12			𝔊	✶													A
13			ℌ	◼													B
14			𝔐	-													C
15			𝔽	⚕													D
16			↑↓	⚖													E
17			↓↑	¢													F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 354$_8$
Extended ITC Dingbats 2 and General Symbols

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				✳	@	@	➤	✓				◂▮	⑨	❺	●	θ	0
01				✭	�	◖	⟫	✂			⇨	⇦	⑩	❻	◖		1
02					→	⇀	✳	✚			⇨	◂⃦	①	❼	◓		2
03					→	◂⃦	✳	✚			⇨	◂⃦	②	❽	◑		3
04					→	→	✳	♠			⇨	⫻	③	❾	◔		4
05				✂	→	←	✳	→			⇨	√	④	❿	○		5
06				✂	➡	✳	✳	→			⇨	✩	⑤		🍎		6
07				☎	→	☞	✳	⟫→			⇨	✳	⑥		🍏		7
10					←	☞	→	⟫			⇦	①	⑦				8
11				❙	➡	☞	→	⟩			▭	②	⑧				9
12				✔	⟫→	✂	→	⟩			←	③	⑨				A
13				✚	➤	⊚	→	⇒			←	④	⑩				B
14					➡	⊶	→	→			←	⑤	❶				C
15					➤	⊸	→	⟲			←	⑥	❷				D
16				★	➡	✓	→	◀			←	⑦	❸				E
17				☆	→		→	→			◂▮	⑧	❹				F

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | Hex |

Legend:

- Char Set Select Code
- Reserved Not Used
- Reserved Unassigned

XEROX
Character Set 355₈
ITC Dingbats 1

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				✐	✢	✳	❊	❙				➢	�’	④	❿	★	0
01			✀	✂	✣	✴	❋	❚	➐	➤	⇒➔	⑤	❧	❨	1
02			✁	✃	✤	✵	❈	❢	➑	➡	↗	⑥	❦	❩	2
03			✄	✔	✥	✶	❉	❣	➒	➡	➘	⑦	●	❬	3
04			✂	✕	✦	✷	❅	❤	➓	➧	➙	⑧	❞	❭	4
05			✆	✖	✧	✸	❆	♥	→	➥	➚	⑨	6	❮	5
06			✇		☆	✹	❇	♦	➘	⇨	➛	⑩	9	❯	6
07			✈	✗	✇	✺	❈	❧	➔	⇨	➜	❶	❰		7
10			✈	✚	☆	✻	❊	❧	➶	⇦	➝	❷	❱		8
11			✉	✜	✩	✼	○	❶	➹	⇨	➞	❸	❲		9
12			☛	✛	✪	✽	❏	❷	➔	⇨	⇛	❹	❳		A
13			☞	✛	✫	✾	❐	❸	→	⇨	❬	❺	Ⓤ		B
14			✌	✝	✬	❀	❑	❹	→	⇨	❭	❻	❨		C
15			✍	✞	✭	❁	❒	❺	⇢	⇨	①	❼	❩		D
16			✎	✟	✱	❂	❖	❻	⇢	⊃	②	❽	Ⓤ		E
17			✏	✡	✲	❃	❍	◗	➢	⇶	③	❾	✂		F

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 356₈
General and Technical Symbols 2

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00				◊	c/u cadauna	⇄ rgt/lft	lt. shade	⊤ inv. perp				▶ triangle	⌑	⏚	] tr. brace	⊠	0
01			3 Em space	a/c	⊙ i. bullet	⇕ up-dwn	dk shade	Ⱶ			⊤	◀ triangle	⊽	⏁	│ v. brace	𝗪	1
02			4 Em space	●	÷	⊏	⋒ n. ident.	≠			. en lead.	▷ triangle	⋔	⌒	}	↩	2
03			hair space	ℛℛ	ℛ	⊐	⊎	⌈ tl. brack			.. en lead.	◁ triangle	⊙	⊥	] cr. brace	↪	3
04			punct. space	:	ℒ	ƒ	⋈	⌊ bl. brack			→ scalar pr	.	⊘	⊡	⌈ tl. brace	↺	4
05			· hyph. pt.	! factorial	Δ increm.	● i. lg. cir	≨ n<nr=	│ c. brack			←	↕	⊛	♫ notes	⌊ bl. brace	↻	5
06			⌐ crop t.r.	⊦ assert.	⌺ lozenge	⋂ lg. inter	≩ n>nr=	⌉ tr. brack			↑	⚓	⊓	⋉	} cl. brace	⇋	6
07			⌐ crop t.l.	≑ symmet.	∧ caret	⋃ lg. union	°	⌋ br. brack			↓	∀	⊟	⋊	∫ brace pc	↤	7
10			⌐ crop b.r.	⤳ t. runout	₵ cntrline	▯ plotter	≈	≅ asympt.			⇒	∀	✚	⋋	⌡ brace pc	↛	8
11			⌐ crop b.l.	Ƶ imped.	— straignt.	◈ plotter	ℂ	≏ appr. =			⇐	■ fill char	✦	⋌	∧	↔	9
12			■ histogr.	⌂ s. house	▱ flatness	△ plotter	⌐ start line	‼ db. excl			⇑	▬ fill char	◸	◸	∨	↚	A
13			✝ dir. sum	∸	℘ cylindric.	◉ plotter	ʼ	`			⇓	▮ fill char	♠ spades	⌄	⊴	↝	B
14			, ar. thou.	╲	⌒ line prof.	⊕ plotter	≶	│ abs. val.			←	▮ fill char	♥ hearts	▯ rectang.	▷	↭	C
15			— minus	≜	◠ sur. prof.	✕ plotter	≷	*			↑	▬ fill char	♦ diamon.	∟ r. angle	⌈ t. integ.	≗	D
16			· ar. deci.	⊻	℘ all prof.	⤴ plotter	≲	∼ similar			→ arr. hd.	◀	♣ clubs	■ rectang.	⌡ b. integ.	✚ n. equiv	E
17			ℏ	⁂	⊕ position	✕ plotter	≳				↓	▶ arr. hd.	☼ compass	☻ dk. smile	│ c. integ.		F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Legend:
- ▨ Char Set Select Code
- ▨ Reserved Not Used
- ▨ Reserved Unassigned

XEROX
Character Set 357₈
General and Technical Symbols 1

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				† dagger	% care of	⇌ rev. rea	⊠ ballot	⊥ perpind.				⌈ l. ceiling	⌢ arc	✕ x-out	☠ poison	≋ aquarius	0
01			non-brk space	‡ db dagg.	‰ per mil	⇆ rev.rea.	∅ null set	∝ proport			₢ cruzeiro	⌉ r. ceiling	I roman 1	①	❙ form	♓ pisces	1
02			- non-brk	⟨ bra	≪ much <	↔	⊕ ads. +	≡ ident. =			ƒ florin	⌊ l. floor	II roman 2	②	━ form	♈ aries	2
03			- discret.	⟩ ket	≫ much >	↗	⊖ abs. -	≐ define =			₣ francs	⌋ r. floor	III roman 3	③	✚ form	♉ taurus	3
04			— en dash	☞ index	≮ not <	⊇ contains	⊗ abs. x	≟ ? =			₧ pesetas	∃ th. exists	IV roman 4	④	❘ form	♊ gemini	4
05			— em dash	☜ index	≯ not >	⊊ cont. in	⊘ abs. ÷	∫ integral			₠ eur. cur.	∀ for all	V roman 5	⑤	— form	♋ cancer	5
06			— flg. dash	⊢ perpin.	∣ divides	∩ intersec.	● bullet	∮ cont. int			$ mireis	∧ and	VI roman 6	⑥	✚ form	♌ leo	6
07			' neutral	⊣ perpin.	✗ not div.	∪ union	∘ cen. ring	≍ asym =			✗ gen inf.	∨ or	VII roman 7	⑦	☉ sun	♍ virgo	7
10			" l. quote	⊨ perpin.	∥ parallel	⊒ con. or =	ℏ Planck c.	≅ congru.			№ number	▶ QED	VIII roman 8	⑧	☽ lq moon	♎ libra	8
11			" r. quote	⊧ perpin.	∦ no paral.	⊆ cn in/ =	ℓ liter	≈ asym. to			℞ take	∇ nabla	IX roman 9	⑨	☾ 3q moon	♏ scorpio	9
12			‹ l. quote	⟦ l. brack.	∈ mem. of.	⊃ p. incl.	¬ log. not	Σ summat.			TEL teleph.	∂ p. deriv.	X roamn 10	⑩	☿ mercury	♐ sagittar	A
13			› r. quote	⟧ r. brack	∉ no mem.	⊂ p. inc. in	⦙ br. v. bar	Π product			₃ dram	∫ ocr hook	♠ spades	⊖	♃ jupiter	♑ capric..	B
14			en quad	↖	∋ such tht	⫫ n. cn. ≠	∠ angle	√ radical			₵ comp. #	Ψ ocr. fork	♡ hearts	⊝	♄ saturn	♋ teleph.	C
15			em quad	↘	⇐ imp. by	⊄ n.c.in ≠	∡ sp. ang.	∓ - or +			N nat. #	⊣ ocr chai	◇ diamon.	⊕	⛢ uranus	⅓ en frac	D
16			figure space	↗	⇔ iff	⫤ no cont.	∷ identical	▨ m. shade			ℝ real #	⌣ alt. curr	♣ clubs	☮ peace	♆ neptune	⅔ en frac.	E
17			thin space	↙	⇒ implies	⫦ no cn. in	∵ because				ℤ integer	= dbl bar	✓ check	☺ smile	♇ pluto		F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 360₈
Ligatures and Field Format Symbols

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00								¼ em frac.				ō NULL	hair sp.				0
01			ff ligature					½ em frac.				3 em sp.	— time mk		match		1
02			ffi ligature					¾ em frac.				4 em sp.	PFC		match		2
03			ffl ligature					⅓ em frac.				5 em sp.	▶ SOD		match		3
04			fi ligature					⅔ em frac.				en quad	• STOP		match		4
05			fl ligature					⅛ em frac.				em quad	— gp erase		x match		5
06			ft ligature					⅜ em frac.				punc. sp	■ ch. erase		A match	Y greek	6
07			ſj					⅝ em frac.				fig. sp.	N		9 match	Я russian	7
10			ct					⅞ em frac.			V$_T$	↓ V TAB			Z match	hiragna	8
11			st					¹/ em frac.			H$_T$	→ H TAB		⇒ Par. TAB	* match	katakna	9
12											L$_F$	↳ LF (1)	■ SUB			漢 kanji	A
13											F$_F$	↡ FF	ERROR			和 japanese	B
14											C$_R$	← CR (1)	☼ DUP		match	• space (1	C
15											N$_L$	↵ NL		NP	match	ƀ space (2	D
16												↵ CR (2)	; FM		match	␣ space (3	E
17												↵ LF (2)			match		F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 361₈
Accented Latin Characters 1

Legend:
- ▨ = Char Set Select Code
- ▧ = Reserved Not Used
- ░ = Reserved Unassigned

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	Hex
00	▧	▧	░	È grave E	Î circ. I	Ó acute O	Ú acute U	Ž hach. Z	▧	▧		è grave e	î circ. i	ó acute o	ú acute u	ž hach. z	0
01	▧	▧	À grave A	É acute E	Ĩ tilde I	Ô circ. O	Û circ. U	Ľ hach. L	▧	▧	à grave a	é acute e	ĩ tilde i	ô circ. o	û circ. u	ľ hach. i	1
02	▧	▧	Á acute A	Ê circ. E	Ī macrn. I	Õ tilde O	Ũ tilde U	T' hach. T	▧	▧	á acute a	ê circ. e	ī macrn. i	õ tilde o	ũ tildé u	ť hach. t	2
03	▧	▧	Â circ. A	Ē macrn. E	İ dot I	Ō macrn. O	Ū macrn. U	D' hach. D	▧	▧	â circ. a	ē macrn. e	░	ō macrn. o	ū macrn. u	ď hach. d	3
04	▧	▧	Ã tilde A	Ė dot E	Ï diar. I	Ö diar. O	Ŭ breve U	Ọ dot bl. O	▧	▧	ã tilde a	ė dot e	ï diar. i	ö diar. o	ŭ breve u	ọ dot bl. o	4
05	▧	▧	Ā macrn A	Ë diar. E	Į ogon. I	Ő db ac. O	Ü diar. U	Ȳ macrn Y	▧	▧	ā macrn. a	ë diar. e	į ogon. i	ő db ac. o	ü diar. u	ȳ macrn y	5
06	▧	▧	Ă breve A	Ę ogon. E	Ĵ circ. J	Ŕ acute R	Ů ring U	Æ macrn Æ	▧	▧	ă breve a	ę ogon. e	ĵ circ. j	ŕ acute r	ů ring u	æ macrn æ	6
07	▧	▧	Ä diar. A	Ĕ hach. E	Ķ cedilla K	Ŗ cedilla R	Ű db ac. U	Œ macrn Œ	▧	▧	ä diar, a	ě hach. e	ķ cedilla k	ŗ cedilla r	ű db ac. u	œ macrn œ	7
10	▧	▧	Å ring A	Ǵ acute G	Ĺ acute L	Ř hach. R	Ų ogon. U	Ă	▧	▧	å ring a	ǵ acute g	ĺ acute l	ř hach. r	ų ogon. u	ẵ	8
11	▧	▧	Ą ogon. A	Ĝ circ. G	Ļ cedilla L	Ś acute S	Ŵ circ. W	Ǎ hach. A	▧	▧	ą ogon. a	ĝ circ. g	ļ cedilla l	ś acute s	ŵ circ. w	ǎ hach. a	9
12	▧	▧	Ć acute C	Ğ breve G	Ľ hach. L	Ŝ circ. S	Ỳ grave Y	Ĕ hach. E	▧	▧	ć acute c	ğ breve g	ľ hach. l	ŝ circ. s	ỳ grave y	ĕ hach. e	A
13	▧	▧	Ĉ circ. C	Ġ dot G	Ń acute N	Ş cedilla S	Ý acute Y	Ḝ	▧	▧	ĉ circ. c	ġ dot g	ń acute n	ş cedilla s	ý acute y	ḝ	B
14	▧	▧	Ċ dot C	Ģ cedilla G	Ñ tilde N	Š hach. S	Ŷ circ. Y	Ḙ	▧	▧	ċ dot c	ģ cedilla g	ñ tilde n	š hach. s	ŷ circ. y	ḙ	C
15	▧	▧	Ç cedilla C	Ĥ circ. H	Ņ cedilla N	Ţ cedilla T	Ÿ diar. Y	Ǧ hach. G	▧	▧	ç cedilla c	ĥ circ. h	ņ cedilla n	ţ cedilla t	ÿ diar. y	ǧ hach. g	D
16	▧	▧	Č hach. C	Ì grave I	Ṇ hach. N	Ť hach. T	Ź acute Z	Ǐ hach. I	▧	▧	č hach. c	ì grave i	ň hach. n	ť hach. t	ź acute z	ǐ hach. i	E
17	▧	▧	Ḋ hach. D	Í acute I	Ò grave O	Ù grave U	Ż dot Z	▧	▧	▧	ď hach. d	í acute i	ò grave o	ù grave u	ż dot z	▧	F

Bottom axis (Hex): 0 1 2 3 4 5 6 7 8 9 A B C D E F — Hex

Legend boxes:
- ▧ Char Set Select Code
- ▧ Reserved Not Used
- ░ Reserved Unassigned

XEROX
Character Set 362₈
Accented Latin characters 2

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				Ṭ								ṭ					0
01			Ĭ	Ḍ							ĭ	ḍ					1
02			Ǐ	Ḥ							ǐ	ḥ					2
03			Ñ	Ṣ							ñ	ṣ					3
04			M̄	Ṭ							m̄	ṭ					4
05			Ŏ	Ḍ							ŏ	ḍ					5
06			Ǒ								ǒ						6
07			Ő̆								ő̆						7
10			Ọ̄								ọ̄						8
11			Ǫ								ǫ						9
12			Ŭ								ŭ						A
13			Ű̆								ű̆						B
14			Y̆								y̆						C
15			Y̊̆								ẙ̆						D
16			Y̌								y̌						E
17			Ḍ								ḍ						F
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Char Set Select Code
Reserved Not Used
Reserved Unassigned

XEROX
Character Set 363₈
Accented Greek Characters 1

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				Ἁ	Ἀ	Ἐ	Ἡ	Ἧ				Ἰ	Ἱ	Ὀ	Ὑ	Ὗ	0
01			ἀ	ἄ	ᾳ	ἐ	ή	ῇ			ῇ	ἰ	ῒ	ὸ	ὺ	ῠ	1
02			Ἀ	Ἄ	Ἀ	Ἑ	Ἡ	Ἧ			Ἧ	Ἰ	Ἴ	Ὀ	Ὕ	Ὗ	2
03			ἀ	ἂ	ᾃ	ἔ	ή	ῆ			ῆ	ἱ	ῗ	ὄ	ὗ	ῧ	3
04			Ἀ	Ἄ	Ἀ	Ἔ	Ἡ	Ἧ			Ἧ	Ἰ	Ἰ	Ὄ	Ὗ	Ὗ	4
05			ἄ	ἄ	ᾃ	ἒ	ῃ	ῃ			ῇ	ἲ	ῗ	ὂ	ὗ	ῧ	5
06			Ἀ	Ἄ	Ἀ	Ἐ	Ἡ	Ἡ			Ἧ	Ἰ	Ἴ	Ὀ	Ὕ	Ὗ	6
07			ἀ	ᾳ	ᾇ	ἕ	ῆ	ή			ῇ	ῖ	ῗ	ὄ	ὗ	ὼ	7
10			Ἀ	Ἀ	Ἀ	Ἕ	Ἧ	Ἡ			Ἧ	Ἰ	Ἰ	Ὄ	Ὕ	Ὦ	8
11			ᾱ	ἀ	ᾇ	ἓ	ή	ἡ			ῇ	ῐ	ῗ	ὄ	ῠ	ὦ	9
12			Ἀ	Ἀ	Ἀ	Ἕ	Ἧ	Ἡ			Ἧ	Ἰ	Ἴ	Ὄ	Ὕ	Ὦ	A
13			ᾰ	ᾀ	ᾃ	ἔ	ῆ	ή			ῇ	ῗ	ὁ	ὑ	ῠ	ώ	B
14			Ἀ	Ἀ	Ἀ	Ἕ	Ἧ	Ἡ			Ἧ	Ἰ	Ὁ	Ὑ	Ὗ	Ὦ	C
15			ᾱ	ᾁ	ᾇ	ἒ	ῆ	ῂ			ῇ	ἲ	ὁ	ὑ	ῠ	ὼ	D
16			Ἀ	Ἀ	Ἀ	Ἕ	Ἧ	Ἡ			Ἧ	Ἰ	Ὁ	Ὑ	Ὗ	Ὦ	E
17			ᾰ	ᾀ	ἐ	ή	ῆ				ἱ	ῐ	ό	ύ	ὗ		F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 364₈
Accented Greek Characters 2

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				Ω̣	Ὼ̣												0
01			ῶ	ῳ̇	ῴ												1
02			Ὼ	Ω̣	Ὼ̣												2
03			ῶ	ῳ̇	ῶ												3
04			Ω̉	Ω̣	Ὼ̣												4
05			ῶ	ῴ	ῶ												5
06			Ω̉	Ω̣	Ω̣												6
07			ῶ	ῳ̇	ῥ												7
10			Ω̣	Ω̣	Ῥ												8
11			ῶ	ῷ	ῥ												9
12			Ὼ	Ω̣	Ῥ												A
13			ῶ	ῴ													B
14			Ὼ	Ω̣													C
15			ῶ	ῷ													D
16			Ω̣	Ὼ̣													E
17			ῳ̇	ῷ													F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

XEROX
Character Set 365₈
Initial, Medial, and Final Arabic Characters

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				ز i. tha'	س i. seen	ظ m. dhah	ك f. caf	ي m. ya									0
01			آ f. alef	ث m. tha'	س m. seen	ظ f. dhah	ل i. lam	ى f. ya									1
02			أ f. alef	ث f. tha'	س f. seen	ع i. ain	ل m. lam	لآ lig.									2
03			ؤ f. waw	ج i. jeem	ش i. sheen	ع m. ain	ل f. lam	لآ f. lig.									3
04			إ f. alef	ج m. jeem	ش m. sheen	ع f. ain	م i. meem	لأ lig.									4
05			ز i. ?/ham.	ج f. jeem	ش f. sheen	غ i. ghain	م m. meem	لأ f. lig.									5
06			ء m. ?/ham.	ح i. ha'	ص i. sad	غ m. ghain	م f. meem	لإ lig.									6
07			ئ f. ?/ham.	ح m. ha'	ص m. sad	غ f. ghain	ن i. noon	لإ f. lig.									7
10			ا f. alef	ح f. ha'	ص f. sad	ف i. fa'	ن m. noon	لا lig.									8
11			ب i. ba'	خ i. kha'	ض i. dad	ف m. fa'	ن f. noon	لا f. lig.									9
12			ب m. ba'	خ m. kha'	ض m. dad	ف f. fa'	ه i. ha	۲ urdu 4									A
13			ب f. ba'	خ f. kha'	ض f. dad	ق i. qaf	ه m. ha	۴ farsi 4									B
14			ة f. ta'a m.	د f. dal	ط i. tah	ق m. qaf	ه f. ha	۵ f&u 5									C
15			ز i. ta'	ذ f. thal	ط m. tah	ق f. qaf	و f. waw	۶ f&u 6									D
16			ز m. ta'	ر f. ra	ط f. tah	ك i. caf	ى f. alef	< urdu 7									E
17			ت f. ta'	ز f. zain	ظ i. dhah	ك m. caf	ي i. ya										F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set
Select Code

Reserved
Not Used

Reserved
Unassigned

XEROX
Character Set 375₈
Variant Representations for Graphic Characters

Octal	000	020	040	060	100	120	140	160	200	220	240	260	300	320	340	360	
00				o Old Style	Υ upsilon	Æ	ϰ kappa	P small cap			o super. 0		─ form	o infer. 0	Ø Alt. 0		0
01				I Old Style		Œ	A small cap	Q small cap			a super. a	1 super. 1	ˋ uc grave	─ form	1 infer. 1	¢	1
02				2 Old Style		&	B small cap	R small cap			e super. e	2 super. 2	ˊ uc acute	─ form	2 infer. 2	◇	2
03				3 Old Style		'	C small cap	S small cap			l super. l	3 super. 3	ˆ uc circ.	─ form	3 infer. 3		3
04				4 Old Style		(	D small cap	T small cap			m super. m	4 super. 4	˜ uc tilde	ǀ form	4 infer. 4		4
05			─	5 Old Style		)	E small cap	U small cap			o super. o	5 super. 5	ˉ uc macr.	ǀ form	5 infer. 5		5
06				6 Old Style		?	F small cap	V small cap			r super r	6 super. 6	˘ uc breve	® sans serif	6 infer, 6	® serif	6
07				7 Old Style		!	G small cap	W small cap			s super. s	7 super. 7	˙ uc dot	© sans serif	7 infer. 7	© serif	7
10				8 Old Style			H small cap	X small cap			n super. n	8 super. 8	¨ uc diar.	TM sans serif	8 infer. 8	TM serif	8
11				9 Old Style			I small cap	Y small cap			ʻ l. quote	9 super. 9	(sub. (	9 infer. 9	F Fr. Franc		9
12							J small cap	Z small cap			ʻʻ l. quote	· super	˚ uc ring	) sub.)	─ infer. –	Pts Pesatas	A
13						ε epsilon	K small cap	Λ Lambda			± super. ±	, super. ,	ˌ uc ced.	$ super $	+ infer. +		B
14			· 1,000's			ϖ pi	L small cap	√ radical			< super. <	(super. (		¢ super ¢	= infer. =		C
15						ϑ theta	M small cap	α alpha			> super. >	) super.)	˝ uc db ac.	≤ super ≤	≥ super ≥		D
16			, dec. pt.			ϱ rho	N small cap	∽ similar			= super. =	+ super. +	˛ uc ogon.	× super ×	≠ super ≠		E
17			· high dec			φ phi	o small cap				/ frac. bar	– super. –	ˇ uc hach.	÷ super ÷	- super -		F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Hex

Char Set Select Code

Reserved Not Used

Reserved Unassigned

C. Technical questions

This appendix addresses a number of technical questions concerning the Xerox character codes listed in chapter 3. Since the topics below are not necessarily related to each other, there may not be continuity in reading from one section of this appendix to the next.

The discussions below rely heavily on the two distinctions made in chapter 1.

— Static text representation is distinguished from active text manipulation processes.

— The *content* of text (*identity* of a character) is distinguished from its *appearance*.

Often the impact of these distinctions is that questions raised in the context of character codes are answered by mechanisms outside the realm of character codes, namely either text manipulation processes or *looks* information specifying how text will appear when rendered visible. A full answer to such questions would require a detailed description of those mechanisms; this is outside the scope of the present standard.

Basic looks

The "Character codes and character appearance" section of chapter 1 gives examples of different looks for the letter "C." Some of the appearance factors taken into account are: character size, character form (serif vs. sans serif), character style (regular or roman vs. italic), character weight (light vs. bold), character baseline (normal vs. raised), and underlining. These are some of the most basic looks. Each can take on a number or range of values (for example, there is a whole range of character weights, not merely light and bold).

Superscripts and subscripts

Character baseline is a looks consideration. In the expression "$2x^2$," the two occurrences of the character "2" certainly represent the same numeral with different looks (size and baseline). This is especially obvious since computation might be performed involving these numbers. Therefore, superscripted numerals should not have independent character codes.

The graphic character codes do include independent superscript "2" and "3" characters, but only to maintain Teletex coverage for Character Set 0. These codes should not be used in a sophisticated text processing system, and no graphic character codes are provided for the other digits. However, for printing on

an external medium, rendering character code assignments have been made for superscripts and subscript figures.

Emphasis

Various looks are used to emphasize a phrase of text: *italicizing*, **emboldening**, <u>underlining</u>, and (in some European languages) increased character s p a c i n g. These visual devices do not change the content of the emphasized text, only its appearance. The same could be said of emphasis via CAPITALIZATION as well (see the following).

Case

Historically, the lowercase Latin letters such as "a," developed as mere stylistic variants of the standard Latin capitals, such as "A" in the same way that italic-style "*A*" did. Thus, "case" is merely a difference of visual style, so it should be handled the same as any other looks.

Specifically, the lowercase "a" ought to be assigned the same "101_8" code as uppercase "A"—likewise for the even more troublesome "small-cap A." All are different appearances of the same character. In other words, a part of the code vs. looks chart should show:

Code(s)	Looks #1	#2	#3	#4	#5	#6
101_8	A	a	A	A	a	A
102_8	B	b	B	B	b	B
103_8	C	c	C	C	c	C
141_8	<not used>					
142_8	<not used>					
143_8	<not used>					

Treating case as a looks difference and not a code difference would yield more benefits than mere historical veracity. The word "cat" would have one unique internal representation instead of eight case-dependent spellings. A single **Substitute** command that replaced the word "cat" with "dog" also would automatically replace "Cat" with "Dog." And the letter "a" would automatically sort together with "A" and before "Z," instead of requiring special treatment in the collating procedure.

Because of the nontraditional nature of this analysis, the Xerox character codes do retain the ASCII standard assignment of 141_8 for "a," and a similar distinction for the Greek and Cyrillic alphabets. A sophisticated text-processing system would simply

not use those codes internally, but would convert to the existing interchange standards at its communication interfaces.

If one chooses to remain with the traditional problems of representing lowercase "a" internally as code 141_8, then small-cap "A" is best handled as a looks variant of "a." In other words, a part of the code vs. looks chart would show:

Code(s)	Looks		
	#1	#2	#3
141_8	a	a	A
142_8	b	b	B
143_8	c	c	C

A situation parallel to "case" occurs with the Japanese syllabaries *hiragana* and *katakana*, which ought to be represented as two different looks for a single set of *kana* symbols.

Ligatures

In standard printing, it is common to express certain letter combinations by a single typographic object called a *ligature*, for example to render "fi" with "fi" This is modeled by designing the rendering process to detect the occurrence of the characters "fi," in sequence and render them visible with the "fi" ligature, if appropriate. In other words, the code vs. looks chart may allow multiple codes per line, such as:

Code(s)	Looks				
	#1	#2	#3	#4	#5
146_8	f	f	f	f	f
$146_8 + 151_8$	fi	fi	fi	fi	f i

What is important here is that the ligature itself, that is, the typographic object "fi," is not a text character and does not have a graphic character code. This means that the text content of a string like "fish" does not vary; it remains four characters, whether it is rendered with a ligature or not.

Although the ligature entity "fi" is not a text character, in practice it is convenient to be able to refer to it by a numerical code. For this sort of use, the block of numbers assigned to alternate representations, Character Sets 360_8 through 376_8, are excluded from use as graphic character codes. Refer to chapter 4 for the definition of rendering characters and code assignments.

European marked characters rendered via ligatures

The Xerox standard follows Teletex in representing European marked characters by two successive codes: the "mark" character followed by the "base" character. But good typography demands that the common European marked characters such as c-cedilla "ç" be rendered by a single specially drawn typographic object.

This situation is handled in precisely the same way as ligatures. The rendering process detects the occurrence of the characters "cedilla c" in sequence and renders them visible with the graphic "ç." In other words, a part of the code vs. looks chart should show:

Code(s)	Looks #1
143_8	c
$13_8 + 143_8$	ç

What is important here is that the European marked character itself, that is, the typographic object "ç," is not a text character and does not have a graphic character code. It is, however, a rendering character (see chapter 4). This permits adherence to the Teletex representation standard without loss of rendering quality.

Also, this approach solves the problem of whether the "marks" are visible or not when attached to uppercase letters. This is a matter of rendering style, not a difference of content. The marked uppercase letters can be rendered either way; but in any case, their content is represented as mark plus base. So, a part of the code vs. looks chart should show:

Code(s)	Looks #1	#2
141_8	a	a
$310_8 + 141_8$	ä	ä
101_8	A	A
$310_8 + 101_8$	Ä	A

Generalized *n*-ary ligatures

The process which renders text visible may be designed to parse it into substrings of arbitrary length, and then emit a single visible graphic corresponding to each substring. Typographic objects representing *n* successive characters are a simple generalization of ligatures.

The English alphabet requires at most two simple ternary ligatures ("ffi" and "ffl"), but in other languages generalized ligatures can play an invaluable role:

— The Arabic-based scripts are modeled on cursive handwriting. As such, numerous combinations of letters are better represented as nicely-drawn ligatures than by composition out of components. The more ligatures used, the more legible the printing. High-quality printing may use up to 900 ligatures for an alphabet containing only 29 distinct characters. One of the ligatures is obligatory.

— Devanagari-based scripts such as Hindi have dozens of ligatures, which are either obligatory or strongly preferred to the sequence of individual characters.

— Some scripts such as Hindi and Thai write certain vowels before the consonants they phonetically follow. For example, the Hindi word pronounced *hindu*, would in effect be written *ihndu*. This is best handled by having a ligature for the pair of characters "h" + "i" which visually appears as the form "ih."

— Korean writes letters in small two-dimensional syllabic clumps, although the underlying phonetic string is of course linear. The total number of possible syllables is on the order of 2,200, each of which could be either represented by its own generalized ligature or composed from an alphabet of about 400 small syllable fragments.

Context-dependent letter forms

Closely related to *n*-ary ligatures are cases where the form of each letter depends on the identity of the letters surrounding it. These cases also require a parsing of the text by the rendering process, but, unlike ligatures, the text characters are singly mapped into visible forms.

The most noteworthy case of context-dependent letter forms is normal English text, where the first character of each sentence is rendered with uppercase looks (refer to the "Case" section of this chapter). Another important application is Arabic-script languages, whose printing absolutely requires this capability. Other languages have a few context-dependent characters (Hindi, Greek, Hebrew).

Miscellaneous digraphs

A *digraph* is a typographic object that appears to be composed of two letters. Aside from ligatures, there are other digraphs whose treatment is quite different.

Certain languages have digraph letters: Spanish has "ch" and "ll," and Hungarian has several. These objects collate as though they were single characters, yet otherwise appear to be treated as pairs of separate characters. It seems best to represent such digraphs as pairs of separate characters and let the collating process parse the text to find them. The Xerox character codes do include independent Dutch "ij," "IJ," and South African "'n" characters, primarily to maintain Teletex coverage for Character Set 0. The use of these codes is not necessarily recommended.

Other digraphs, notably "æ," "œ," and German "ess-zed," *do* differ graphically and otherwise from a pair of letters. The use of these individual codes in Character Set 0 is recommended.

Fractions

Fractions must be handled as unitary objects of some sort, since the formatting of the fraction applies to the fraction as a whole and not only to the individual digits within it. But fractions cannot possibly be given individual character codes, since they are infinite in number.

Therefore, fractions must necessarily be handled as non-textual objects of some kind. The Xerox character codes do include independent "1/2," "1/3," "2/3," "1/4," and "3/4" characters, but only to maintain coverage of Teletex and other code sets. These codes should not be used in a sophisticated text-processing system, and very few graphic character codes are provided for other fractions. However, rendering character codes may be used in final form text.

Logos, signatures, and other non-textual objects

There is no clear borderline between "text" and "graphics." The Xerox character codes arbitrarily include a few "pictorial" symbols, but policy is to exclude these in general. Pictorial entities which are not commonly used in running text should be handled by the machinery of graphics rather than the machinery of text. It is possible to construct an architecture where sequences of text may be interrupted by interceding nontextual objects such as "frames" for graphics.

The preference for not assigning character codes to arbitrary pictorial symbols applies to company logos and the signatures of individuals (refer to the "Private use rendering entities" section of chapter 4). Moreover, such items should be accompanied by security information (password, etc.) which places them outside

the pale of ordinary text. On the other hand, if a company name can be written in ordinary letters, such as

XEROX,

then there is certainly no harm in doing so.

Rendering of "normally nonprinting" characters

The Xerox standard follows ISO in defining code (0 | 40$_8$) as "Space, (normally nonprinting)." To render the character 40$_8$ visible, perhaps with one of several alternate graphical entities, is a different look of the Space character, not a change in its identity. So, a code vs. looks chart for the Space character could show:

Code(s)	Looks				
	#1	#2	#3	#4	#5
0$_8$	40$_8$		•	b	⌴	∎

In the above visualization, either the Space character or another nonprinting character, the picture in each looks column is not itself a Space or even a graphic character at all. However, in practice it is convenient to be able to refer to each picture by a numerical code. Therefore, each picture is assigned a code in chapter 4.

To distinguish between a numeric code, which identifies a substitute picture, and a normal character code, the higher order byte of the substitute code is always larger than the higher order byte of the replaced character code. Substitute codes are defined as rendering character codes (refer to chapter 4) when they can be algorithmically substituted for normal character codes. Rendering character codes use the block of numbers corresponding to Character Sets 360$_8$ through 375$_8$.

In addition to rendering character codes always having a larger high-order byte, any given instance of a rendering type is assigned within a specified numeric code range. For rendering characters which are non-conventional representations of normally nonprinting characters, Character Set 360$_8$ Right contains all of the looks for making control codes and graphic characters, such as Space, visible.

By definition, (refer to the "Rendering character codes" section of chapter 4) substitution is always in conformance with predetermined typographic, linguistic, or formatting rules. For rendering nonprinting characters visible, the set of <character code, character looks> pairs models these rules and always contains Character Set 360_8 as its high-order byte. A code vs looks chart of the set of pairs for rendering Space visible would show:

Code(s)	Looks				
	#1	#2	#3	#4	#5
0_8 | 40_8					
360_8 | 374_8		•			
360_8 | 375_8			b		
360_8 | 376_8				␣	
360_8 | 312_8					▮

The graphical picture "▮" defined in Character Set 360_8 to be the graphic entity representative of the "SUBSTITUTE" character, while the other pictures "•," "b," and "␣"are graphic entities representative of Space, type 1, Space, type 2, and Space, type 3. Each picture in the chart provides an illustration of algorithmic substitution of a <character code, character looks> pair for the <0_8 \| 40_8, Space> pair, in accordance with a previously assumed set of rules. The example only illustrates the rendering of nonprinting characters with substitute pairs from Character Set 360_8 Right and does not imply nor recommend any particular set of rules.

Spaces

Conventionally, space characters are included in text to provide spaces between words and, sometimes, to perform indentation, centering, tabulation, etc. In the printing trade, a variety of different width spaces are used when fine control of spacing is required. The Xerox standard follows both of these conventions by providing a variety of space characters.

For a given size of type, an "em" is a unit of width equal to the type font. For example, in a 12-point font, an em is 12 points high and 12 points wide. The space characters provided by the standard have widths expressed in units of ems; their width is, therefore, proportional to the size of the font used.

The following table describes the available space characters. All the space characters are nonprinting.

Code(s)	Name	Also called	Width	
357_8 | 55_8	em quad	em space	1.0 em	fixed width
357_8 | 54_8	en quad	en space, nut quad	1/2 em	fixed width
356_8 | 41_8	3-to-the-em space	3-em space, thick space	1/3 em	fixed width
356_8 | 42_8	4-to-the-em space	4-em space	1/4 em	fixed width
357_8 | 57_8	5-to-the-em space	5-em space, thin space	1/5 em	fixed width
356_8 | 43_8	hair space		1/2 point to 6-to-the-em	fixed width
357_8 | 56_8	figure space	numeric space	same as numeral	fixed width
356_8 | 44_8	punctuation space		same as period semicolon, etc.	fixed width
0_8 | 40_8	space		1/4 em (typ.)	stretches for justification
357_8 | 41_8	non-breaking space		same as space	stretches for justification

The nonbreaking space is intended as a replacement for the plain space in situations where the space is not an acceptable place to break a line, e.g., the spaces in "May 15, 1928."

The widths given in the table are nominal widths. The font designer will choose the actual widths as appropriate for the font.

Printwheels

Printwheel printing is somewhat at a loss to cope with the Xerox character world, with over 700 non-kanji characters, each of which can have an arbitrary number of looks. What is required is creative coping: a division sign can be simulated as a colon overstruck with minus sign.

The process which maps text into printwheel spokes should, therefore, be able to map an arbitrary combination of characters plus looks into an arbitrary combination of printing actions. For example, a u-umlaut "ü" can be simulated as an umlaut mark overstruck with a "u." If the wheel does not have the mark character, then the "ü" can be alluded to via "ue" or even just plain "u." Again, a certain printwheel may have a large integral sign on one spoke and a small integral sign on another, and the mapping process must attend to the character looks information in order to pick the integral-sign spoke of the desired size.

Clearly there are no fixed rules to this game. What is important is that the mapping process have as much flexibility as possible—it

cannot possibly be a simple one-to-one mapping between character codes and wheel spokes.

Kanji variations

Chinese and Japanese kanji characters are subject to special looks variations, above and beyond the usual parameters of size and style:

— Vertical vs. horizontal text
(a few characters change their appearance, such as parentheses)

— "Variant" character forms
(affects a few hundred characters)

— Traditional vs. simplified character forms
(affects thousands of characters).

These are all questions of appearance rather than content. Indeed, if we can say that one character is a "variant" or "simplified" form of another, then we have explicitly declared them to be the same character, and they should be given the same character code but different looks. Unfortunately, the information interchange code standards in Asia sometimes handle these distinctions by assigning separate character codes to the different forms.

In the Xerox character codes, there are thousands of Japanese kanji characters which have the same appearance as Chinese kanji. For example, the Japanese character "ichi" is identical semantically, graphically, and historically to the Chinese character "yi." These two kanji are considered to be different for the same reason that letters like "A" are repeated in the Latin, Greek, and Cyrillic alphabets: they are different by virtue of context. Furthermore, it would be chaotic to attempt to manage a system in which Japanese and Chinese kanji codes were shared, not to mention the effect on run-length for text in both languages. Note that this version of the standard does not make any code assignments for Chinese kanji.

Find and Substitute

Find and Substitute are not merely useful editing commands; they are also the most direct means by which a system user matches his understanding of text representation against the system's encoding. For example:

The English and Russian alphabets both contain letters which have the visual appearance of "ABC," but in the case of Russian, these letters correspond phonetically to "AVS." A user with a bilingual English-Russian document would hardly expect the English string "ABC" to Find the Russian string of the same appearance, since in the user's mind there is no relationship between the two.

In other words, when the user applies a Find command, his expectation of what is a reasonable match is a *de facto* definition of text identity.

Character identity

Despite the helpfulness of the Find command in defining a notion of text identity, it still offers only a *gedankenexperiment,* not a definitive answer to questions of the sort: "Should these two symbols be two different character codes, or the same character code with different looks?"

In fact, there *is* no source of a definitive answer to such questions; there are only carefully considered judgments of appropriateness and expediency. The listing of Xerox character codes in the "Graphic character code sets" section of chapter 3, is ultimately a record of such considered judgments. For example:

> It is clear enough that "hyphen" and "minus sign" are not the same semantic, hence these are assigned to two different Xerox character codes. The ASCII and ISO 55_8 was given the identity "neutral dash" simply because that is more compatible with existing standards; "hyphen" is assigned the code (41_8 | 76_8) and "minus sign" is assigned the code (356_8 | 55_8).

In cases where the Xerox character code listing does not distinguish separate characters, it is worth considering the possibility that they are looks variants of each other. For example:

> It is clear enough that a "less-than-or-equal-to" sign that has one line on the bottom is just a looks variant of one that has two lines on the bottom. Hence, there is only one Xerox character code for the "less-than-or-equal-to" sign.

In cases where the Xerox character code listing does distinguish separate characters, a type designation is provided when the same semantic can be implied. For example:

> It is clear that the approximate signs "≃" and "≈" have similar meaning, but are assigned separate Xerox character codes. The code (357_8 | 167_8) for "≃" has been given the identity "approximately equal, type 1" and the code (357_8 | 171_8) has the identity "approximately equal, type 2."

The user of this standard must often apply his or her own judgment in finding the right combination of character identity and looks to meet the needs of a particular situation.

Keyboard input

The method of keyboard input should have no particular relationship to the assignment of character codes, but in the past there has been a tendency to assume that any entity that appears on a standard typewriter keyboard must be represented as a single character (e.g., the Dutch "ij" digraph).

In fact, the mapping of keystrokes to characters may be many-to-one or one-to-many. A many-to-one mapping is found in phonetic-based typing methods for Japanese and Chinese. A one-to-many mapping is found in Swedish, whose standard keyboard contains several European marked characters, such as

"ä," which are to be represented internally as two separate codes.

Collating

The term "collating" here simply means "sorting into alphabetical order." The numerical Xerox character codes obviously constitute a *de facto* linear ordering on the characters, and the alphabetic Xerox characters are of course placed in standard dictionary order, insofar as possible.

The numerical Xerox code order, however, simply cannot serve as a universal standard collating order. Even among European Latin-alphabet languages, certain characters occupy different alphabetical places in different languages. For example, the character o-umlaut ("ö") has different standard positions:

— In German: mixed in with "o"
— In Hungarian: between "o" and "p"
— In Swedish: at the end after "z."

It also turns out that most alphabetical orderings are not based on simple numerical single-character comparisons. For example, in Spanish "ch" is a letter coming between "c" and "d," in French the "œ" digraph is a single character but it sorts between "od" and "of," and in all European languages the uppercase and lowercase characters are sorted together.

Likewise, the phonetic ordering used in Japanese dictionaries is not a simple linear ordering of the *kana* characters, but instead involves sorting certain sets of *kana* together in a first pass and then discriminating them in a second pass (just as in collating English, if "A" and "a" are given separate codes, then they must first be sorted together and then later discriminated).

In the case of Japanese and Chinese kanji, there is no standard dictionary order at all.

The inescapable conclusion is:

— The *de facto* linear character ordering implied by the numerical Xerox character codes cannot be designed so as to carry the burden of the collating process. That being the case, there must exist a separate collating procedure for each language, which may in general be an arbitrarily complex algorithm.

Information interchange

The present standard applies directly to textual information interchange only insofar as it defines character codes which constitute a representation of text content. It does not define or imply any transmission, error-correction, or other communications protocols.

The process of information interchange at an interface with an external system generally involves a format conversion of some sort, which often includes code-shuffling (for example, between ASCII and EBCDIC). The character codes obviously cannot be chosen so as to eliminate all such code shuffling, especially for a

multinational system that must interface with various conflicting information interchange standards.

This situation is quite analogous to the conclusion with regard to collating (see above):

— The numerical Xerox character codes cannot be designed so as to eliminate completely code shuffling as part of all format conversion processes. That being the case, there must exist a separate character conversion procedure for each information interchange standard, which may in general be an arbitrarily complex algorithm.

The goal, of course, is to minimize interface code shuffling, which is the reason that the Xerox character codes adhere to existing standards wherever possible, even at the cost of a very sparse use of the available code space.

Number of available codes

The basic Xerox code space is 16 bits (that is [0 .. 177777$_8$]), which in theory allows for 65,536 different characters; however, this space is very considerably diluted by the ISO-based format which excludes "control codes" [1 .. 37$_8$] and [177$_8$ .. 240$_8$] from being used in any byte.

For Japanese characters, the Xerox codes follow the JIS standard, which adopts the ISO format and further prohibits use of the high-order bit in any byte (except that the Xerox codes impose the Character Set Escape code 377$_8$). Thus, JIS limits itself to 94*94 = 8,836 total characters. There appear to remain 1,033 code spaces available to JIS for additional Japanese kanji under the current self-imposed regime. The current JIS codes cover all but the most obscure Japanese text, and only a highly-trained scholar could recognize all of the currently-specified JIS kanji characters. However, there are many thousands of obscure characters used in the names of people and places or archaic text, that are not now covered by JIS.

The Xerox code design makes no attempt to resolve this problem on behalf of JIS. JIS will undoubtedly address it in the future, and the Xerox codes will attempt to remain as consistent as possible with JIS' future handling of kanji code assignments. Certainly the most attractive code-extension possibility is an escape to a multi-byte encoding (refer to the "Syntax" section of chapter 5) for ultra-obscure kanji characters. In any case, the current limitations of the Xerox characters with regard to Japanese kanji are precisely those which are presently in force throughout Japan.

The situation for Chinese kanji characters is similar, but confused by the lack of a generally accepted character set. The total number of Chinese kanji characters is in excess of 50,000; however, most of these are extremely rare. Between 6,000 and 12,000 kanji characters will suffice for all but the most obscure Chinese text.

As for non-kanji characters, all but the most technical European-language text is covered already by the current Xerox character codes, and only a few significant non-European alphabets remain to be added. Most European-language typewriting and information processing has survived so far with no more than a dozen or so "symbol" characters.

A reference such as *Shepherd's Glossary of Graphic Signs and Symbols* [13] lists only 6,188 symbol applications, but this represents a very much smaller number of distinct character codes. Many of these "symbols" are actually letters, and there are often many different applications of the same symbol (for example, a circle). Likewise, the number of different visual appearances of symbols is in no way constrained by the number of distinct symbol codes.

The Xerox code space range of character sets [241_8 .. 355_8] currently allows for the addition of approximately 14,500 new symbols and/or characters. This provision should be adequate for the foreseeable future without going to a code-extension scheme such as described in the "Syntax" section of chapter 5.

D. Differences between Xerox character encoding and JIS 6226 standards

Deletions and additions have been made to the *Code of the Japanese Graphic Character Set for Information Interchange* standard, JIS C 6226-1983 (Japanese Industrial Standard) [11] [21], to create the Xerox Character Code Standard. The differences are listed below for reference:

Deletions to the JIS Standard

(Roman alphabet and punctuation)

Character	Xerox Code in Character Set 0	JIS Code Set Row(1st)-Col.(2nd)
!	41	1-10
#	43	1-84
%	45	1-83
&	46	1-85
'	(apos)	471-39
(	50	1-42
)	51	1-43
*	52	1-86
+	53	1-60
-	55	1-61
/	57	1-31
0	60	3-16
1	61	3-17
2	62	3-18
3	63	3-19
4	64	3-20
5	65	3-21
6	66	3-22
7	67	3-23
8	70	3-24
9	71	3-25

Character	Xerox Code in Character Set 0	JIS Code Set Row(1st)-Col.(2nd)
:	72	1-7
;	73	1-8
<	74	1-67
=	75	1-65
>	76	1-68
?	77	1-9
@	100	1-87
A	101	3-33
B	102	3-34
C	103	3-35
D	104	3-36
E	105	3-37
F	106	3-38
G	107	3-39
H	110	3-40
I	111	3-41
J	112	3-42
K	113	3-43
L	114	3-44
M	115	3-45
N	116	3-46
O	117	3-47
P	120	3-48
Q	121	3-49
R	122	3-50
S	123	3-51
T	124	3-52
U	125	3-53
V	126	3-54
W	127	3-55
X	130	3-56
Y	131	3-57
Z	132	3-58
[	133	1-46
\	134	1-32
]	135	1-47
a	141	3-65
b	142	3-66

Character		Xerox Code in Character Set 0	JIS Code Set Row(1st)-Col.(2nd)
c		143	3-67
d		144	3-68
e		145	3-69
f		146	3-70
g		147	3-71
h		150	3-72
i		151	3-73
j		152	3-74
k		153	3-75
l		154	3-76
m		155	3-77
n		156	3-78
o		157	3-79
p		160	3-80
q		161	3-81
r		162	3-82
s		163	3-83
t		164	3-84
u		165	3-85
v		166	3-86
w		167	3-87
x		170	3-88
y		171	3-89
z		172	3-90
{		173	1-48
|	(bar)	174	1-35
}		175	1-49
~	(tilde)	176	1-33
¢	(cents)	242	1-81
£	(Pound)	243	1-82
$		244	1-80
¥	(yen)	245	1-79
§		247	1-88
'	(left)	251	1-38
"	(left)	252	1-40
«		253	1-52
←	(left arrow)	254	2-11
↑	(up arrow)	255	2-12

Character		Xerox Code in Character Set 0	JIS Code Set Row(1st)-Col.(2nd)
→	(right arrow)	256	2-10
↓	(down arrow)	257	2-13
°	(degree)	260	1-75
±	(plus minus)	261	1-62
×	(mult.)	264	1-63
¶	266	2	89
•	(centered dot)	267	1-6

Character		Xerox Code in Character Set 43	JIS Code Set Row(1st)-Col.(2nd)
÷	(div)	270	1-64
'	(right)	271	1-39
"	(right)	272	1-41
»		273	1-53
`	(grave)	301	1-14
´	(acute)	302	1-13
^	(circumflex)	303	1-16
‾	(macron)	305	1-28
¨	(diaeresis)	310	1-15
__	(underline)	314	1-18
♪		325	2-86

General and technical symbols

Character	Xerox Code in Character Set 43	JIS Code Set Row(1st)-Col.(2nd)
♭	254	2-85
♯	274	2-84
‒	303	1-17

Character	Xerox Code in Character Set 357	JIS Code Set Row(1st)-Col.(2nd)
–	44	1-29
†	60	2-87
‡	61	2-88
⟨	62	1-50
⟩	63	1-51
‰	101	2-83

Character	Xerox Code in Character Set 357	JIS Code Set Row(1st)-Col.(2nd)
≪	102	2-67
≫	103	2-68
∈	112	2-26
∋	114	2-27
⇔	116	2-46
⇒	117	2-45
∩	126	2-33
∪	127	2-32
⊇	130	2-29
⊆	131	2-28
⊃	132	2-31
⊂	133	2-30
¬	152	2-44
∠	154	2-60
∴	157	2-72
⊥	160	2-61
∝	161	2-71
≡	162	2-65
∫	165	2-73
√	174	2-69
∃	264	2-48
∀	265	2-47
∧	266	2-42
∨	267	2-43
∇	271	2-64
∂	272	2-63
⌢	300	2-62

Character	Xerox Code in Character Set 361	JIS Code Set Row(1st)-Col.(2nd)
Å	50	2-82

Forms characters

Character	Xerox Code in Character Set 357	JIS Code Set Row(1st)-Col.(2nd)
│	341	2-13
━	342	2-12
╋	343	2-22
│	344	2-2
─	345	2-1
╋	346	2-11

Substitution within the JIS Standard

Greek

ISO 5428-1980 (E), Greek alphabet coded character set for bibliographic information has been substituted for the JIS C 6226-1983 Greek character set.

JIS Level-II

The four old style characters which appear in row 84 of the 1983 JIS Level-II standard are moved to row 85 because the Xerox standard has CharSet8 = 164_8 (the equivalent of row 84) assigned to Symbols 3 (Japanese).

Character	Xerox Code in Character Set 165	JIS Code Set Row(1st)-Col.(2nd)
堯	41	84-1
槇	42	84-2
遙	43	84-3
瑤	44	84-4

These two characters which appear in row 2 of the 1983 JIS standard are alternate renderings of graphic characters and so are assigned to CharSet8 = 375_8.

Character	Xerox Code in Character Set 375	JIS Code Set Row(1st)-Col.(2nd)
√	174	2-69
∽	176	2-70

Character name	Shape	Cross reference
Absolute value	|	356B/174B
Abstract +	⊕	357B/142B
Abstract ×	⊗	357B/144B
Abstract ÷	⊘	357B/145B
Abstract -	⊖	357B/143B
Accented Greek letters 1	ά to ώ	363B/041B
Accented Greek letters 2	ῶ to ῥ	364B/041B
Accented Latin letters	À to Ọ	361B/041B
Account of symbol	ª⁄c	356B/061B
Acute (l.c. nonspacing accent)	´	000B/302B
Acute (l.c. spacing accent)	´	043B/043B
Acute (u.c. spacing accent)	´	043B/062B
Acute A	Á	361B/042B
Acute a	á	361B/242B
Acute breve (Vietnamese) (nonspacing)	̆	043B/306B
Acute C	Ć	361B/052B
Acute c	ć	361B/252B
Acute circumflex (Vietnamese) (nonspacing)	̂	043B/266B
Acute diaeresis accent (nonspacing)	̈	046B/315B
Acute E	É	361B/061B
Acute e	é	361B/261B
Acute G	Ǵ	361B/070B
Acute g	ǵ	361B/270B
Acute I	Í	361B/077B
Acute i	í	361B/277B
Acute L	Ĺ	361B/110B
Acute l	ĺ	361B/310B
Acute N	Ń	361B/113B
Acute n	ń	361B/313B
Acute O	Ó	361B/120B
Acute o	ó	361B/320B
Acute R	Ŕ	361B/126B
Acute r	ŕ	361B/326B
Acute S	Ś	361B/131B
Acute s	ś	361B/331B
Acute U	Ú	361B/140B
Acute u	ú	361B/340B
Acute Y	Ý	361B/153B
Acute y	ý	361B/353B
Acute Z	Ź	361B/156B
Acute z	ź	361B/356B
Acute, double (l.c. nonspacing accent)	̋	000B/315B
Acute, double (l.c. spacing accent)	˝	043B/051B
Acute, double (u.c. spacing accent)	˝	043B/075B

Character Name	Shape	Cross reference
ae digraph, lowercase	æ	000B/361B
AE digraph, uppercase	Æ	000B/341B
Airplane, solid, top view	✈	355B/050B
Alpha, Greek, alternate small letter	α	375B/175B
Alphabet, Arabic	ا to ی	340B/102B
Alphabet, Armenian	Ա to Ֆ	344B/241B
Alphabet, Cyrillic	A to Ỹ	047B/041B
Alphabet, Cyrillic, extended	Ҷ to Ӡ	052B/041B
Alphabet, Devanagari	ఌ to ई	345B/241B
Alphabet, English	A to Z	000B/101B
Alphabet, Georgian	ა to ჳ	344B/041B
Alphabet, Gothic	𐌰 to 𐍄	051B/341B
Alphabet, Greek	A to Ͽ	046B/101B
Alphabet, Hebrew	א to ש	341B/100B
Alphabet, International Phonetic	m to ɦ	342B/241B
Alphabet, Korean	ㄱ to ㅣ	343B/301B
Alphabet, Latin	A to Z	000B/101B
Alphabet, Roman	A to Z	000B/101B
Alphabet, Runic	ᚠ to ᛁ	051B/316B
Alternate rendition of Hachek L	Ľ	361B/161B
Alternate rendition of "acute accent" (nonspacing uppercase)	´	375B/302B
Alternate rendition of "breve accent" (nonspacing uppercase)	˘	375B/306B
Alternate rendition of "cedilla undermark" (nonspacing uppercase)	¸	375B/313B
Alternate rendition of "circumflex accent" (nonspacing uppercase)	ˆ	375B/303B
Alternate rendition of "dieresis accent" (nonspacing uppercase)	¨	375B/310B
Alternate rendition of "double acute accent" (nonspacing uppercase)	˝	375B/315B
Alternate rendition of "grave accent" (nonspacing uppercase)	`	375B/301B
Alternate rendition of "hachek accent" (nonspacing uppercase)	ˇ	375B/317B
Alternate rendition of "macron accent" (nonspacing uppercase)	¯	375B/305B
Alternate rendition of "ogonek undermark" (nonspacing uppercase)	˛	375B/316B
Alternate rendition of "over-dot accent" (nonspacing uppercase)	˙	375B/307B
Alternate rendition of "over-ring accent" (nonspacing uppercase)	˚	375B/312B
Alternate rendition of "tilde accent" (nonspacing uppercase)	˜	375B/304B
Alternate rendition of Hachek D	Ď	361B/163B
Alternate rendition of Hachek d	ď	361B/363B
Alternate rendition of Hachek l	ľ	361B/361B
Alternate rendition of Hachek t	ť	361B/362B
Alternate rendition of Hachek T	Ť	361B/162B
Alternate version of digit zero	Ø	375B/360B
Alternating current	∿	357B/276B
Ambiguous glyph "apostrophe, right single quotation mark, or acute accent"	'	043B/047B
Ambiguous glyph "left single quotation mark or acute accent"	`	043B/140B
Ampersand	&	000B/046B
Ampersand underscore (APL)	&	042B/241B
And	∧	357B/266B
AND double overbar	∧̿	356B/332B
Angle	∠	357B/154B

Character Name	Shape	Cross reference
Angle, right	L	356B/335B
APL underscore	_A_ to _Z_	042B/301B
APL underscore A	_A_	042B/301B
APL underscore B	_B_	042B/302B
APL underscore C	_C_	042B/303B
APL underscore D	_D_	042B/304B
APL underscore E	_E_	042B/305B
APL underscore F	_F_	042B/306B
APL underscore G	_G_	042B/307B
APL underscore H	_H_	042B/310B
APL underscore I	_I_	042B/311B
APL underscore J	_J_	042B/312B
APL underscore K	_K_	042B/313B
APL underscore L	_L_	042B/314B
APL underscore M	_M_	042B/315B
APL underscore N	_N_	042B/316B
APL underscore O	_O_	042B/317B
APL underscore P	_P_	042B/320B
APL underscore Q	_Q_	042B/321B
APL underscore R	_R_	042B/322B
APL underscore S	_S_	042B/323B
APL underscore T	_T_	042B/324B
APL underscore U	_U_	042B/325B
APL underscore V	_V_	042B/326B
APL underscore W	_W_	042B/327B
APL underscore X	_X_	042B/330B
APL underscore Y	_Y_	042B/331B
APL underscore Z	_Z_	042B/332B
Apostrophe	'	000B/047B
Apple symbol, solid	🍎	354B/346B
Approaches	→	356B/256B
Approximately equal to	≏	356B/171B
Approximately equal, type 1	≃	357B/167B
Approximately equal, type 2	≈	357B/171B
Approximately equal, type 4	≈	042B/170B
Approximately equal, type 5	≜	041B/251B
Aquarius	♒	357B/360B
Arabic	ا to ي	340B/102B
Arabic thousands separating delimiter	٬	356B/054B
Arc	⌒	357B/300B
Aries	♈	357B/362B
Armenian	Ա to ֆ	344B/241B
Arrow with dark tail = east arrow 298	↣	354B/151B
Arrow with five chevrons = east arrow 296	⋙→	354B/147B
Arrow with heavy tail, east pointing = east arrow 299	➤→	354B/152B
Arrow with split tail, east pointing = east arrow 299B	⇒→	354B/153B
Arrow with tear drop shape, east pointing = east arrow 299C	�→	354B/154B
Arrow with three chevrons = east arrow 297	⋙→	354B/150B

Character Name	Shape	Cross reference
Arrow with two solid chevrons and dark head = east arrow 286	»→	354B/142B
Arrow, monotone, east pointing = east arrow 281	→	354B/136B
Arrow, west pointing = west arrow 399F	↞	354B/257B
Arrow, backward indicator	◄	356B/276B
Arrow, barbed, bold, east pointing = east arrow 177	→	354B/064B
Arrow, barbed, light, east pointing = rightward arrow	→	000B/256B
Arrow, barbed, light, east pointing = east arrow 175	→	354B/062B
Arrow, barbed, light, north pointing	↑	000B/255B
Arrow, barbed, light, south pointing	↓	000B/257B
Arrow, barbed, light, west pointing	←	000B/254B
Arrow, barbed, medium, east pointing = east arrow 176	→	354B/063B
Arrow, bold barbs, light shaft, east pointing = east arrow 278	→	354B/133B
Arrow, bold barbs, light shaft, east pointing = east arrow 277	→	354B/132B
Arrow, bold, east pointing with triangle head = east arrow 182	➡	354B/066B
Arrow, bold, hairline barbs, east pointing = east arrow 198	➡	354B/076B
Arrow, bold, medium barbs, east pointing = east arrow 199	➡	354B/077B
Arrow, bold, thick feathers and barbs = east arrow 284	►►	354B/140B
Arrow, bold, west pointing = west arrow 299K	◄	354B/156B
Arrow, bold, west pointing, rounded = west arrow 199K	←	354B/105B
Arrow, curly	⤳	357B/123B
Arrow, dark, rightward arrow = east arrow 295	→	355B/245B
Arrow, double	↔	357B/122B
Arrow, double, back	⇐	357B/115B
Arrow, double, double	⇔	357B/116B
Arrow, double, right	⇒	357B/117B
Arrow, double, up and down	⇕	356B/121B
Arrow, duo-tone, east pointing = east arrow 192	»→	354B/072B
Arrow, east pointing = east arrow 178	→	355B/252B
Arrow, east pointing = east arrow 179	→	355B/253B
Arrow, east pointing = east arrow 181	→	355B/254B
Arrow, east pointing = east arrow 199F	➤	355B/251B
Arrow, east pointing = east arrow 291	➡	355B/247B
Arrow, east pointing = east arrow 293	⫸	355B/277B
Arrow, east pointing = east arrow 387	⇒	355B/255B
Arrow, east pointing = east arrow 388	⇒	355B/256B
Arrow, east, circled	⊙	357B/333B
Arrow, east-then-south, circled	⊙	357B/334B
Arrow, forward indicator	►	356B/277B
Arrow, large, downward and closed	↓	356B/247B
Arrow, large, downward and open	⇓	356B/253B
Arrow, large, leftward and closed	←	356B/245B
Arrow, large, leftward and open	⇐	356B/251B
Arrow, large, rightward and closed	➡	356B/244B
Arrow, large, rightward and open	⇨	356B/250B
Arrow, large, upward and closed	↑	356B/246B
Arrow, large, upward and open	⇧	356B/252B
Arrow, left, double-headed	⇇	042B/106B
Arrow, left, triple	⇚	042B/104B

Character Name	Shape	Cross reference
Arrow, left, with loop	↜	042B/116B
Arrow, light barbs, bold shaft, east pointing = east arrow 276	→	354B/131B
Arrow, light, dotted, east pointing = east arrow 287	⇢	354B/143B
Arrow, light, east pointing = east arrow 186	→	354B/067B
Arrow, light, double barbs, east pointing = east arrow 199C	⇉	354B/101B
Arrow, light, duo-tone, fine barbs, east pointing = east arrow 199E	⇀	354B/102B
Arrow, light, east pointing = east arrow 199H	→	354B/104B
Arrow, light, east pointing = east arrow 275	→	354B/130B
Arrow, light, west pointing = west arrow 187	←	354B/070B
Arrow, light, with two solid chevrons, east pointing	⇶	354B/141B
Arrow, medium, dotted, east pointing = east arrow 288	⇢	354B/144B
Arrow, medium, east pointing, triangle head = east arrow 180	→	354B/065B
Arrow, medium, large tail feathers, east pointing = east arrow 194	⊶	354B/073B
Arrow, medium, monotone, east pointing = east arrow 294	→	354B/146B
Arrow, medium, west pointing, feathered = west arrow 199D	⇚	354B/103B
Arrow, medium, with tapered shaft, east pointing = east arrow 290	→	354B/145B
Arrow, monotone, bold, east pointing = east arrow 280	→	354B/135B
Arrow, monotone, bold, east pointing = east arrow 282	→	354B/137B
Arrow, monotone, bold, west pointing = west arrow 399C	←	354B/254B
Arrow, monotone, east pointing = east arrow 279	→	354B/134B
Arrow, monotone, light, west pointing = west arrow 399A	←	354B/252B
Arrow, monotone, medium, west pointing = west arrow 399B	←	354B/253B
Arrow, north-south	↕	356B/265B
Arrow, north-south, perpendicular	⇕	356B/266B
Arrow, northeast	↗	357B/076B
Arrow, northeast pointing = northeast arrow 299F	➚	355B/250B
Arrow, northwest	↖	357B/074B
Arrow, outline, 3-D, bullet, east pointing = east arrow 386	⇨	354B/251B
Arrow, outline, 3-D, east pointing = east arrow 390	⇨	355B/274B
Arrow, outline, 3-D, east pointing = east arrow 390 upside-down	⇨	355B/275B
Arrow, outline, 3-D, west pointing = west arrow 384	⇦	354B/250B
Arrow, outline, east pointing = east arrow 289	⇛	355B/312B
Arrow, outline, east pointing = east arrow 376	⇨	354B/242B
Arrow, outline, east pointing = east arrow 375	⇨	354B/241B
Arrow, outline, east pointing = east arrow 377	⇨	354B/243B
Arrow, outline, east pointing = east arrow 379	⇨	354B/244B
Arrow, outline, east pointing = east arrow 380	⇨	354B/245B
Arrow, outline, east pointing = east arrow 381	⇨	354B/246B
Arrow, outline, east pointing = east arrow 382	⇨	354B/247B
Arrow, outline, shaded, 3-D, east pointing	⇨	355B/267B
Arrow, outline, shaded, 3-D, east pointing = east arrow 383	⇨	355B/266B
Arrow, outline, shaded, 3-D, east pointing = east arrow 385	⇨	355B/270B
Arrow, outline, shaded, 3-D, east pointing = east arrow 385 upside-down	⇨	355B/271B
Arrow, outline, shaded, 3-D, east pointing = east arrow 389	⇨	355B/272B
Arrow, outline, shaded, 3-D, east pointing = east arrow 389 upside-down	⇨	355B/273B
Arrow, outline, southeast pointing = southeast arrow 299J	⇘	354B/155B

Character Name	Shape	Cross reference
Arrow, outline, west pointing = west arrow 399H	⇐	354B/261B
Arrow, ragged, east pointing = east arrow 299L	→	354B/157B
Arrow, reversed in circle, east pointing = east arrow 391	⊃	355B/276B
Arrow, right, triple	⇛	042B/105B
Arrow, right, with loop	↬	042B/117B
Arrow, solid, curved shaft, east pointing = east arrow 199A	➠	355B/262B
Arrow, solid, curved shaft, east pointing = east arrow 199B	➡	355B/263B
Arrow, solid, east pointing = east arrow 183	▸	355B/264B
Arrow, solid, east pointing = east arrow 191	➤➤	355B/311B
Arrow, solid, east pointing = east arrow 193	➤➤	355B/304B
Arrow, solid, east pointing = east arrow 283	➤➤	355B/310B
Arrow, solid, east pointing = east arrow 292	➡	355B/265B
Arrow, solid, east pointing = east arrow 299D	➡	355B/306B
Arrow, solid, east pointing = east arrow 299E	➤➤	355B/307B
Arrow, solid, east pointing = east arrowhead 274	➤	355B/261B
Arrow, solid, northeast pointing = northeast arrow 299H upside-down	➚	355B/305B
Arrow, solid, southeast pointing = southeast arrow 299H	�’	355B/303B
Arrow, solid, split tail, east pointing = east arrow 299A	➡	355B/301B
Arrow, solid, split tail, northeast pointing = northeast arrow 299G	➚	355B/302B
Arrow, south-then-west, circled	⊕	357B/335B
Arrow, southeast	↘	357B/075B
Arrow, southeast pointing = southeast arrow 299F	�’	355B/246B
Arrow, southeast pointing = southeast arrow 299G	�’	355B/300B
Arrow, southwest	↙	357B/077B
Arrow, ultra-bold, bullet shaped, east pointing = east arrow 195	➡	354B/074B
Arrow, ultra-bold, chevron style, east pointing = east arrow 196	➤	354B/075B
Arrow, ultra-bold, east pointing = east arrow 190	➤➤	354B/071B
Arrow, west pointing = west arrow 399D	←	354B/255B
Arrow, west pointing = west arrow 399E	←	354B/256B
Arrow, west pointing = west arrow 399G	◄	354B/260B
Arrow, west pointing = west arrow 399J	◄◄	354B/262B
Arrow, west pointing = west arrow 399K	◄‖	354B/263B
Arrowhead, east pointing = east arrowhead 273	➤	355B/257B
Arrowhead, east pointing = east arrowhead 273 upside-down	➤	355B/260B
Arrows, down, parallel	⇊	042B/103B
Arrows, up, parallel	⇈	042B/102B
Assertion sign	⊢	356B/066B
Asterisk	*	000B/052B
Asterisk	✳	354B/060B
Asterisk, monotone, bold	✳	354B/125B
Asterisk, light, 8 tear-shaped strokes, solid circle center	✳	355B/147B
Asterisk, medium, 8 tear-shaped strokes, solid circle center	✳	355B/150B
Asterisk, monotone, light	✳	354B/122B
Asterisk, monotone, medium	✳	354B/123B
Asterisk, monotone, medium	✳	354B/124B
Asterisk, sextuplicate light lines, solid circle ends	✳	355B/146B
Asterisk, solid, heavy, monotone, square ends	✳	355B/116B

Character name	Shape	Cross reference
Asterisk, solid, light, stress variation, square ends	✳	355B/120B
Asterisk, solid, medium, monotone, concave ends, open center	✻	355B/117B
Asterisk, stress variation	✳	354B/126B
Asterisk, stress variation	✳	354B/127B
Asymptotic or equal to	≅	356B/170B
Asymptotically equal to, type 2 (curly equal)	≍	042B/144B
At sign (commercial at sign)	@	000B/100B
At sign, generic sans serif	@	354B/120B
At sign, generic serif	@	354B/100B
Azerbaijani capital letter E	Ə	043B/106B
Azerbaijani capital letter OJ	Ol	043B/107B
Azerbaijani capital letter Z	Z	043B/110B
Azerbaijani small letter E	ə	043B/146B
Azerbaijani small letter OJ	oȷ	043B/147B
Azerbaijani small letter Z	z	043B/150B
Ballot box	☐	042B/042B
Ballot box with "x"	☒	042B/061B
Ballot box, checked	☒	357B/140B
Bar, horizontal, bold	━	357B/342B
Bar, horizontal, light	─	357B/345B
Bar, low	_	000B/137B
Bar, low, double		357B/277B
Bar, vertical, light	⌐	357B/344B
Bar, vertical, bold	│	357B/341B
Bar, vertical, broken	¦	357B/153B
Bar, vertical, single	│	000B/174B
Bar, vertical, solid, bold	▮	355B/161B
Bar, vertical, solid, medium	▮	355B/160B
Base null (APL)	⏚	356B/320B
Because	∵	357B/157B
Between	∅	356B/060B
Big circle dot	⊙	042B/354B
Big circle plus	⊕	042B/352B
Big circle times	⊗	042B/353B
Big union with inner plus sign	⊎	042B/257B
Bo-po-mo-fo (Chinese)	ㄅ to ㄜ	044B/241B
Bottle symbol	⚬	356B/062B
Bottom	⊥	042B/252B
Bowtie	⋈	042B/154B
Box intersection double	╫	050B/142B
Box intersection double to single	╪	050B/154B
Box intersection single to double	╪	050B/153B
Box with dot	⊡	042B/062B
Box with minus sign	⊟	042B/060B
Box with plus sign	⊞	042B/057B
Box, open, shaded northeast	◪	355B/155B
Box, open, shaded southeast	◪	355B/154B

Character name	Shape	Cross reference
Box, open, shadowed northeast	❏	355B/153B
Box, open, shadowed southeast	❐	355B/152B
Brace, beginning (open)	{	000B/173B
Brace, bold, begin	{	355B/351B
Brace, bold, end	}	355B/352B
Brace, closing (end)	}	000B/175B
Brace, left, bottom portion	⎩	356B/345B
Brace, left, center portion	⎨	356B/346B
Brace, left, top portion	⎧	356B/344B
Brace, multiline, vertical portion	⎪	356B/341B
Brace, right, bottom portion	⎭	356B/343B
Brace, right, center portion	⎬	356B/342B
Brace, right, top portion	⎫	356B/340B
Brace, two line, left lower and right upper	⎰	356B/350B
Brace, two line, left upper and right lower	⎱	356B/347B
Bracket, angled, begin, bold	❰	355B/361B
Bracket, angled, begin, light	⟨	355B/313B
Bracket, angled, begin, light	⟨	357B/062B
Bracket, angled, close, light	⟩	357B/063B
Bracket, angled, end, bold	❱	355B/362B
Bracket, angled, end, light	⟩	355B/314B
Bracket, closing (right)	]	000B/135B
Bracket, left and right, center portion	⎢	356B/165B
Bracket, left, bottom portion	⎣	356B/164B
Bracket, left, center portion	⎢	042B/333B
Bracket, left, top portion	⎡	356B/163B
Bracket, lenticular, left, black (Japanese)	【	041B/132B
Bracket, lenticular, left, white (Chinese)	〖	357B/072B
Bracket, lenticular, right, black (Japanese)	】	041B/133B
Bracket, lenticular, right, white (Chinese)	〗	357B/073B
Bracket, opening (left)	[	000B/133B
Bracket, right, center portion	⎥	042B/334B
Bracket, right, bottom portion	⎦	356B/167B
Bracket, right, top portion	⎤	356B/166B
Breve (l.c. nonspacing accent)	˘	000B/306B
Breve (l.c. spacing accent)	˘	043B/045B
Breve (u.c. spacing accent)	˘	043B/066B
Breve A	Ă	361B/046B
Breve a	ă	361B/246B
Breve G	Ğ	361B/072B
Breve g	ğ	361B/272B
Breve U	Ŭ	361B/144B
Breve u	ŭ	361B/344B
Bull's eye	◎	041B/175B
Bullet, centered	●	357B/146B
Bullet, reverse image	▣	356B/101B

Character name	Shape	Cross reference
Cada una (Spanish)	℅ᵤ	356B/100B
Cancer	♋	357B/365B
Cap null (APL)	⍝	356B/322B
Capital acute Alpha	Ά	363B/046B
Capital acute Epsilon	Έ	363B/124B
Capital acute Eta	Ή	363B/144B
Capital acute Iota	Ί	363B/264B
Capital acute Omega	Ώ	363B/374B
Capital acute Omicron	Ό	363B/320B
Capital acute Upsilon	Ύ	363B/340B
Capital diaeresis Iota	Ϊ	046B/327B
Capital diaeresis Upsilon	Ϋ	046B/330B
Capricorn	♑	357B/373B
Care of ·	%	357B/100B
Caret	^	356B/107B
Caron S	Š	361B/134B
Caron Z	Ž	361B/160B
Cedilla (l.c. nonspacing undermark)	¸	000B/313B
Cedilla (l.c. spacing undermark)	¸	043B/054B
Cedilla (u.c. spacing undermark)	¸	043B/073B
Cedilla C	Ç	361B/055B
Cedilla c	ç	361B/255B
Cedilla G	Ģ	361B/074B
Cedilla g	ģ	361B/274B
Cedilla K	Ķ	361B/107B
Cedilla k	ķ	361B/307B
Cedilla L	Ļ	361B/111B
Cedilla l	ļ	361B/311B
Cedilla N	Ņ	361B/115B
Cedilla n	ņ	361B/315B
Cedilla R	Ŗ	361B/127B
Cedilla r	ŗ	361B/327B
Cedilla S	Ş	361B/133B
Cedilla s	ş	361B/333B
Cedilla T	Ţ	361B/135B
Cedilla t	ţ	361B/335B
Ceiling, left	⌈	357B/260B
Ceiling, right	⌉	357B/261B
Cent sign	¢	000B/242B
Cent sign, superscript	¢	375B/334B
Center box bar horizontal double	=	050B/141B
Center box bar vertical double	‖	050B/125B
Centered circle equals	⊜	041B/252B
Centerline	₡	356B/110B
Check mark	✓	357B/317B
Check mark	✔	354B/052B
Check mark, light brush, spotted	✓	354B/265B
Check mark, medium brush	✓	354B/160B

Character Name	Shape	Cross reference
Check mark, outline	✓	354B/116B
Check mark, solid	✔	355B/063B
Chevron, begin, light	⟨	355B/363B
Chevron, begin, medium	❬	355B/365B
Chevron, end, light	⟩	355B/364B
Chevron, end, medium	❭	355B/366B
Circle below (transliterated Bengali, Hindi, etc.) (nonspacing)	°	043B/324B
Circle dot	⊙	042B/275B
Circle minus	⊖	042B/164B
Circle plus	⊕	042B/163B
Circle slash	⊘	042B/166B
Circle slope (APL)	⦰	356B/304B
Circle star (APL)	⊛	356B/305B
Circle stile (APL)	⌽	356B/303B
Circle times	⊗	042B/165B
Circle, large	◯	042B/176B
Circle, large, inverse	◉	356B/125B
Circle, monotone, open	○	041B/173B
Circle, open, shadow	◯	355B/151B
Circle, solid	●	041B/174B
Circled letters	Ⓐ to Ⓩ	166B/101B
Circled numbers	① to ⑩	357B/321B
Circled asterisk	⍟	041B/170B
Circled circle	◎	042B/365B
Circled dash	⊝	041B/167B
Circled number 1	①	357B/321B
Circled number 1, open circle, generic sans serif	①	354B/302B
Circled number 1, open circle, generic serif	①	354B/270B
Circled number 1, reversed, generic sans serif	❶	354B/314B
Circled number 1, reversed, generic serif	❶	355B/171B
Circled number 10	⑩	357B/332B
Circled number 10, open circle, generic sans serif	⑩	354B/313B
Circled number 10, open circle, generic serif	⑩	354B/301B
Circled number 10, reversed, generic sans serif	❿	354B/325B
Circled number 10, reversed, generic serif	❿	355B/244B
Circled number 2	②	357B/322B
Circled number 2, open circle, generic sans serif	②	354B/303B
Circled number 2, open circle, generic serif	②	354B/271B
Circled number 2, reversed, generic sans serif	❷	354B/315B
Circled number 2, reversed, generic serif	❷	355B/172B
Circled number 3	③	357B/323B
Circled number 3, open circle, generic sans serif	③	354B/304B
Circled number 3, open circle, generic serif	③	354B/272B
Circled number 3, reversed, generic sans serif	❸	354B/316B
Circled number 3, reversed, generic serif	❸	355B/173B
Circled number 4	④	357B/324B
Circled number 4, open circle, generic sans serif	④	354B/305B
Circled number 4, open circle, generic serif	④	354B/273B

Character Name	Shape	Cross Reference
Circled number 4, reversed, generic sans serif	❹	354B/317B
Circled number 4, reversed, generic serif	❹	355B/174B
Circled number 5	⑤	357B/325B
Circled number 5, open circle, generic sans serif	⑤	354B/306B
Circled number 5, open circle, generic serif	⑤	354B/274B
Circled number 5, reversed, generic sans serif	❺	354B/320B
Circled number 5, reversed, generic serif	❺	355B/175B
Circled number 6	⑥	357B/326B
Circled number 6, open circle, generic sans serif	⑥	354B/307B
Circled number 6, open circle, generic serif	⑥	354B/275B
Circled number 6, reversed, generic sans serif	❻	354B/321B
Circled number 6, reversed, generic serif	❻	355B/176B
Circled number 7	⑦	357B/327B
Circled number 7, open circle, generic sans serif	⑦	354B/310B
Circled number 7, open circle, generic serif	⑦	354B/276B
Circled number 7, reversed, generic sans serif	❼	354B/322B
Circled number 7, reversed, generic serif	❼	355B/241B
Circled number 8	⑧	357B/330B
Circled number 8, open circle, generic sans serif	⑧	354B/311B
Circled number 8, open circle, generic serif	⑧	354B/277B
Circled number 8, reversed, generic sans serif	❽	354B/323B
Circled number 8, reversed, generic serif	❽	355B/242B
Circled number 9	⑨	357B/331B
Circled number 9, open circle, generic serif	⑨	354B/300B
Circled number 9, reversed, generic sans serif	❾	354B/324B
Circled number 9, reversed, generic serif	❾	355B/243B
Circled small letters	ⓐ to ⓩ	166B/141B
Circled uppercase Latin letter S	Ⓢ	166B/123B
Circumflex accent (l.c. spacing)	ˆ	000B/136B
Circumflex (l.c. nonspacing accent)	ˆ	000B/303B
Circumflex (u.c. spacing accent)	ˆ	043B/063B
Circumflex A	Â	361B/043B
Circumflex a	â	361B/243B
Circumflex C	Ĉ	361B/053B
Circumflex c	ĉ	361B/253B
Circumflex E	Ê	361B/062B
Circumflex e	ê	361B/262B
Circumflex G	Ĝ	361B/071B
Circumflex g	ĝ	361B/271B
Circumflex H	Ĥ	361B/075B
Circumflex h	ĥ	361B/275B
Circumflex I	Î	361B/100B
Circumflex i	î	361B/300B
Circumflex J	Ĵ	361B/106B
Circumflex j	ĵ	361B/306B
Circumflex O	Ô	361B/121B
Circumflex o	ô	361B/321B
Circumflex S	Ŝ	361B/132B

Character Name	Shape	Cross Reference
Circumflex s	ŝ	361B/332B
Circumflex U	Û	361B/141B
Circumflex u	û	361B/341B
Circumflex undermark (nonspacing and used in African languages)	ˆ	043B/333B
Circumflex W	Ŵ	361B/151B
Circumflex w	ŵ	361B/351B
Circumflex Y	Ŷ	361B/154B
Circumflex y	ŷ	361B/354B
Clubs (playing card) solid	♣	357B/316B
Clubs (playing card), outline	♧	356B/316B
Colon	:	000B/072B
Comma	,	000B/054B
Comma, square (kanji)	、	041B/044B
Compass symbol	☼	356B/317B
Complement	∁	356B/151B
Complex number	ℂ	357B/254B
Computer forward single delimiter	'	356B/153B
Conductance	℧	042B/174B
Congruent	≅	357B/170B
Contained in or equals	⊆	357B/131B
Contains normal subgroup	⊵	356B/354B
Contains or equals	⊇	357B/130B
Coproduct	∐	041B/255B
Coproduct operator	∐	042B/267B
Copyright sign	©	000B/323B
Copyright sign, generic sans serif	©	375B/327B
Copyright sign, generic serif	©	375B/367B
Copyright statement, sound recording	℗	043B/256B
Crop sign, bottom left	⌐	356B/051B
Crop sign, bottom right	⌐	356B/050B
Crop sign, top left	⌐	356B/047B
Crop sign, top right	⌐	356B/046B
Cross, outline, shadow	♱	355B/075B
Cross, solid, medium, monotone	†	355B/074B
Cross, solid, medium, monotone, outlined	♱	355B/076B
Cross-out, brushed	✗	354B/161B
Cross-out, open	✗	354B/106B
Cross-out, solid, heavy, brush stroke	✗	355B/067B
Cross-out, solid, medium, brush stroke	✗	357B/320B
Crossed division sign	✳	356B/077B
Crossed lines, solid, heavy, monotone, open center	✚	355B/073B
Crossed lines, solid, medium, monotone, open center	✚	355B/072B
Crossed lines, solid, outlined	✚	355B/070B
Cruzeiro (Brazilian)	₢	357B/241B
Cubed	³	000B/263B
Cup product	⌣	041B/245B
Curly equal to or precedes	≼	041B/124B
Curly equal to or succeeds	≽	041B/125B

Character Name	Shape	Cross Reference
Curly vee	V	356B/352B
Curly wedge	∧	356B/351B
Currency sign, European	₠	357B/245B
Cylindricity	⌀	356B/113B
Cyrillic	A to Ў	047B/041B
d with stroke, lowercase (Croatian)	đ	000B/362B
D with stroke, uppercase (Croatian)	Đ	000B/342B
Dagger	†	357B/060B
Dagger, double	‡	357B/061B
"Daku-on" mark	゛	041B/053B
Dash, em	—	357B/045B
Dash, en	–	357B/044B
Dash, figure	–	357B/046B
Dash, neutral	–	000B/055B
Decimal point	.	356B/056B
Decorated rules	— to →·	056B/041B
Decreases	↓	356B/257B
Defined to be	:=	042B/124B
Degree sign	°	000B/260B
Degrees Celsius	°C	041B/156B
Del stile (APL)	⍒	356B/301B
Del tilde (APL)	⍫	356B/300B
Delta stile (APL)	⍋	356B/302B
Delta underbar (APL)	Δ̲	042B/243B
Derivative, partial	∂	357B/272B
Devanagari	ॱ to ी	345B/241B
Diaeresis (l.c. nonspacing accent)	¨	000B/310B
Diaeresis (l.c. spacing accent)	¨	043B/042B
Diaeresis (u.c. spacing accent)	¨	043B/070B
Diaeresis i	ï	361B/304B
Diaeresis o	ö	361B/324B
Diaeresis u	ü	361B/345B
Diaeresis y	ÿ	361B/355B
Diamond, enclosed numbers	◈ to ◈	166B/060B
Diamond, open	◇	041B/176B
Diamond, solid	◆	042B/041B
Diamonds (playing card) outline	◇	357B/315B
Diamonds (playing card) solid	◆	356B/315B
Diaeresis A	Ä	361B/047B
Diaeresis a	ä	361B/247B
Diaeresis E	Ë	361B/065B
Diaeresis e	ë	361B/265B
Diaeresis I	Ï	361B/104B
Diaeresis O	Ö	361B/124B
Diaeresis U	Ü	361B/145B
Diaeresis Y	Ÿ	361B/155B
Digits	0 to 9	000B/060B

Character Name	Shape	Cross Reference
Dingbats 1, ITC	✃ to 〉	355B/041B
Dingbats 2, ITC extended	☞ to ⑩	354B/042B
Dirac h	ℏ	356B/057B
Direct sum	⊕	356B/053B
Divide sign	÷	000B/270B
Divide sign, superscript	÷	375B/337B
Divides	∣	357B/106B
Does not contain	⊅	357B/136B
Does not contain as normal or equal to	⋭	041B/276B
Does not contain as normal subgroup	⋫	041B/274B
Does not contain or equal, type 1	⊉	357B/134B
Does not contain or equal, type 2	⊉	041B/304B
Does not contain or equal, type 3	⊉	357B/124B
Does not contain or equal, type 4	⊉	041B/310B
Does not divide, type 1	∤	357B/107B
Does not divide, type 2	∤	041B/265B
Does not equal	≠	041B/142B
Does not equal, sign, superscript	≠	375B/356B
Does not force	⊮	041B/271B
Does not imply	⇏	356B/373B
Does not model	⊭	041B/270B
Does not precede	⊀	041B/320B
Does not precede or equal	⋠	041B/322B
Does not prove	⊬	041B/267B
Does not succeed	⊁	041B/321B
Does not succeed or equal	⋡	041B/323B
Dollar sign	$	000B/244B
Dollar sign, superscript	$	375B/333B
Dot below (transliterated Bengali, Hindi, etc.) (nonspacing)	.	043B/326B
Dot, centered	·	000B/267B
Dot, centered, dark	•	042B/360B
Double acute O	Ő	361B/125B
Double acute o	ő	361B/325B
Double acute U	Ű	361B/147B
Double acute u	ű	361B/347B
Double cap	⋒	356B/142B
Double cup	⋓	356B/143B
Double dot below (transliterated Urdu) (nonspacing)	¨	043B/327B
Double down arrow	⇓	042B/141B
Double map left	⇐	042B/100B
Double map right	⇒	042B/101B
Double subset	⋐	041B/136B
Double superset	⋑	041B/137B
Double up arrow	⇑	042B/140B
Down harpoon left	⇃	042B/111B
Down harpoon right	⇂	042B/113B
Dram	ȝ	357B/253B
Also: Yogh (Old English)		

Character Name	Shape	Cross Reference
Eight	8	000B/070B
Em fraction 1/2	½	360B/161B
Em fraction 1/3	⅓	360B/163B
Em fraction 1/4	¼	360B/160B
Em fraction 1/8	⅛	360B/165B
Em fraction 2/3	⅔	360B/164B
Em fraction 3/4	¾	360B/162B
Em fraction 3/8	⅜	360B/166B
Em fraction 5/8	⅝	360B/167B
Em fraction 7/8	⅞	360B/170B
Eng, lowercase (Lapp)	ŋ	000B/376B
Eng, uppercase (Lapp)	Ŋ	000B/356B
English	A to Z	000B/101B
Envelope, wax sealed	⊠	355B/051B
Epsilon underbar (APL)	ε	042B/245B
Epsilon, Greek, alternate small letter	ε	375B/133B
Equal by definition	≐	357B/163B
Equal sign, subscript	=	375B/354B
Equal to or greater than	≥	041B/141B
Equal to or less than	≤	041B/140B
Equal underbar (APL)	≡	042B/242B
Equals	=	000B/075B
Equals by definition	≜	041B/253B
Equals colon	=:	042B/125B
Equals, left underdot, right overdot	≓	042B/143B
Equiangular	≚	356B/076B
Escudo (Portuguese currency)	$	357B/246B
Estimates or is estimated by	≙	356B/075B
Eth, lowercase (Icelandic)	ð	000B/363B
Exclamation mark	!	000B/041B
Exclamation mark (Spanish) inverted	¡	000B/241B
Exclamation mark, double	!!	356B/172B
Exclamation mark, solid, fat	❗	355B/163B
Exclamation mark, solid, heart shaped, heavy	❣	355B/164B
Factorial sign	!	356B/065B
Female	♀	041B/152B
Five	5	000B/065B
Flatness	⬭	356B/112B
Floor, left	⌊	357B/262B
Floor, right	⌋	357B/263B
Florin	ƒ	357B/242B
For all	∀	357B/265B
Forces	⊩	041B/103B
Four	4	000B/064B
Fraction bar	/	375B/257B
Fraction one with fraction bar	¹⁄	360B/171B
Fraction, five-eighths	⅝	000B/336B

Character Name	Shape	Cross Reference
Fraction, one-eighth	⅛	000B/334B
Fraction, one-half, en set	½	000B/275B
Fraction, one-quarter, en set	¼	000B/274B
Fraction, one-third, en set	⅓	357B/375B
Fraction, seven-eighths	⅞	000B/337B
Fraction, three-eighths	⅜	000B/335B
Fraction, three-quarters, en set	¾	000B/276B
Fraction, two-thirds en set	⅔	357B/376B
Francs	₣	357B/243B
Frown	⌢	041B/246B
Function symbol	ƒ	356B/124B
Gemini	♊	357B/364B
General currency symbol	¤	000B/044B
Geometric proportion	∷	356B/144B
Geometrically equal to	≑	041B/250B
Geometrically equivalent	≎	356B/102B
Georgian	ა to ჳ	344B/041B
Grave accent (l.c. spacing)	`	000B/140B
Grave (l.c. nonspacing accent)	`	000B/301B
Grave (u.c. spacing accent)	`	043B/061B
Grave A	À	361B/041B
Grave a	à	361B/241B
Grave breve (Vietnamese) (nonspacing)	̀	043B/305B
Grave circumflex (Vietnamese) (nonspacing)	̀	043B/265B
Grave E	È	361B/060B
Grave e	è	361B/260B
Grave I	Ì	361B/076B
Grave i	ì	361B/276B
Grave O	Ò	361B/117B
Grave o	ò	361B/317B
Grave U	Ù	361B/137B
Grave u	ù	361B/337B
Grave Y	Ỳ	361B/152B
Grave y	ỳ	361B/352B
Greater than	>	000B/076B
Greater than and not equal to, type 1	≩	041B/363B
Greater than and not equal to, type 2	≩	041B/343B
Greater than and not equal to, type 3	≩	041B/365B
Greater than and not equivalent to, type 1	≵	041B/345B
Greater than and not equivalent to, type 2	≵	041B/367B
Greater than or approximately equal to	≳	041B/144B
Greater than or equal to sign, superscript	≥	375B/355B
Greater than or equal to, type 1	≥	041B/146B
Greater than or equal to, type 2	≧	041B/161B
Greater than or equal to, type 3	⩾	041B/163B
Greater than or equivalent to	≳	356B/157B
Greater than or less than	≷	356B/155B

Character Name	Shape	Cross Reference
Greater than, equal to, or less than, Type 1	≥≦	041B/117B
Greater than, equal to, or less than, Type 2	≥≦	041B/165B
Greater than, with dot inside	⋗	041B/101B
Greek	A to ∂	046B/101B
Greek capital letter Alpha	A	046B/101B
Greek capital letter Beta	B	046B/102B
Greek capital letter Chi	X	046B/133B
Greek capital letter Delta	Δ	046B/105B
Greek capital letter Epsilon	E	046B/106B
Greek capital letter Eta	H	046B/112B
Greek capital letter Gamma	Γ	046B/104B
Greek capital letter Iota	I	046B/114B
Greek capital letter Kappa	K	046B/115B
Greek capital letter Lambda	Λ	046B/116B
Greek capital letter Mu	M	046B/117B
Greek capital letter Nu	N	046B/120B
Greek capital letter Omega	Ω	046B/135B
Greek capital letter Omicron	O	046B/122B
Greek capital letter Phi	Φ	046B/132B
Greek capital letter Pi	Π	046B/123B
Greek capital letter Psi	Ψ	046B/134B
Greek capital letter Rho	P	046B/125B
Greek capital letter Sigma	Σ	046B/126B
Greek capital letter Tau	T	046B/130B
Greek capital letter Theta	Θ	046B/113B
Greek capital letter Upsilon	Y	046B/131B
Greek capital letter Xi	Ξ	046B/121B
Greek capital letter Zeta	Z	046B/111B
Greek capital oxia Alpha	Ά	046B/320B
Greek capital oxia Epsilon	Έ	046B/321B
Greek capital oxia Eta	Ή	046B/322B
Greek capital oxia Iota	Ί	046B/323B
Greek capital oxia Omega	Ώ	046B/326B
Greek capital oxia Omicron	Ό	046B/324B
Greek capital oxia Upsilon	Ύ	046B/325B
Greek small letter Alpha	α	046B/141B
Greek small letter Beta	β	046B/142B
Greek small letter Chi	χ	046B/173B
Greek small letter Delta	δ	046B/145B
Greek small letter Digamma	ϝ	046B/150B
Greek small letter Epsilon	ε	046B/146B
Greek small letter Eta	η	046B/152B
Greek small letter Gamma	γ	046B/144B
Greek small letter Iota	ι	046B/154B
Greek small letter Kappa	κ	046B/155B
Greek small letter Lambda	λ	046B/156B
Greek small letter Mu	μ	046B/157B
Greek small letter Nu	ν	046B/160B

Character Name	Shape	Cross Reference
Greek small letter Omega	ω	046B/175B
Greek small letter Omicron	o	046B/162B
Greek small letter oxia Omega	ώ	046B/366B
Greek small letter oxia Omicron	ό	046B/364B
Greek small letter oxia Upsilon	ύ	046B/365B
Greek small letter oxia Alpha	ά	046B/360B
Greek small letter oxia diaeresis Iota	ΐ	046B/371B
Greek small letter oxia diaeresis Upsilon	ΰ	046B/372B
Greek small letter oxia Epsilon	έ	046B/361B
Greek small letter oxia Eta	ή	046B/362B
Greek small letter oxia Iota	ί	046B/363B
Greek small letter Phi	φ	046B/172B
Greek small letter Pi	π	046B/163B
Greek small letter Psi	ψ	046B/174B
Greek small letter Rho	ρ	046B/165B
Greek small letter Sigma form found at beginning or middle of words	σ	046B/166B
Greek small letter Sigma form found at end of words	ς	046B/167B
Greek small letter Tau	τ	046B/170B
Greek small letter Theta	θ	046B/153B
Greek small letter Upsilon	υ	046B/171B
Greek small letter Xi	ξ	046B/161B
Greek small letter Zeta	ζ	046B/151B
Guillemet (European quotation mark), left, double	«	000B/253B
Guillemet (European quotation mark), right, double	»	000B/273B
Guillemet, single, left quote	‹	357B/052B
Guillemet, single, right quote	›	357B/053B
h with stroke, lowercase (Maltese)	ħ	000B/364B
H with stroke, uppercase (Maltese)	Ħ	000B/344B
Hachek (l.c. nonspacing accent)	ˇ	000B/317B
Hachek (l.c. spacing accent)	ˇ	043B/053B
Hachek (u.c. spacing accent)	ˇ	043B/077B
Hachek C	Č	361B/056B
Hachek c	č	361B/256B
Hachek D	Ď	361B/057B
Hachek d	ď	361B/257B
Hachek E	Ě	361B/067B
Hachek e	ě	361B/267B
Hachek L	Ľ	361B/112B
Hachek l	ľ	361B/312B
Hachek N	Ň	361B/116B
Hachek n	ň	361B/316B
Hachek R	Ř	361B/130B
Hachek r	ř	361B/330B
Hachek s	š	361B/334B
Hachek T	Ť	361B/136B
Hachek t	ť	361B/336B
Hachek z	ž	361B/360B

Character Name	Shape	Cross Reference
Hand (fist), right pointing	☛	355B/052B
Hand (fist), right-pointing index, coat and cuff	☞	355B/053B
Hand with pencil, male, outline, right hand	✍	355B/055B
Hand, (fist) left pointing, male, solid	☚	354B/043B
Hand, (fist) right pointing, male, solid	☛	354B/042B
Hand, (fist) right pointing, male, solid	☛	354B/044B
Hand, left pointing, outline	☜	357B/065B
Hand, male, solid, right-pointing index (closed left hand with cuff)	☞	354B/165B
Hand, outline, right pointing (left hand with cuff)	☞	354B/166B
Hand, right pointing, outline	☞	357B/064B
Hand, right-pointing index (open left hand)	☞	354B/111B
Hand, right pointing, outline, female	☞	354B/107B
Hand, right pointing, solid, female	☛	354B/110B
Hand, solid, left pointing (closed hand with cuff)	☚	354B/167B
"Han-daku-on" mark	°	041B/054B
Hat accent (multiple characters and nonspacing)	^	043B/272B
Hausa capital letter B	Ɓ	043B/101B
Hausa capital letter D	Ɗ	043B/102B
Hausa capital letter K	Ƙ	043B/103B
Hausa small letter B	ɓ	043B/141B
Hausa small letter D	ɗ	043B/142B
Hausa small letter K	ƙ	043B/143B
Heart, bold, solid, left pointing	◄♥	354B/164B
Heart, solid, wide	♥	355B/165B
Heart, solid, wide, right pointing	♥►	355B/166B
Hearts (playing card) outline	♡	357B/314B
Hearts (playing card) solid	♥	356B/314B
Hebrew	א to ת	341B/100B
Hebrew letter Aleph	א	341B/100B
Hebrew letter Daleth	ד	341B/103B
Hebrew letter Gimel	ג	341B/102B
Hebrew letter Veth	ב	341B/101B
High comma off center (Czech, Slovak, etc.) (nonspacing)	'	043B/313B
High dot C	Ċ	361B/054B
High dot c	ċ	361B/254B
High dot E	Ė	361B/064B
High dot e	ė	361B/264B
High dot G	Ġ	361B/073B
High dot g	ġ	361B/273B
High dot I	İ	361B/103B
High dot Z	Ż	361B/157B
High dot z	ż	361B/357B
Hiragana	あ to ん	044B/042B
Histogram sign	▌	356B/052B
Hook left arrow	↩	042B/133B
Hook right arrow	↪	042B/132B
Horizontal arrow extension	⎯	042B/335B
Horizontal bar	—	000B/320B

Character Name	Shape	Cross Reference
House, small	⌂	356B/072B
Hyphen	-	041B/076B
Hyphen, discretionary	-	357B/043B
Hyphen, nonbreaking	-	357B/042B
Hyphen, superscript	·	375B/357B
Hyphenation point (not normally imaged)	·	356B/045B
i, dotless, lowercase (Turkish)	ı	000B/365B
I-beam (APL)	⌶	356B/323B
Identical	∷	357B/156B
Identically equal	≡	357B/162B
If and only if (variant)	↔	042B/147B
If and only if, type 2	⟺	042B/150B
IJ digraph , uppercase (Dutch)	IJ	000B/346B
ij digraph, lowercase (Dutch)	ij	000B/366B
Image of	⊏	356B/122B
Impedance	**Z**	356B/071B
Implies	⟹	042B/137B
Includes or is equal to	⊇	041B/135B
Increases	↑	356B/255B
Infinity	∞	041B/147B
Infinity, generic	ℵ	357B/247B
Integer	ℤ	357B/257B
Integral	∫	357B/165B
Integral sign, bottom portion	⌡	356B/356B
Integral sign, center portion	|	356B/357B
Integral sign, top portion	⌠	356B/355B
Integral, contour	∮	357B/166B
Integral, double	∬	042B/152B
Intercalate	T	356B/241B
Intersection	∩	357B/126B
Intersection of classes	⋂	356B/126B
Inverted "asymptotically equal to"	≈	356B/150B
Iota underbar (APL)	ι	042B/244B
IPA	m to fi	342B/241B
Is a member of	∈	357B/112B
Is implied by	⟸	042B/136B
Is not a member of	∉	357B/113B
Is not a normal subgroup of	⋪	041B/275B
Is not a proper normal subgroup of	⋪	041B/273B
Is not contained in	⊄	357B/137B
Is not equivalent to	⇎	356B/374B
Is not implied by	⇍	356B/372B
Is subgroup of	⊴	356B/353B
Is the image of	≓	042B/142B
j, dotless, lowercase	ȷ	000B/345B
Japanese "geta"	〓	042B/056B

Character Name	Shape	Cross Reference
Japanese comma	`	041B/042B
Japanese period	｡	041B/043B
Join (supremum)	∨	042B/263B
Jot (APL)	∘	356B/147B
Jupiter	♃	357B/353B
k, lowercase (Greenlandic)	ᴋ	000B/360B
"Kanji zero"	○	041B/073B
Kappa, Greek, alternate small letter	ϰ	375B/140B
Katakana	ア to ケ	045B/041B
"Kome" symbol	※	042B/050B
Korean	フ to ᅵ	343B/301B
l with middle dot, lowercase (Catalan)	l·	000B/367B
L with middle dot, uppercase (Catalan)	L·	000B/347B
l with stroke, lowercase (Polish)	ł	000B/370B
L with stroke, uppercase (Polish)	Ł	000B/350B
Lambda bar	ƛ	375B/173B
Laplace operator	Δ	356B/105B
Laplace symbol	ℒ	356B/104B
Latin	A to Z	000B/101B
Leader, one-dot on an en body	.	356B/242B
Leader, three-dot on an em body	…	041B/104B
Leader, two-dot on an em body	..	041B/105B
Leader, two-dot on an en body	..	356B/243B
Leaf, solid, horizontal	☙	355B/170B
Leaf, solid, vertical	❧	355B/167B
Left box side double	╟	050B/140B
Left box side double to single	╟	050B/133B
Left box side single to double	╟	050B/132B
Left harpoon down	↽	042B/127B
Left harpoon up	↼	042B/126B
Left minutes sign = backprime	`	042B/053B
Left open angled bracket	⟨	041B/110B
Left open bracket	⟦	041B/112B
Left seconds sign	‶	042B/054B
Left tack (APL)	⊢	050B/047B
Left tailed arrow	↢	042B/114B
Leo	♌	357B/366B
Less than	<	000B/074B
Less than and not equal to, type 1	≨	041B/362B
Less than and not equal to, type 2	≨	041B/342B
Less than and not equal to, type 3	≨	041B/364B
Less than and not equivalent to, type 1	≴	041B/344B
Less than and not equivalent to, type 2	≴	041B/366B
Less than or approximately equal to	≲	041B/143B
Less than or equal to, superscript sign	≤	375B/335B
Less than or equal to, type 1	≤	041B/145B

Character Name	Shape	Cross Reference
Less than or equal to, type 2	≦	041B/160B
Less than or equal to, type 3	≤	041B/162B
Less than or equivalent to	≲	356B/156B
Less than or greater than	≶	356B/154B
Less than, equal to, or greater than, type 1	⋚	041B/116B
Less than, equal to, or greater than, type 2	⋚	041B/164B
Less than, with dot inside	⋖	041B/100B
Letters, circled, capital	Ⓐ to Ⓩ	166B/101B
Letters, circled, small	ⓐ to ⓩ	166B/141B
Libra	♎	357B/370B
Ligature ff	ff	360B/041B
Ligature ffi	ffi	360B/042B
Ligature ffl	ffl	360B/043B
Ligature fi	fi	360B/044B
Ligature fj	fj	360B/047B
Ligature fl	fl	360B/045B
Line, intersecting, bold	✝	357B/343B
Line, intersecting, thin	✝	357B/346B
Liter	ℓ	357B/151B
Long double arrow	⟺	042B/151B
Long leftward arrow	⟵	042B/134B
Long rightward arrow	⟶	042B/135B
Long vowel bar	‾	041B/074B
Low rising tone mark (Vietnamese) (nonspacing)	̉	043B/300B
Lower left box corner	└	050B/046B
Lower left box corner double	╚	050B/134B
Lower left box corner double to single	╙	050B/147B
Lower left box corner single to double	╘	050B/150B
Lower right box corner	┘	050B/045B
Lower right box corner double	╝	050B/127B
Lower right box corner double to single	╜	050B/131B
Lower right box corner single to double	╛	050B/130B
Lowercase acute alpha	ά	363B/045B
Lowercase acute diaeresis Iota	ΐ	363B/305B
Lowercase acute diaeresis Upsilon	ΰ	363B/363B
Lowercase acute Epsilon	έ	363B/123B
Lowercase acute Eta	ή	363B/143B
Lowercase acute Iota	ί	363B/263B
Lowercase acute Omega	ώ	363B/373B
Lowercase acute Omicron	ό	363B/317B
Lowercase acute Upsilon	ύ	363B/337B
Lowercase diaeresis Iota	ϊ	046B/367B
Lowercase diaeresis Upsilon	ϋ	046B/370B
Lowercase Latin letter a	a	000B/141B
Lowercase Latin letter b	b	000B/142B
Lowercase Latin letter c	c	000B/143B
Lowercase Latin letter d	d	000B/144B
Lowercase Latin letter e	e	000B/145B

Character Name	Shape	Cross Reference
Lowercase Latin letter f	f	000B/146B
Lowercase Latin letter g	g	000B/147B
Lowercase Latin letter h	h	000B/150B
Lowercase Latin letter i	i	000B/151B
Lowercase Latin letter j	j	000B/152B
Lowercase Latin letter k	k	000B/153B
Lowercase Latin letter l	l	000B/154B
Lowercase Latin letter m	m	000B/155B
Lowercase Latin letter n	n	000B/156B
Lowercase Latin letter o	o	000B/157B
Lowercase Latin letter p	p	000B/160B
Lowercase Latin letter q	q	000B/161B
Lowercase Latin letter r	r	000B/162B
Lowercase Latin letter s	s	000B/163B
Lowercase Latin letter t	t	000B/164B
Lowercase Latin letter u	u	000B/165B
Lowercase Latin letter v	v	000B/166B
Lowercase Latin letter w	w	000B/167B
Lowercase Latin letter x	x	000B/170B
Lowercase Latin letter y	y	000B/171B
Lowercase Latin letter z	z	000B/172B
Lozenge	◊	356B/106B
Macron (l.c. nonspacing accent)	-	000B/305B
Macron (l.c. spacing accent)	-	043B/044B
Macron (u.c. spacing accent)	-	043B/065B
Macron A	Ā	361B/045B
Macron a	ā	361B/245B
Macron E	Ē	361B/063B
Macron e	ē	361B/263B
Macron I	Ī	361B/102B
Macron i	ī	361B/302B
Macron O	Ō	361B/123B
Macron o	ō	361B/323B
Macron U	Ū	361B/143B
Macron u	ū	361B/343B
Made in U.S.A. sign	Ⓜ	355B/353B
Magnetic tape symbol	Ⓐ	355B/047B
Male	♂	041B/151B
Maltese cross	✠	041B/256B
Maps into itself, ccw	↺	356B/364B
Maps into itself, cw	↻	356B/365B
Maps to	↦	042B/153B
Maps to, curved arrow to left	↶	356B/362B
Maps to, curved arrow to right	↷	356B/363B
Measured angle	∡	357B/155B
Meet (infimum)	∧	042B/262B
Mercury	☿	357B/352B

Character Name	Shape	Cross Reference
Micro sign	μ	000B/265B
Middle box bottom	⊥	050B/052B
Middle box bottom double	⊥⊥	050B/135B
Middle box bottom double to single	⊥⊥	050B/144B
Middle box bottom single to double	⊥⊥	050B/143B
Middle box top	⊤	050B/050B
Middle box top double	⊤⊤	050B/137B
Middle box top double to single	⊤⊤	050B/145B
Middle box top single to double	⊤⊤	050B/146B
Minus or plus	∓	357B/175B
Minus sign	−	356B/055B
Minus sign, subscript	₋	375B/352B
Minutes sign = prime sign	′	041B/154B
Models	⊧	042B/254B
Moon, first quarter	☽	357B/350B
Moon, third quarter	☾	357B/351B
Mosaic	▪ to ◢	050B/241B
Much greater than, type 1	≫	357B/103B
Much greater than, type 2	≫	042B/162B
Much less than, type 1	≪	357B/102B
Much less than, type 2	≪	042B/161B
Multiplication operator	*	356B/175B
Multiplication sign, bold	✕	354B/176B
Multiplication sign, bold, monotone	✕	355B/065B
Multiplication sign, light, monotone	✕	355B/064B
Multiplication sign, medium	✕	354B/175B
Multiplication sign, superscript	ˣ	375B/336B
Multiply sign	×	000B/264B
Musical flat	♭	043B/254B
Musical sharp	♯	043B/274B
Musical natural	♮	042B/156B
N tilde	Ñ	361B/114B
n with apostrophe, lowercase (South African)	'n	000B/357B
Nabla	∇	357B/271B
Nand (APL)	⍲	356B/267B
Negated turnstile with double horizontal and vertical bars	⊯	041B/272B
Negation of math symbols (nonspacing)	/	043B/271B
Neither approximately nor actually equal to	≇	041B/300B
Neptune	♆	357B/356B
New line (NL)	↵	360B/275B
Nine	9	000B/071B
Nor (APL)	⍱	356B/270B
Not	¬	357B/152B
Not approximately equal to	≉	041B/277B
Not congruent	≇	041B/314B
Not contained in or equal to, type 1	⊈	357B/135B
Not contained in or equal to, type 2	⊈	041B/303B

Character Name	Shape	Cross Reference
Not contained in or equal to, type 3	⊊	357B/125B
Not contained in or equal to, type 4	⊊	041B/307B
Not equivalent to, type 1	≁	041B/260B
Not equivalent to, type 2	≁	356B/376B
Not greater than or equal to, type 1	≱	041B/341B
Not greater than or equal to, type 2	≱	356B/146B
Not greater than or equal to, type 3	≩	041B/361B
Not greater than or equal to, type 4	≱	041B/347B
Not greater than, type 1	≯	357B/105B
Not greater than, type 2	≯	041B/312B
Not identical with	≢	356B/162B
Not left arrow	↚	356B/367B
Not less than or equal to, type 1	≰	041B/340B
Not less than or equal to, type 2	≰	356B/145B
Not less than or equal to, type 3	≨	041B/360B
Not less than or equal to, type 4	≰	041B/346B
Not less than, type 1	≮	357B/104B
Not less than, type 2	≮	041B/311B
Not parallel, type 1	∦	357B/111B
Not parallel, type 2	∦	041B/266B
Not right arrow	↛	356B/370B
Not symmetrical horizontal arrow	↮	356B/371B
Note, musical, double eighth	♫	356B/325B
Note, musical, eighth	♪	000B/325B
Null set, type 1	∅	357B/141B
Null set, type 2	∅	042B/247B
Number	№	357B/250B
Number sign	#	000B/043B
Number, circled	① to ⑩	357B/321B
Number, diamond enclosed	◈ to ◈	166B/060B
Number, natural	ℕ	357B/255B
Number, real	ℝ	357B/256B
Numeral, roman, fixed-pitch	I to X	357B/301B
o with slash, lowercase (Norwegian, Danish)	ø	000B/371B
O with slash, uppercase (Norwegian, Danish)	Ø	000B/351B
OCR chair	⊢	357B/275B
OCR fork	Ψ	357B/274B
OCR hook	Γ	357B/273B
Octonions	𝕆	042B/351B
oe digraph, lowercase	œ	000B/372B
OE digraph, uppercase	Œ	000B/352B
Ogonek A	Ą	361B/051B
Ogonek a	ą	361B/251B
Ogonek E	Ę	361B/066B
Ogonek e	ę	361B/266B
Ogonek I	Į	361B/105B
Ogonek i	į	361B/305B

Character Name	Shape	Cross Reference
Ogonek U	Ų	361B/150B
Ogonek u	ų	361B/350B
Ogonek undermark (l.c. nonspacing accent)	␣	000B/316B
Ogonek undermark (l.c. spacing accent)	␣	043B/052B
Ogonek undermark (u.c. spacing accent)	␣	043B/076B
Ohm sign	Ω	000B/340B
Old Style numerals	o to 9	375B/060B
One	1	000B/061B
Onto map	→»	042B/107B
Or	∨	357B/267B
Or underbar	⊻	356B/333B
Ordinal indicator, feminine (Spanish)	ª	000B/343B
Ordinal indicator, masculine (Spanish)	º	000B/353B
Original of	⊐	356B/123B
Ornament, circular, 16 spokes,	✳	355B/127B
Ornament, flower, octa-petal, open center circle	❀	355B/136B
Ornament, flower, penta-petal, solid center circle	❀	355B/135B
Ornament, outline and solid petals	✿	355B/133B
Ornament, quadruplicate heart	♣	354B/162B
Ornament, quaduplicate closed circle	✛	354B/173B
Ornament, sextuplicate balloon	❊	354B/174B
Ornament, sextuplicate tear ornament with closed center dot	✳	354B/267B
Ornament, snowflake	❆	355B/141B
Ornament, snowflake, outline	❄	355B/142B
Ornament, solid and open, sextuplicate, tear shaped	✳	355B/140B
Ornament, solid diamond, with white cross	❖	355B/156B
Ornament, solid, quadruplicate, balloon shaped with solid center circle	✛	355B/101B
Ornament, solid, quadruplicate, clubs	✛	355B/103B
Ornament, solid, quadruplicate, tear shaped	✛	355B/100B
Ornament, solid, sextuplicate, tear shaped, open center circle	✳	355B/131B
Ornament, solid, sextuplicate, tear shaped, solid center circle	✳	355B/130B
Ornament, solid, alternating 4 light and 4 medium strokes, solid circle center	✳	355B/144B
Ornament, solid, alternating 4 light straight strokes and 4 heavy tear-shaped strokes, solid circle center	✳	355B/145B
Ornament, solid, heavy sextuplicate, tear shaped	✳	355B/132B
Ornament, solid, penta circle shaped, open center circle	✿	355B/134B
Ornament, solid, quadruplicate balloon shaped	✛	355B/102B
Ornament snowflake, light stems, bold branches	❆	355B/143B
OUT symbol (APL)	𝑼	356B/361B
Over-dot (l.c. nonspacing accent)	·	000B/307B
Over-dot (l.c. spacing accent)	·	043B/046B
Over-dot (u.c. spacing accent)	·	043B/067B
Over-ring (l.c. nonspacing accent)	°	000B/312B
Over-ring (l.c. spacing accent)	°	043B/050B
Over-ring (u.c. spacing accent)	°	043B/072B
Overbar (spacing character)	—	043B/176B

Character Name	Shape	Cross Reference
Overline (l.c. nonspacing)	⁻	043B/303B
Oxia diaeresis (nonspacing)	··	046B/300B
Paragraph mark	¶	354B/051B
Paragraph mark, outline	¶	354B/172B
Paragraph sign	¶	000B/266B
Paragraph sign, single stem, curved terminal	¶	355B/162B
Parallel sign, type 1 = double vertical bar	‖	041B/102B
Parenthesis, beginning (open), angled	(	041B/114B
Parenthesis, beginning (open), curved	(	000B/050B
Parenthesis, bold, begin	(	355B/347B
Parenthesis, bold, end	)	355B/350B
Parenthesis, close (end), curved	)	000B/051B
Parenthesis, close, subscript	)	375B/332B
Parenthesis, closing (end), angled	)	041B/115B
Parenthesis, opening, subscript	(	375B/331B
Parenthesis, piece, bottom, left, curved	(	042B/342B
Parenthesis, piece, bottom, right, curved	)	042B/346B
Parenthesis, piece, center extension, straight, left/right		042B/343B
Parenthesis, piece, extension, left, straight		042B/341B
Parenthesis, piece, extension, right, straight		042B/345B
Parenthesis, piece, top, left, curved	(	042B/340B
Parenthesis, piece, top, right, curved	)	042B/344B
Parenthesis, solid, medium, begin	(	355B/354B
Parenthesis, solid, medium, end	)	355B/355B
Peace symbol	☮	357B/336B
Pen nib (point), outline, right pointing	↦	355B/061B
Pen nib (point), solid, right pointing	↦	355B/062B
Pen nib (point), solid, left pointing	↤	354B/050B
Pen nib (point), outline, left pointing	↤	354B/114B
Pencil pointing left	✐	354B/115B
Pencil pointing northeast	✏	355B/060B
Pencil pointing right	✐	355B/057B
Pencil, pointing southeast	✎	355B/056B
Per thousand sign	‰	357B/101B
Percent sign	%	000B/045B
Period	.	000B/056B
Period, square (kanji)	.	041B/045B
Perpendicular	⊥	357B/160B
Perpendicular, left	⊢	357B/066B
Perpendicular, left, double	⊨	357B/070B
Perpendicular, right	⊣	357B/067B
Perpendicular, right, double	⫤	357B/071B
Perpendicular, upside down	⊤	356B/160B
Pesetas symbol, alternate rendition	₧	375B/372B
Pesetas (Spanish)	₧	357B/244B
Phi, Greek, alternate small letter	φ	375B/137B
Pi, Greek, alternate small letter	ϖ	375B/134B

Character Name	Shape	Cross Reference
Pisces	00	357B/361B
Planck's constant	ℏ	357B/150B
Plus or minus sign	±	000B/261B
Plus sign	+	000B/053B
Plus sign in union	⊎	042B/253B
Plus sign, light	+	354B/053B
Plus sign, medium	+	354B/163B
Plus sign, bold, monotone	✚	355B/071B
Plus sign, subscript	₊	375B/353B
Pluto	P	357B/357B
Position	⊕	356B/117B
"Post office" symbol	〒	042B/051B
Pound Sterling sign	£	000B/243B
Precedes	≺	041B/120B
Precedes and does not equal	⋨	041B/324B
Precedes or approximates	≾	041B/243B
Precedes or equals, type 1	≼	041B/122B
Precedes or equals, type 2	≼	042B/145B
Precedes or equivalent to	≾	041B/241B
Precedes, not approximate	⋨	041B/263B
Precedes, not similar	⋨	041B/261B
Printed in U.S.A. sign		355B/356B
Product	Π	357B/173B
Product, scalar	·	356B/264B
Proper inclusion in set = is properly contained in	⊂	357B/133B
Proper intersection	⋔	041B/254B
Properly contained in, type 1	⊊	041B/301B
Properly contained in, type 2	⊊	041B/305B
Properly contains, type 1	⊋	041B/302B
Properly contains, type 2	⊋	041B/306B
Properly includes in set = contains	⊃	357B/132B
Proportional to, type 1	∝	357B/161B
Proportional to, type 2	∝	042B/171B
PS lozenge (postscript)	◊	375B/362B
QED	▶	357B/270B
Quad (APL)	□	042B/337B
Quad jot (APL)	⊡	356B/324B
Quad slope (APL)	⍁	356B/360B
Quad, em		357B/055B
Quad, en		357B/054B
Quaternions	ℍ	042B/350B
Question mark	?	000B/077B
Question mark, Spanish, inverted	¿	000B/277B
Questioned equality	≟	357B/164B
Quine corner, lower left	⌞	042B/363B
Quine corner, lower right	⌟	042B/364B
Quine corner, upper left	⌜	042B/361B

Character Name	Shape	Cross Reference
Quine corner, upper right	¬	042B/362B
Quotation mark, beginning, double, corner (Japanese)	『	041B/130B
Quotation mark, beginning, double, curved	"	000B/252B
Quotation mark, beginning, single, corner (Japanese)	「	041B/126B
Quotation mark, beginning, single, curved	'	000B/251B
Quotation mark, beginning, single, curved, bold	❛	355B/343B
Quotation mark, beginning, single, curved, bold outline	6	355B/345B
Quotation mark, beginning, single, square	◣	355B/341B
Quotation mark, closing, double, corner (Japanese)	』	041B/131B
Quotation mark, closing, double, curved	"	000B/272B
Quotation mark, closing, single, corner (Japanese)	」	041B/127B
Quotation mark, closing, single, curved	'	000B/271B
Quotation mark, closing, single, curved, bold	❜	355B/344B
Quotation mark, closing, single, curved, bold, outline	9	355B/346B
Quotation mark, closing, single, square	◤	355B/342B
Quote divide (APL)	⊡	356B/307B
Quote quad (APL)	⍞	356B/306B
Quote, double, left, lowered	„	357B/050B
Quote, double, neutral	"	000B/042B
Quote, double, right, German	"	357B/051B
Quote, single, left, lowered	‚	043B/262B
Quote, single, neutral	'	357B/047B
Quote, single, right (German)	'	043B/242B
Radical	√	357B/174B
Radical extension		042B/277B
Ratio symbol	:	356B/064B
Rationals	ℚ	042B/347B
Recipe (prescription)	℞	357B/251B
Rectangle, horizontal, solid	▬	356B/336B
"Reduplicate"	ヾ	041B/067B
"Reduplicate above item"	仝	041B/070B
Reference 1	1	000B/321B
Registered sign	®	000B/322B
Registered sign, superscript, generic sans serif	®	375B/326B
Registered sign, superscript, generic serif	®	375B/366B
Reverse of congruence symbol	≌	041B/313B
Reverse of membership symbol	∋	042B/271B
Reverse similar to	∽	042B/276B
Relata of a relation	←	356B/254B
Repeat hiragana	ゝ	041B/065B
Repeat hiragana with daku-on	ゞ	041B/066B
Relata of a relation	←	356B/254B
Repeat hiragana	ゝ	041B/065B
Repeat hiragana with daku-on	ゞ	041B/066B
Repeat kanji	々	041B/071B
Repeat katakana	ヽ	041B/063B
Repeat katakana with daku-on	ヾ	041B/064B

Character Name	Shape	Cross Reference
Replacement symbol (IBM)	Ⓝ	360B/307B
Restriction	↾	042B/112B
Reverse approximately equal	≍	356B/375B
Reverse of congruence symbol	≡	041B/313B
Reverse of membership symbol	∋	042B/271B
Reverse similar to	∽	042B/276B
Reversible reaction, type 1	⇋	357B/121B
Reversible reaction, type 2	⇌	357B/120B
Reversible reaction, type 3	⇋	356B/366B
Rho, Greek, alternate small letter	ϱ	375B/136B
Riemann integral	ℛ	356B/103B
Right arrow over left arrow	⇄	356B/120B
Right box side double	╣	050B/124B
Right box side double to single	╡	050B/120B
Right box side single to double	╢	050B/121B
Right comet	⊸	042B/123B
Right harpoon down	⇁	042B/131B
Right harpoon up	⇀	042B/130B
Right open angled bracket	〕	041B/111B
Right open bracket	〛	041B/113B
Right tack (APL)	⊢	050B/051B
Right tailed arrow	↣	042B/115B
Ring A	Å	361B/050B
Ring a	å	361B/250B
Ring U	Ů	361B/146B
Ring u	ů	361B/346B
Ring, centered	°	357B/147B
Roman	A to Z	000B/101B
Roman numeral I	I	357B/301B
Roman numeral II	II	357B/302B
Roman numeral III	III	357B/303B
Roman numeral IV	IV	357B/304B
Roman numeral IX	IV	357B/311B
Roman numeral V	V	357B/305B
Roman numeral VI	VI	357B/306B
Roman numeral VII	VII	357B/307B
Roman numeral VIII	VIII	357B/310B
Roman numeral X	X	357B/312B
Roman numerals	I to X	357B/301B
Rough breathing (nonspacing)	'	046B/046B
Rupee (Indian)	₨	345B/375B
s, double	ß	000B/373B
Sagittarius	♐	357B/372B
Saturn	♄	357B/354B
Schwa	ə	342B/137B
Scissors, light, monotone	✂	355B/357B
Scissors, outline	✄	354B/046B
Scissors, outlined	✄	355B/044B

Character Name	Shape	Cross Reference
Scissors, solid with inline handle	✄	354B/045B
Scissors, solid and outline	✂	354B/112B
Scissors, solid, broken on bottom	✀	355B/041B
Scissors, solid, broken on top	✁	355B/043B
Scissors, solid, open	✃	355B/042B
Scissors, solid, top half, leftward	∿	354B/170B
Scissors, solid, top half, rightward	∿	354B/171B
Scorpio	♏	357B/371B
Seconds (time) mark Also: Inch mark	″	041B/155B
Section sign	§	000B/247B
Semicircle, solid, left	◖	354B/121B
Semicircle, solid, right	◗	355B/157B
Semicolon	;	000B/073B
Semidirect product left	⋌	356B/330B
Semidirect product right	⋋	356B/331B
Semidirect product, normal factor on left	⋉	356B/327B
Semidirect product, normal factor on right	⋊	356B/326B
Set minus	∖	356B/074B
Set of imaginary numbers	ℑ	042B/251B
Set of real numbers	ℜ	042B/250B
Seven	7	000B/067B
Shade, dark	▓	356B/141B
Shade, light	░	356B/140B
Shade, medium	▒	357B/176B
Shade, solid	█	353B/100B
"Shime"	∉	041B/072B
Short parallel	‖	041B/166B
Short stroke, vertical	∣	041B/247B
Similar to, type 1	∼	356B/176B
Similar to, type 2	∼	042B/167B
Six	6	000B/066B
Skull and crossbones	☠	357B/340B
Slant	/	000B/057B
Slant, double	∥	357B/110B
Slant, reverse	\	000B/134B
Slash bar (APL)	⌿	356B/310B
Slope bar (APL)	⍀	356B/311B
Small black star	★	042B/155B
Small cap letters	A to z	375B/141B
Small integral	∫	042B/172B
Small point-down white triangle	▽	042B/173B
Small pointing left triangle	◁	042B/274B
Small pointing right triangle	▷	042B/273B
Small white diamond	◊	041B/257B
Small white triangle	△	042B/160B
Smile	⌣	042B/157B
Smile face	☺	357B/337B

Character Name	Shape	Cross Reference
Smile face, dark	☻	356B/337B
Smooth breathing (nonspacing)	'	046B/045B
Solid fill	■	356B/271B
Solid fill, bottom half		356B/272B
Solid fill, left half	▐	356B/274B
Solid fill, right half		356B/273B
Solid fill, top half	▄	356B/275B
Space (normally nonprinting)	n n	000B/040B
Space, punctuation (normally nonprinting)	n n	356B/044B
Space, thick (normally nonprinting)	n n	356B/041B
Space, figure (normally nonprinting)	n n	357B/056B
Space, fixed pitch (kanji)	SP	041B/041B
Space, hair (normally nonprinting)	n n	356B/043B
Space, nonbreaking (normally nonprinting)	n n	357B/041B
Space, thin (normally nonprinting)	n n	357B/057B
Spades (playing card) outline	♤	356B/313B
Spades (playing card) solid	♠	357B/313B
Spherical angle, type 2	⊲	042B/270B
Square contained in or equals	⊑	042B/260B
Square contains or equals	⊒	042B/261B
Square intersection	⊓	042B/256B
Square number 1, outline box, solid number, generic sans serif	①	355B/315B
Square number 1, solid box, reverse number, generic sans serif	■	355B/327B
Square number 10, outline box, solid number, generic sans serif	⑩	355B/326B
Square number 10, solid box, reverse number, generic sans serif	⑩	355B/340B
Square number 2, outline box, solid number, generic sans serif	②	355B/316B
Square number 2, solid box, reverse number, generic sans serif	❷	355B/330B
Square number 3, outline box, solid number, generic sans serif	③	355B/317B
Square number 3, solid box, reverse number, generic sans serif	❸	355B/331B
Square number 4, outline box, solid number, generic sans serif	④	355B/320B
Square number 4, solid box, reverse number, generic sans serif	❹	355B/332B
Square number 5, outline box, solid number, generic sans serif	⑤	355B/321B
Square number 5, solid box, reverse number, generic sans serif	❺	355B/333B
Square number 6, outline box, solid number, generic sans serif	⑥	355B/322B
Square number 6, solid box, reverse number, generic sans serif	❻	355B/334B
Square number 7, outline box, solid number, generic sans serif	⑦	355B/323B
Square number 7, solid box, reverse number, generic sans serif	❼	355B/335B
Square number 8, outline box, solid number, generic sans serif	⑧	355B/324B
Square number 8, solid box, reverse number, generic sans serif	❽	355B/336B
Square number 9, outline box, solid number, generic sans serif	⑨	355B/325B
Square number 9, solid box, reverse number, generic sans serif	❾	355B/337B
Square union	⊔	042B/255B
Square union ("cumulative" operator, with limits)	⊔	042B/266B
Square, solid	■	042B/043B
Squared	^{2}	000B/262B
Squished quad (APL)	⌷	356B/334B
Star of David	✡	355B/077B
Star of David, solid	✦	355B/360B

Character Name	Shape	Cross Reference
Star, open, 5 points with shadow	☆	355B/115B
Star, open, 5 points, in solid circle	✪	355B/107B
Star, open, 8 points, on solid circle, open circle center	✪	355B/137B
Star, open, stress variation, 5 points	☆	355B/106B
Star, open, stress variation, 5 points, solid center circle	✯	355B/111B
Star, outline (open)	☆	041B/171B
Star, outline = open star	☆	354B/057B
Star, outline, medium, 8 points, 2 points up, down, left, right	✧	354B/266B
Star, outlined, 4 points	✧	355B/105B
Star, six point, with open center circle	✶	354B/061B
Star, solid	★	041B/172B
Star, solid and open, 5 points	✯	355B/114B
Star, solid and open, 8 points	✳	355B/122B
Star, solid with rounded points	★	354B/056B
Star, solid, 12 points	✸	355B/126B
Star, solid, 4 points	◆	355B/104B
Star, solid, 5 points, in heavy outlined star	✪	355B/113B
Star, solid, 5 points, in outlined star	✪	355B/112B
Star, solid, 5 points, open circle center	☆	355B/110B
Star, solid, 6 points	✶	355B/123B
Star, solid, 8 points	✳	355B/121B
Star, solid, heavy, 8 points, 2 points up, down, right, left	✴	355B/125B
Star, solid, medium, 8 points, 2 points up, down, right, left	✴	355B/124B
Start of line symbol	⌐	356B/152B
Stop, full, raised (Greek)	·	046B/073B
Subscript numbers	$_0$ to $_9$	375B/340B
Subset of or equal to	$\subseteq$	041B/134B
Substitute character	▮	360B/312B
Succeeds	$\succ$	041B/121B
Succeeds and does not equal	$\succneqq$	041B/325B
Succeeds or approximates	$\succapprox$	041B/244B
Succeeds or equals, type 1	$\succeq$	041B/123B
Succeeds or equals, type 2	$\succeq$	042B/146B
Succeeds or equivalent	$\succsim$	041B/242B
Succeeds, not approximate	$\succnapprox$	041B/264B
Succeeds, not similar	$\succnsim$	041B/262B
Such that, type 1	$\ni$	357B/114B
Summation	Σ	357B/172B
Sun	$\odot$	357B/347B
Superscript 0	^{0}	375B/260B
Superscript 1	^{1}	375B/261B
Superscript 2	^{2}	375B/262B
Superscript 3	^{3}	375B/263B
Superscript 4	^{4}	375B/264B
Superscript 5	^{5}	375B/265B
Superscript 6	^{6}	375B/266B
Superscript 7	^{7}	375B/267B
Superscript 8	^{8}	375B/270B

Character Name	Shape	Cross Reference
Superscript 9	^{9}	375B/271B
Superscript closing parenthesis	$^)$	375B/275B
Superscript decimal point	$^.$	375B/272B
Superscript equals	$^=$	375B/256B
Superscript greater than	$^>$	375B/255B
Superscript less than	$^<$	375B/254B
Superscript minus sign	$^-$	375B/277B
Superscript n	^{n}	375B/250B
Superscript numbers	^{0} to ^{9}	375B/260B
Superscript opening parenthesis	$^($	375B/274B
Superscript plus minus	$^\pm$	375B/253B
Superscript plus sign	$^+$	375B/276B
Superscript thousands delimiter	,	375B/273B
Symmetric difference	≐	356B/073B
Symmetrical squiggle arrow	←↝→	042B/122B
t with stroke, lowercase (Lapp)	ŧ	000B/375B
T with stroke, uppercase (Lapp)	Ŧ	000B/355B
Taurus	♉	357B/363B
TEL (telephone)	TEL	357B/252B
Telephone handset	✆	355B/046B
Telephone symbol, open	☏	356B/063B
Telephone, reversed	☏	354B/113B
Telephone, solid	☎	354B/047B
Telephone, solid	☎	355B/045B
Telephone, solid	☎	357B/374B
There does not exist	∄	356B/161B
There exists	∃	357B/264B
Therefore	∴	041B/150B
Theta, Greek, alternate small letter	ϑ	375B/135B
Thorn, lowercase (Icelandic)	þ	000B/374B
Thorn, uppercase (Icelandic)	Þ	000B/354B
Three	3	000B/063B
Tie bar for two characters	⌢	043B/263B
Tilde (l.c. nonspacing accent)	~	000B/304B
Tilde (l.c. spacing accent)	~	000B/176B
Tilde (u.c. spacing accent)	~	043B/064B
Tilde A	Ã	361B/044B
Tilde a	ã	361B/244B
Tilde accent (multiple characters and nonspacing)	~	043B/273B
Tilde breve (Vietnamese) (nonspacing)	᷉	043B/307B
Tilde circumflex (Vietnamese) (nonspacing)	᷉	043B/267B
Tilde i	ĩ	361B/301B
Tilde I	Ĩ	361B/101B
Tilde n	ñ	361B/314B
Tilde O	Õ	361B/122B
Tilde o	õ	361B/322B
Tilde U	Ũ	361B/142B

Character Name	Shape	Cross Reference
Tilde u	ũ	361B/342B
Tone breve (Vietnamese) (nonspacing)	᷉	043B/304B
Tone circumflex (Vietnamese) (nonspacing)	᷄	043B/264B
Top null (APL)	⌽	356B/321B
Trademark sign	™	000B/324B
Trademark sign, superscript, generic sans serif	™	375B/330B
Trademark sign, superscript, generic serif	™	375B/370B
Triangle, black, left pointing	◀	356B/261B
Triangle, black, right pointing	▶	356B/260B
Triangle, open	△	042B/044B
Triangle, open, inverted	▽	042B/046B
Triangle, solid	▲	042B/045B
Triangle, solid, inverted	▼	042B/047B
Triangle, solid, small	▲	042B/264B
Triangle, solid, small, inverted	▼	042B/265B
Triangle, white, left pointing	◁	356B/263B
Triangle, white, right pointing	▷	356B/262B
Triple prime	‴	041B/153B
Turn left arrow	↰	042B/120B
Turn right arrow	↱	042B/121B
Turnstile with triple vertical bars	⊫	041B/157B
Two	2	000B/062B
Umlaut (nonspacing German, etc.)	¨	043B/311B
Underline (nonspacing undermark)	_	000B/314B
Union	∪	357B/127B
Union of classes or sets	∪	356B/127B
Up arrowhead	^	042B/300B
Up harpoon left	↿	042B/110B
Upper left box corner	⌈	050B/043B
Upper left box corner double	╔	050B/135B
Upper left box corner double to single	╓	050B/152B
Upper left box corner single to double	╒	050B/151B
Upper right box corner	⌉	050B/044B
Upper right box corner double	╗	050B/126B
Upper right box corner double to single	╖	050B/123B
Upper right box corner single to double	╕	050B/122B
Uppercase Latin letter A	A	000B/101B
Uppercase Latin letter B	B	000B/102B
Uppercase Latin letter C	C	000B/103B
Uppercase Latin letter D	D	000B/104B
Uppercase Latin letter E	E	000B/105B
Uppercase Latin letter F	F	000B/106B
Uppercase Latin letter G	G	000B/107B
Uppercase Latin letter H	H	000B/110B
Uppercase Latin letter I	I	000B/111B
Uppercase Latin letter J	J	000B/112B
Uppercase Latin letter K	K	000B/113B

Character Name	Shape	Cross Reference
Uppercase Latin letter L	L	000B/114B
Uppercase Latin letter M	M	000B/115B
Uppercase Latin letter N	N	000B/116B
Uppercase Latin letter O	O	000B/117B
Uppercase Latin letter P	P	000B/120B
Uppercase Latin letter Q	Q	000B/121B
Uppercase Latin letter R	R	000B/122B
Uppercase Latin letter S	S	000B/123B
Uppercase Latin letter T	T	000B/124B
Uppercase Latin letter U	U	000B/125B
Uppercase Latin letter V	V	000B/126B
Uppercase Latin letter W	W	000B/127B
Uppercase Latin letter X	X	000B/130B
Uppercase Latin letter Y	Y	000B/131B
Uppercase Latin letter Z	Z	000B/132B
Upsilon, Greek, alternate small letter	Y	375B/100B
Uranus	♅	357B/355B
Vector "accent" (nonspacing)	→	043B/270B
Vertical arrow extension	│	042B/336B
Vertical brush strokes	//	354B/264B
Very much greater than	⋙	041B/107B
Very much less than	⋘	041B/106B
Victory sign, outline, right hand	✌	355B/054B
Vietnamese capital letter O	Ơ	043B/104B
Vietnamese capital letter U	Ư	043B/105B
Vietnamese small letter O	ơ	043B/144B
Vietnamese small letter U	ư	043B/145B
Virgo	♍	357B/367B
Wedge with overbar	$\overline{\wedge}$	356B/312B
Weierstrass p	℘	042B/246B
Wreath product	≀	042B/175B
Yen currency symbol (Japanese)	¥	000B/245B
Zero	0	000B/060B
Zero dot	0̸	354B/360B

F.

Recommendations to users of XCCS

By design, the Xerox Character Code Standard (XCCS) serves as both a private (Xerox) standard and a public (international) standard. Like any private standard its development cost has been borne by its owner; however, its contents are driven by the need for an international standard for quality rendering of formatted text. In this dual role XCCS has formed the core of an evolving international standard. Progress in the evolution of this international standard is visibly seen between the covers of the XCCS Version 2.0, the contents illustrate contributions made by international technical experts and standards bodies.

Currently, the International Standards Organization-sanctioned Association for Font Information Interchange (AFII) Glyph Registry has numeric identifiers all of whose values match the corresponding XCCS codes, and so private and public documents share text files and fonts used in their printing. Creation of the international AFII Glyph Registry (under ISO/IEC/DIS 10036) and evolution of new text processing and communication standards provides a different foundation for future developments. Compatibility with the past is being maintained, but blind interchange can no longer be subverted in new developments.

It is anticipated that XCCS will eventually be supplanted by a reference to that AFII registry, that users of this XCCS will eventually have to make a transition to using those AFII identifiers instead. Therefore it is the purpose of this appendix to recommend to developers of systems using XCCS how to act now to ease such an eventual transition.

XCCS reserves certain character codes for use as control codes or for private use and thus excludes those codes from assignment as graphic characters by XCCS. The codes presently so reserved in XCCS are as follows:

Character sets:

a. Sets 001_8 through 040_8 are reserved for control codes

b. Sets 167_8 through 176_8 are reserved for Fuji Xerox private use.

c. Sets 177_8 through 240_8 are reserved for control codes.

d. Set 376_8 is reserved for private use.

e. Set 377_8 is reserved as an escape code for compactly encoding strings of characters.

Char8Codes (the least significant byte, which designates characters in a set):

a. Char8Codes 001_8 through 040_8 are reserved for control codes.

b. Char8Codes 177_8 through 240_8 are reserved for control codes.

c. Char8Code 377_8 is reserved as an escape code as above.

In contrast, the AFII identifier code space is potentially fully utilized; no codes are guaranteed reserved for control codes or for private use as in XCCS. In contexts where AFII identifiers are used, mechanisms other than reserved codes must be used to provide control and private use functions.

Therefore, it is recommended that users of XCCS minimize dependence on such reserved codes, anticipating that in future standards all codes, including those which are reserved in XCCS, may be assigned to specific characters.

XCCS assigns character codes to certain Xerox-proprietary piece-parts of characters. The codes presently so assigned include character sets 366B for Arabic and 367B for Devanagari. These character pieces are proprietary because their concept is proprietary and because they themselves are specific to one font.

In contrast, AFII does not assign identifiers to these or other such proprietary character pieces. In contexts where AFII identifiers are used, other mechanisms must be used to manage such private pieces.

Therefore, it is recommended that users of XCCS minimize dependence on such coded proprietary piece-part characters, anticipating that future standards will likely not include such characters in the standard code or identification space.

XCCS assigns character codes to certain Xerox-proprietary zero-width characters as follows:

Code 340_8 | 374_8, "Left to Right Zero-width Non-Joiner" (LRZWNJ).
Code 340_8 | 375_8, "Right to Left Zero-width Non-Joiner" (RLZWNJ).
Code 340_8 | 376_8, "Zero-width joiner".

Because these characters appear to AFII to be both control codes and proprietary, AFII has not assigned identifiers to them.

It is therefore recommended that users of XCCS minimize dependence on such coded proprietary zero-width characters, anticipating that future standards will likely not include such characters in the standard code or identification space, and that other mechanisms may thus be required to achieve their effect.

Developers are encouraged to seriously consider these recommendations in the Open Systems environment of ISO and to take whatever actions are necessary on new programs to avoid constraining or subverting future electronic document interchange. Future XCCS versions and new products will more likely be in step if the above recommendations are adopted.
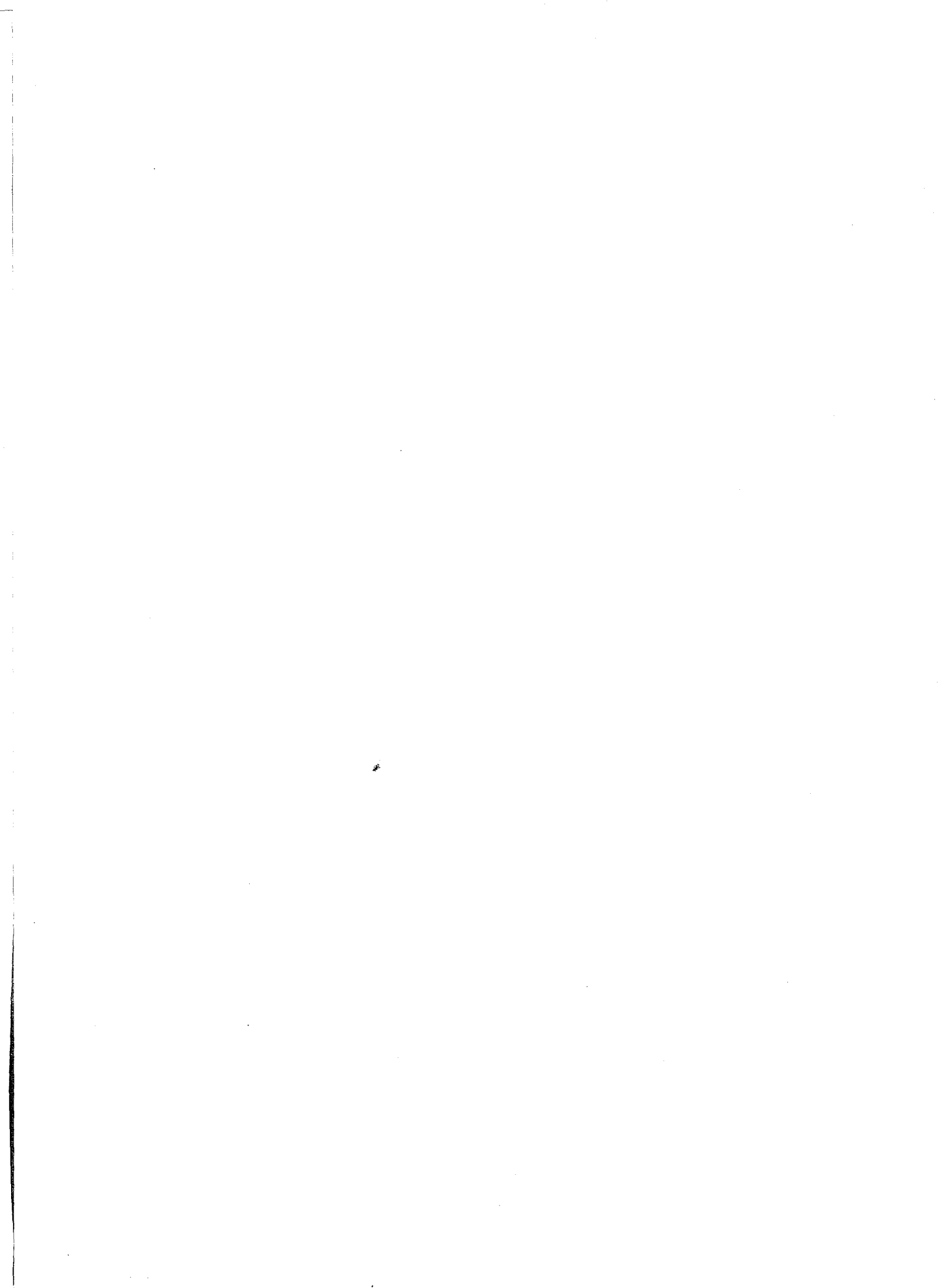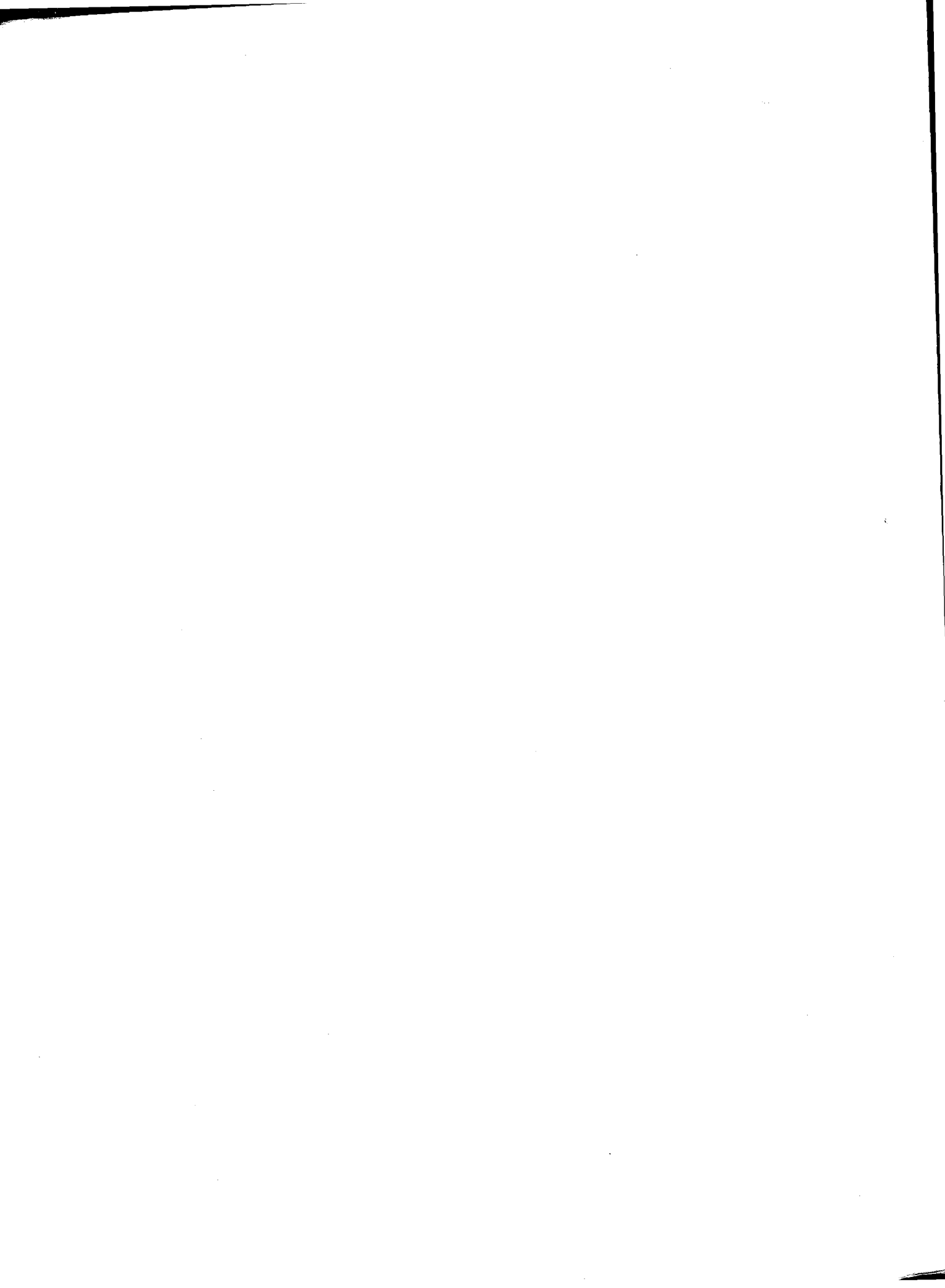
Italicized words in definitions are themselves indexed and defined in this glossary.

character
A *graphic shape* used for representing visual information, or a syntactic entity which lacks a physical representation. In electronic printing, a character is represented in the form of a spatial arrangement of pixels.

character appearance
A function of two variables: *character codes*, which express the identity of characters, and character *looks* information, which models the different appearances that a shape can assume.

character code
Any code representing a *graphic character, rendering character,* or *control character,* usually unique within the set, most commonly represented as a cardinal number. In a particular code collection, such as the Xerox Character Code Standard, a character code is represented as a 16-bit non-negative integer.

character code collection
A listing of specific cardinal numbers from a character code standard.

character collection
A particular selection of the individual characters appearing in a *font.* A collection of a fixed number of characters is known as a character set in the graphic arts—a character collection has no such limit.

character grouping
One or more *NAMED character collections* in union with a core character collection (also NAMED, but a member of a nested set of character collections).

character set
A *character collection* with a fixed number of characters. For purposes of this document, a block of 256 contiguous numerical codes, of which 188 may be assigned to graphic characters.

control character
A character, other than a graphic character or rendering character, whose occurrence in a particular context initiates, modifies, or stops a control operation. A control character, while not a graphic character or rendering character, may have a non-conventional representation in some circumstances.

core character collection
One of a nested family of *NAMED character collections.* In the graphic arts industry, a core character collection is called a universal character set.

Core Font Library
A *font library* having the essential typefaces and character collections for a particular targeted market available on all products.

display font
A particular *variation* of a type face, or unique design, where type is set larger than that used in text to attract a reader's attention and where distinctiveness of design may take precedence over readability factors.

file
A set of related records treated as a unit.

file format
The arrangement and structure of data or words in a *file,* including the order and size of the components of the file.

font	A particular collection of characters of a typeface with unique parameters in the *Variation vector,* a particular instance of values for orientation, size, posture, weight, etc., attributes.
	General definition: The word font or fount is derived from the word *foundry,* where, originally, type was cast. It has come to mean the vehicle which holds the typeface character collection. A font can be metal, photographic film, or electronic media (cartridge, tape, disk).
font family	A particular collection of *font progressions* of a typeface where the *Variation vector* with given orientations and sizes can differ in posture attribute value and weight attribute values. By current practice, a font family can include font progressions in posture, attribute values of roman and italic, and weight attribute values of light, medium, and bold, that is, 40 x 2 x 3 = 240 fonts.
font file	A set of *font* records including a digital representation of a set or collection of graphic symbols and/or characters and control information for some level(s) of processing.
Font Library	A repository for *fonts* and font metric information on any number of typefaces, for example, the Times Roman Family, the Helvetica Family, etc.
font progression	A particular size sequence of *font rotations* of a typeface, i.e., the *Variation vector* with a given orientation value can differ only in size attribute value. A typical progression is ten sizes for the typical four orientations, resulting in 40 fonts for a typical font progression.
	General definition: Sequential sizes of one typeface. The number of fonts comprising a progression can be influenced by needs of a typical market.
font rotation	A set of *fonts* of a typeface where only the parameter of the *Variation vector* affecting the rotational orientation of character placement differs between fonts. Typical orientation values are portrait, landscape, inverse portrait, and inverse landscape.
	General definition: A set of fonts of one typeface which print vertically or horizontally on a page or its inverse.
general looks	The finite set of basic character looks (see appendix C) upon which agreement has been reached and which broadly applies to all characters in a designated code space.
graphic	A symbol produced by a process such as handwriting, drawing, or printing.
graphic character	A character, other than a control character or rendering character, that is normally represented by a graphic.
graphic shape	The physical form of letters, accent marks, numeric figures, fractions, symbols, and constructions (forms characters, mosaics, etc.).
kern	(noun): That portion of a letter which extends beyond its width, that is, the letter shapes that overhang—the projection of a character beyond its side bearings. (verb): The function of adjusting the intercharacter spacing in character groups (words) to improve their appearance.
library font file format	The arrangement and structure of Font Library information in a Font Library font file. The internal format within the library and not a printer or display device-specific format.

logotype (or logo)   A symbol, image, or complex character composed of multiple entities, for example, the name of a company or product in a special design used as an identity mark.

NAMED character collection   The identity given by a registration service, and recorded within a Name Registry, to a particular selection of the characters appearing in a deliverable from a Font Library.

Name Registry   The official record book within the registry for recording unique identifiers. Within a Font Library, the record book to record typeface and character code identifiers for fonts, for example, Font Name Registry.

non-general looks   First kind: The finite set of character looks upon which agreement has been reached and which cannot be broadly applied to all characters in the designated code space.

Second kind: The thousands of non-interesting sets of character looks which may or may not broadly apply to all characters in the designated code space.

Non-general looks of the first kind, those upon which agreement has been reached, are also called specific looks and includes Old Style numerals, long descenders, small caps, etc.

registry   A dynamic (and sometimes complex) service whose purpose is to record information, assign and register unique identifiers, and respond to requests for information about identifiers.

rendering   A copy or version of a symbol produced by a process such as printing.

rendering character   A character, other than a control character or graphic character, that fits in one of four classes:

1st—a non-conventional representation of a control character.

2nd—a sequence of graphic characters (ligature or accented character).

3rd—contextually-dependent alternate representation for a graphic character (initial, medial, or final).

4th—a variant representation for a graphic character.

screen display font   A particular rendition of a typeface used exclusively to create character images on cathode ray tube screens, usually at low to very low resolution.

typeface   The features by which a character's design is recognized, hence the word *face*. Within the Latin language group of graphic shapes are the following forms: Uncial, Blackletter, Serif, Sans Serif, Scripts, and Decorative. Each form characterizes one or more designs.

Example: Serif form contains four designs called Old Style, Transitional, Modern, and Slab Serif designs. The typeface called Bodoni is a Modern design, while Times Roman is a Transitional design.

variation   The extent to which a typographic object varies.

Variation vector   An ordered set of attributes and attribute values which models general character looks in the character looks information specification. An ordered set includes the following attributes: orientation, size, posture, weight, setwidth, stroke, measure, kerning, reading (right or wrong), and escapement (right to left playing and left to right playing).