amazonkindle

Amazon Kindle Publishing Guidelines

How to make books available for the Kindle platform

This document describes the primary ways publishers, authors and conversion houses can make their content available on the Amazon Kindle platform along with guidelines and suggestions developed to ensure a smooth conversion and publication process

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Getting started

There are many options for making your books available for the Amazon Kindle platform. Your options depend on the nature of your publications (such as file formats), the resources and technical expertise you have available, and your general eBook sales model. Amazon.com has both managed and self-service platforms to help publish your content as Kindle books. The Kindle book creation software and all publishing tools on Amazon.com are free. Once you make your titles available for Amazon Kindle, you will receive payments for every title sold. Below are examples of publishing needs we fit and more information on how to move forward:

- Publishers who have a relationship with an Amazon Kindle vendor manager should read more about Kindle Title Manager below.

- Publishers who have many titles to convert but do not wish to (or have the technical resources to) convert files in-house might want to consider outsourcing to a conversion house or create their Kindle books themselves using KindleGen software (more info below).

- If you do not yet have a contract in place to sell your Kindle titles on Amazon.com and will be using eBookbase to upload, contact digitalrights@amazon.com to get a contract.

- If you are a small publisher or author who wishes to take advantage of Amazon's self-service tools to create Kindle Books and sell them on Amazon, read more on Amazon.com's Digital Text Platform below.

Paths to get your content on Kindle

Kindle Title Manager

Publishers who are located in the United States and have a relationship with an Amazon vendor manager can use Kindle Title Manager through Vendor Central. Kindle Title Manager is a portal designed for you to:

- Approve titles for Amazon.com to convert to Kindle editions from pre-existing Search Inside the Book (SITB) files
- Upload source files to be used to convert your titles to Kindle editions.
- Upload and edit metadata associated with your Kindle editions.

We are currently working on making this application available to all publishers and will be providing more information as we make progress.

If you have questions about using Kindle Title Manager, please contact your vendor manager.

Conversion Houses

Publishers have the option to outsource conversion of titles from a variety of formats to eBook formats. Conversion houses offer publishers solutions and services including taking a variety of input formats and creating the eBook or print ready output. The typical input formats are:

- Word (.DOC, .DOCX), Rich Text Format (.rtf), Text (.txt)
- PDF
- Scanning of print book
- FrameMaker, InDesign, PageMaker, QuarkXPress
- XML (i.e., DocBook, etc.)
- HTML, XHTML
- IDPF format (also known as OEB (.opf) or EPUB)

It is important to mention that the reason to sometimes use conversion houses is because the process of converting non-reflowable content (PDF, scans) to reflowable content is labor intensive and requires specialized formatting knowledge.

As you explore conversion house options, it is recommended that you confirm which source format the house requires as part of their conversion of files for use on Kindle.

The preferred output of the conversion houses that can be processed by Amazon.com is:

- Books in Amazon Kindle format (.mobi/.prc/.azw – all 3 file extensions are equivalent)
- Metadata in ONIX format (XML)

Amazon can process content in EPUB source format, but KindleGen will compile the file and run checks for common errors. Any errors or warnings will have to be addressed before making the title available in the Kindle store. Also, titles in EPUB format must be tested on Amazon software and/or hardware and abide by the publishing guidelines in this document.

Conversion houses can also be of service in helping publishers supply eBook retailers with metadata.

Conversion houses Amazon.com partners are using include:

Aptara Inc.

http://www.aptaracorp.com

Code Mantra

http://www.codemantra.com

Impelsys

http://www.impelsys.com

Innodata Isogen, Inc.

http://www.innodata-isogen.com

The Jouve Group

www.jouve.com

Libre Digital

http://www.libredigital.com

MPS

http://www.macmillanpublishingsolutions.com

Texttech

http://www.textech.in

If you have further questions regarding how to add your titles to Amazon Kindle, please contact us at digitalrights@amazon.com

Creating Kindle Books in-house using KindleGen and Kindle Previewer software

Publishers can elect to create their own Kindle books in-house by using a free software program called *KindleGen.* This is a command line tool that allows you to build a Kindle book based on HTML, so content in either HTML, XHTML or IDPF 1.0 or 2.0 (OPF + HTML) is the best source for incorporation into an ebook.

KindleGen is the only tool officially supported by Amazon to convert files to the Kindle format. Only Kindle files created using Kindlegen are guaranteed to be compatible with the current and future Kindle devices & applications. Files created with 3rd party software may not work properly on current or future Kindle devices & readers.

The most recent version of KindleGen can be downloaded for free from our website at http://www.amazon.com/kindlepublishing.

Kindle Previewer is graphical user interface tool that emulates how books display on Kindle devices and applications. *Kindle Prev*iewer makes it easy to preview the layout of a book and make sure its text displays properly for any orientation or font size. This tool is recommended for publishers, eBook conversion companies, and individual authors in combination with KindleGen to produce the highest quality Kindle books.

Kindle Previewer is available for both Windows and Mac OS X platforms.

The most recent version of *Kindle Previewer* can be downloaded for free from our website at http://www.amazon.com/kindlepublishing.

If the only format in which your content is available is EPUB, then KindleGen can process it, but will run a series of checks to confirm that the end result will provide the best experience for the customer. This includes checking for broken links, missing images or cover among others. It is important to note that HTML knowledge is useful in optimizing complex books. If you use a content creation tool that does not use HTML natively you must export your content to HTML before using KindleGen. Most content creation tools allow content to be exported to HTML but **you should verify your exported content before compiling it into a Kindle book because some content creation tools format content differently when exported to HTML** and the quality of the HTML produced by automatic converters can vary.

Testing is important when creating Kindle books. Make sure your titles are tested on Amazon software and/or hardware and that they comply with the publishing guidelines.

Use the Kindle Previewer application to review a Kindle book before publishing it.

KindleGen does not allow creating a DRM'd book directly using it. Instead, you can choose whether to enable DRM from your publishing platform (below), if DRM is supported by your publishing platform.

The publishing platform of choice for selling Kindle books created in-house or by conversion houses is eBookBase (http://www.ebookbase.com, see the web site for details). Books uploaded to the eBookBase catalog are sold on the Kindle store.

You can also upload Kindle files into the Digital Text Platform.

Instructions to use KindleGen

KindleGen for Windows:

1. Download the KindleGen zip file to your PC on your Desktop.
2. Extract it to 'c:\KindleGen'
3. Open a command prompt; this can be done from the Start menu > All Programs > Accessories > Command Prompt -- alternatively, you can go to your Start menu in Windows and choose 'Run' and then type 'cmd'. This will open a black command prompt window.
4. Type 'c:\KindleGen\kindlegen'
5. You will see instructions on how to run KindleGen.
6. To convert a file called book.html, go to the directory where the book is present, eg. 'cd Desktop' and type 'c:\KindleGen\kindlegen book.html' and if successful, you will see a successful conversion and a new file on your Desktop called book.mobi.

Please note: It is recommended to follow these steps to run KindleGen. Double-clicking the KindleGen icon does not launch this program. Run the above commands without quotes.

KindleGen for Linux:

1. Download the KindleGen tar.gz to your PC in a location such as your home (~) directory.
2. Extract it under '~/KindleGen'
3. Open a command prompt and type '~/KindleGen/kindlegen'.
4. You will see instructions on how to run KindleGen.
5. To convert a file called book.html, go to the directory where the book is present, eg. 'cd Desktop' and all you have to do now is type '~/KindleGen/kindlegen book.html' and if successful, you will see a successful conversion and a new file on your Desktop called book.mobi.

Please note: It is recommended to follow these steps to run KindleGen. Double-clicking the KindleGen icon does not launch this program. Run the above commands without quotes.

KindleGen for Mac:

1. Download the KindleGen.zip to your PC in a location such as your home (~) directory.
2. Unzip it under '~/KindleGen'
3. Open a command prompt and type '~/KindleGen/kindlegen'.
4. You will see instructions on how to run KindleGen.
5. To convert a file called book.html, go to the directory where the book is present, eg. 'cd Desktop' and all you have to do now is type '~/KindleGen/kindlegen book.html' and if successful, you will see a successful conversion and a new file on your Desktop called book.mobi.

Please note: It is recommended to follow these steps to run KindleGen. Double-clicking the KindleGen icon does not launch this program. Run the above commands without quotes.

Instructions to Install Kindle Previewer

Windows:

1. Download "Kindle Previewer" available for Windows from the link www.amazon.com/kindlepublishing
2. Store the executable (KindlePreviewer.exe) to the local disk.
3. Execute "KindlePreviewer.exe" by double clicking the .exe
4. Accept the EULA from the dialog box with details to install Kindle Previewer.
5. Kindle Previewer will be present in Start > Programs > Amazon > Kindle Previewer after successful installation

Mac:

1. Download "Kindle Previewer" available for Mac from the link www.amazon.com/kindlepublishing
2. Save the zip file (KindlePreviewer.zip) to the local disk.

3. Double click the zip file to unzip the Kindle Previewer.
4. Drag Kindle Previewer from Downloads folder to Application folder.
5. Start Kindle Previewer.

Use F1 or Help menu to find the Kindle Previewer User Guide.

Amazon.com's Digital Text Platform

If you would like to convert your books into electronic format using Amazon.com's self publishing tools and sell them on Amazon Kindle, please visit Amazon's Digital Text Platform (DTP). DTP is a fast, easy self-publishing tool that lets you publish your digital text content for the Amazon Kindle. Simply upload your content, enter sales copy and pricing information, and publish in minutes. DTP accepts the following formats:

- Microsoft Word
- PDF
- Text
- RTF
- HTML, XHTML
- Amazon Kindle (.mobi/.prc/.azw – all 3 extensions are equivalent)

Once again we recommend using the preview functionality embedded in the platform to test the content for quality. A publication with a significant emphasis on quality will require multiple iterations between edit and preview phases. Such a publication might be easier to create using KindleGen on your computer (You can also use the desktop version called Mobicreator).

For more information, and to sign up, please visit: http://dtp.amazon.com

Content Creation Guidelines

For creating MOBI files using KindleGen you will need to have a single HTML file which represents the entire book, or you can provide an IDPF spec 1.0 or 2.0 compliant files. You can look at the IDPF's OPF spec here - http://www.idpf.org/doc_library/epub/OPF_2.0_latest.htm

Using the IDPF spec you can create a Kindle book with multiple HTML files and a single OPF file which links all of them together. You can look at an sample OPF provided along with the KindleGen downloadable to base your book on that.

Formatting Guidelines

Writing HTML for a website and for a Kindle Book is something quite different. There are many web page design practices which should be avoided when creating Kindle Books in order to provide the right reading experience.

Text Guidelines

Text guideline #1: normal text

The "normal" text in a Kindle book must be "all defaults". We encourage content creators to use creative styles for headings, special paragraphs, footnotes, tables of contents and so on but not "normal" text. The reason is that any styling on "normal" text in the HTML would override the user's preferred default reading settings. Users tend to report such behavior as a poor experience. Here are the most important points:

- "Normal" text must not have a forced alignment (left aligned or justified).
- "Normal" text must use the default font family. The `<font face="…">` tag is ignored on the Kindle platform but even so, make sure it is not used on "normal" text. The same applies to the CSS `font-family` style.
- "Normal" text must use the default font size. The <font size="…"> tag or its equivalent in CSS should not be used in "normal" text.
- "Normal" text should not be bold or italicized. Selected parts can of course use such styling. This guidelines only prohibits book that would be entirely bold for example.
- "Normal" text should not have an imposed font color or background color.

Text guideline #2: page breaks

Blank lines of text should not be inserted to create empty pages. Use the page break tag `<mbp:pagebreak/>`. This is especially true for documents generated from Microsoft Word; you should use the "Page Break" feature of Word.

Text guideline #3:paragraph formatting

- The First line of every paragraph is automatically indented. This behavior can be changed using the `text-indent style` on the `<p> tag`. For example:
  - `<p style="text-indent:0">` - no indentation of the first line
  - `<p style="text-indent:10%">` - positive indent, 10% of the width of the page
  - `<p style="text-indent:5em">` - positive indent, 5 em
  - `<p style="text-indent:-10pt">` - negative indent, 10 pt
  - `<p style="text-indent:-10">` - negative indent, 10 pixels
- The space before each paragraph can be changed using the "`margin-top`" style on tag `<p>`.
- Background color cannot be set on text.
- Borders cannot be added to paragraphs.

Text guideline #4: UNICODE and supported characters:

The Kindle format supports UNICODE. UNICODE characters listed in "Supported Characters" are guaranteed to exist on all Kindle devices. Do not use characters outside of the listed ranges. KindleGen will list, at the end of every compilation, all UNICODE ranges used in your publication. Use the list to check for unsupported characters.

Unsupported characters can sometimes be represented in different ways. For example, superscript-i can be represented by the Unicode code point `U+2071` or using HTML `<sup>i</sup>`. For this particular example Kindle supports only the latter representation.

Text guideline #5: other encodings

The source of a Kindle book can be encoded in many different ways. All encodings are supported provided that:

- The encoding of your HTML files is clearly stated in the HTML
- The computer on which you are compiling the sources supports the encoding and knows how to convert it to UNICODE

We recommend that you specify the encoding of your HTML files in the HTML itself using the `<meta>` tag in the `<head>` section.

```
<html>
<head>
…
<meta http-equiv="content-type" content="text/html; charset=iso-8859-1">
…
```

Text guideline #6: spaces and control characters

- The only supported spaces are the normal space, the non-breakable space ( ) and the zero-width non-joiner (‌). Use of any other space can break selection, dictionary lookup and line-wrap algorithms.
- "Unicode Format Characters" should NOT be used as they may also cause problems.

Text guideline #7: the monospaced font

Kindle uses a default font for content and it also supports a monospaced font.

The monospaced font is used to render content in the following tags: `<pre>`, `<code>`, `<samp>`, `<kbd>`, `<tt>`, `<font face="courier">`, `<font face="monospace">`.

All tags listed above, with the exception of `<pre>`, do not change the text alignment. If the content in these tags should be left aligned you must wrap the previous tags in a `<div align="left">` block.

Text guideline #8: CSS

The Kindle platform currently offers a very basic support for Cascading Style Sheets (CSS). If you do not obtain the desired behavior using CSS, try using inline HTML tags instead. Please make sure you preview your Kindle book before publishing it, to verify that your use of CSS elements displays the way you intended for it to display.

Text guideline #9: no page numbers

Kindle books are reflowable and can be viewed with different font sizes, so page numbers do not apply.

There should not be any reference to page numbers in the book. The cross references should not have page numbers, nor should there be any plain text index with page numbers.

Cover image guidelines

Cover image[1] guideline #1: the cover image is mandatory

Kindle books must have a cover image. The preferred format for the cover is a JPEG image of 600 x 800 pixels. Covers with less than 500 pixels on the smaller side are rejected. If your cover is smaller that the required size, do not stretch it as this does not add any quality.

The content of your cover image should not:

- Infringe other publisher's or artist's copyrights on the same cover
- Mention pricing or other temporary promotional offers

Does not infringe other publisher's or artist's copyrights on the same cover.

Covers are defined in the .OPF using the following tags, please use *name="cover"* in the metadata element name as that is recognized :

```
<metadata>
      ...
      <meta name="cover" content="my-cover-image" />
      ...
</metadata>
  ...
<manifest>
      ...
      <item href="MyCoverImage.jpg" id="my-cover-image" media-
type="image/jpeg" />
      ...
</manifest>
```

This syntax is not part of the IDPF standard because the standard "forgot" to provide for cover images. It has however been designed with help from the IDPF and will validate in an IDPF validator.

Cover image guideline #2: the cover must not appear twice

Cover images must not be added to the content in any other way, otherwise they will appear twice in the book.

[1] This image is different from the image used to merchandise the book on Amazon.com

One exception is provided for: if you want to have an HTML cover page for compatibility with software from other vendors, in addition to the proper logical cover, add the following tags in your .OPF (underlined elements are mandatory):

```
<spine> <itemref idref="my-html-cover" linear="no" /> </spine>
  ...
<manifest> <item id="my-html-cover" href="cover.xml" media-
type="application/xhtml+xml" /> </manifest>
  ...
<guide> <reference type="cover" title="Cover Image" href="cover.xml" />
<guide>
```

TOC Guidelines

TOC guideline #1: the Logical TOC (NCX) is mandatory

The Logical Table Of Contents is very important for our mutual customers' reading experience as it allows them to easily navigate between chapters on Kindle 2. So all Kindle books should have both logical and HTML TOCs. Users expect to see an HTML TOC when paging through a book from the beginning, while the logical table of contents is an additional way for users to navigate books.

Logical tables of contents are generated using a Navigational Control file for XML applications (NCX). You create an NCX to expose the hierarchical structure of a Kindle book to allow the user to navigate through it.

In NCX enabled books, users will be able to see where they are in their reading such that the part, chapter, or section will be exposed. In addition this progress indicator shows relative progress in that book.

Logical tables of content are part of the IDPF 2.0 specification and are described here: http://www.niso.org/workrooms/daisy/Z39-86-2005.html#NCX

Here is an example NCX:

```
<navMap>
    <navPoint class="titlepage" id="L1T" playOrder="1">
        <navLabel><text>AUTHOR'S NOTE</text></navLabel>
        <content srcSway_body.html#preface_1" />
    </navPoint>
    <navPoint class="book" id="level1-book1" playOrder="2">
        <navLabel><text>PART ONE</text></navLabel>
        <content srcSway_body.html#part_1" />
        <navPoint class="chapter" id="level2-book1chap01" playOrder="3">
            <navLabel><text>THE HOUSES, 1969</text></navLabel>
            <content src="Sway_body.html#chapter_1" />
        </navPoint>
        <navPoint class="chapter" id="level2-book1chap02" playOrder="4">
```

```
                    <navLabel><text>ROCK AND ROLL, 1962</text></navLabel>
                    <content src="Sway_body.html#chapter_2" />
                </navPoint>
                <navPoint class="chapter" id="level2-book1chap03" playOrder="5">
                    <navLabel><text>THE EMPRESS, 1928-1947</text></navLabel>
                    <content src="Sway_body.html#chapter_3" />
                </navPoint>
            </navPoint>
        </navMap>
```

It defines the following TOC hierarchy:

```
AUTHOR'S NOTE
PART ONE
   THE HOUSES, 1969
   ROCK AND ROLL, 1962
   THE EMPRESS, 1928-1947
```

And here is an excerpt from the .OPF (publication header file) that shows how to add an NCX table of contents to a book.

You need to declare the NCX in the "manifest":

```
<manifest>
<item id="toc" media-type="application/x-dtbncx+xml" href="toc.ncx"/>
```

And you need to use it in the "spine":

```
<spine toc="toc">
```

TOC guideline #2: the HTML TOC must be linked

It is generally a good idea to place an HTML page with a table of contents at the beginning of the book so that users can easily jump to given locations within it (typically to a given chapter). The HTML TOC must be linked so that users can click and get to a specific location. A table of contents that is not made of links is not useful on Kindle.

TOC guideline #3: the HTML TOC must be referenced as a guide item

The TOC must be referenced from a toc guide item. Every Kindle device or app has a UI element allowing the user to jump to the toc guide item from anywhere in the book. Here is an example of a guide item for a table of contents (underlined elements are mandatory):

```
<guide> <reference type="toc" title="Table of Contents" href="toc.html"/> </guide>
```

TOC guideline #4: no tables in TOCs

Do not create TOCs using html table tags. Tables are for tabular data only, not layout.

TOC guideline #5: no page numbers in the TOC

- Page numbers must not be used in the TOC. Kindle books are reflowable and can be viewed with different font sizes, so page numbers do not apply.
- If you are importing your document from Word, you should use the "Heading" styles and "Table of contents" feature of Microsoft Word. The TOC created by Word will be imported correctly and will convert to a TOC that follows the above guidelines.

TOC guideline #6: placement of the TOC

- Please ensure the HTML TOC is located towards the start of the book, and not the end of the book.

Guide Item guidelines

Guide item guideline #1: recommended guide items

- The Kindle platform supports guide items for defining the cover, table of contents (TOC), and start reading location.

- We do not recommend adding additional guide items to your OPF file beyond these, as they will be grayed out in the menu options and may cause customer confusion. Please note that guide items are not intended to replace the table of contents.

Image guidelines

Image guideline #1: supported input formats

- The Kindle platform supports GIF, BMP, JPEG, PNG images in your content.
- Kindle does not support vector graphics. You will have to convert your vector graphics into raster graphics using one of the supported image formats.
- If you are using images for schemas, charts, tables, maps or anything that includes text, you must pay special attention to the legibility of the final image.

Images are added to the source using the standard HTML `<img>`.

When using images, please save them in 300dpi or 300ppi resolution to future-proof your image content for display.

Image guideline #2: automatic image conversions

The Kindle file format internally supports JPEG and GIF images of up to 127KB in size. This is double the previously-supported maximum of 63KB, and provides for richer nuances in images, particularly for large images, or content with gradient patterns. KindleGen will perform the necessary conversions automatically from the supported input formats so you should usually provide your images with the maximum resolution available and let KindleGen do the rest.

If you find the automatic image conversion unsatisfactory, you can optimize your images before feeding them to KindleGen. If your images are in the JPEG or GIF formats and are less than 127KB in size, KindleGen will not alter them.

Image guideline #3: color

Use color images whenever possible and relevant. The Kindle reading device has a black & white screen today but Kindle applications for other devices, such as iPhone or PC, take advantage of colors.

Image guideline #4: photographs

Photographs should use the JPEG format with a quality factor of 40 or higher. Photographs should be provided with the highest resolution available to you. KindleGen will reprocess them as needed to adapt them to the requirements of the file format.

Photographs should not be too small. Please make sure your input photos are at least 600x800 pixels in size, unless you optimize them yourself according to the previous guideline. Photographs of less than 300x400 pixels are much too small and can be rejected.

If your photographs are in GIF format or are too small, simply converting them to JPEG or artificially increasing their size will not improve their quality. You should go back to the original source to create a JPEG image with sufficient resolution.

Image guideline #5: use GIF for line-art and text

Line-art is graphics drawn with a limited number of solid colors (e.g., images drawn by Illustrator, Paint or Power Point). Text, graphics, charts and tables are examples of images which are line-art.

Line-art should be in GIF format. The JPEG algorithm tries to blend parts of the image together, and will blur the sharp edges of the line-art.

Text appearing in line-art images should be sharp and legible.

You should optimize your line art GIFs before submitting them to KindleGen. Resizing or JPEG compression can introduce blurriness or unwanted artifacts in line art images which is why the automatic conversions applied by KindleGen are best avoided.

To optimize your GIFs and make them fit in the 127KB limit, try the following tips:

- Try reducing the number of colors used. This can often be done without altering the quality of the image. Line art images which appear black & white might be using colors because of certain anti-aliaising algorithms. Here is an example (notice the shades of red and blue around the "A" in the left picture):

- Remove white margins around the image if any exist
- Resize the image if necessary but pay close attention to the ligibility of text (see guideline #6)

Image guideline #6: image and font size requirements for line-art and text

An image with text in it should not be significantly larger than a screen. The Kindle device offers the possibility to rotate an image to use more screen real estate. The Kindle for iPhone app allows zooming and panning. In both cases however, user experience degrades rapidly for very large line art images.

The following rules ensure a good rendering on all Kindle platforms for line art images containing text:

- The MAXIMUM image size is 500x600 pixels. This ensure that the image is not shrunk on a Kindle device, which could make its text illegible.
- The MINIMUM size of text is 6 pixels for the height of a lower-case "a".

These rules limit the size of tables rendered as pictures. Larger tables should be reformatted.

Example images:

A table, line-art / text content rendered as an image. This GIF image is 317x233 pixels and 6KB in size. The text is sharp and legible. The font size requirement is met ("a" is 7 pixels high).

Fruit	#/week	Sales	Remarks	Sales
Apple	4	$ 250,000	Sold well	$ 250,000
Peach	2	$ 150,000		$ 150,000
Banana	5	$ 670,000		$ 670,000
Pear	3	$ 560,000	Need more marketing	$ 560,000
Plum	2	$ 432,000		$ 432,000
Walnut	1	$ 35,000		$ 35,000
Pineapple	15	$14,000	Prospective sales	$14,000
Grapefruit	5	$1,345,000		$1,345,000
Hazelnut	3	$ 25,000		$ 25,000
Total	16	$3,679,000		$3,679,000

The same image with JPEG compression. Compression artifacts appear,making the text blurry although it remains legible. The size has increased to 17KB.

Fruit	#/week	Sales	Remarks	Sales
Apple	4	$ 250,000	Sold well	$ 250,000
Peach	2	$ 150,000		$ 150,000
Banana	5	$ 670,000		$ 670,000
Pear	3	$ 560,000	Need more marketing	$ 560,000
Plum	2	$ 432,000		$ 432,000
Walnut	1	$ 35,000		$ 35,000
Pineapple	15	$14,000	Prospective sales	$14,000
Grapefruit	5	$1,345,000		$1,345,000
Hazelnut	3	$ 25,000		$ 25,000
Total	16	$3,679,000		$3,679,000

Bad quality: the image is blurry because of resizing and JPEG compression. The text is not legible. This will be rejected.

Fruit	#/week	Sales	%	Remarks	Sales	Quality	Country of origin
Apple	4	$ 250,000	25%	Sold well	$ 250,000	1st choice	U.K.
Peach	2	$ 150,000	13%		$ 150,000	1st choice	Holland
Banana	5	$ 670,000	31%		$ 670,000	2nd choice	Germany
Pear	3	$ 560,000	19%	Need more marketing	$ 560,000	3rd choice	Mexico
Plum	2	$ 432,000	13%		$ 432,000	1st choice	Argentina
Walnut	**1**	**$ 35,000**	3%		**$ 35,000**	**3rd choice**	**Uruguay**
Pineapple	15	$14,000	2 %	Prospective sales	$14,000	2nd choice	Ethiopia
Grapefruit	5	$1,345,000	23 %		$1,345,000	3rd choice	Iran
Hazelnut	3	$ 25,000	45 %		$ 25,000	2nd choice	Japan
Apple	4	$ 250,000	25%	Different batch	$ 250,000	1st choice	U.K.
Peach	**2**	**$ 150,000**	13%		**$ 150,000**	**1st choice**	**Holland**
Banana	5	$ 670,000	31%		$ 670,000	2nd choice	Germany
Pear	3	$ 560,000	19%		$ 560,000	3rd choice	Mexico
Plum	2	$ 432,000	13%		$ 432,000	1st choice	Argentina
Walnut	1	$ 35,000	3%		$ 35,000	3rd choice	Uruguay
Pineapple	15	$14,000	2 %		$14,000	2nd choice	Ethiopia
Grapefruit	5	$1,345,000	23 %	Prospective sales	$1,345,000	3rd choice	Iran
Hazelnut	3	$ 25,000	45 %		$ 25,000	2nd choice	Japan
Apple	4	$ 250,000	25%	Sold well	$ 250,000	1st choice	U.K.
Peach	2	$ 150,000	13%		$ 150,000	1st choice	Holland
Banana	**5**	**$ 670,000**	31%		**$ 670,000**	**2nd choice**	**Germany**
Pear	3	$ 560,000	19%	Find alternative suppliers	$ 560,000	3rd choice	Mexico
Plum	2	$ 432,000	13%		$ 432,000	1st choice	Argentina
Walnut	1	$ 35,000	3%		$ 35,000	3rd choice	Uruguay
Pineapple	15	$14,000	2 %	Prospective sales	$14,000	2nd choice	Ethiopia
Grapefruit	5	$1,345,000	23 %		$1,345,000	3rd choice	Iran
Hazelnut	3	$ 25,000	45 %		$ 25,000	2nd choice	Japan
Plum	2	$ 432,000	13%		$ 432,000	1st choice	Argentina
Total	**16**	**$3,679,000**	235 %		**$3,679,000**		

BAD

An example of the largest acceptable table rendered as an image. The size is 500x600 pixels which is the maximum. The font uses a body size (height of an "a") of 7 pixels which is just above the 6 pixel minimum. The size of the GIF is 33KB.

Fruit	#/week	Sales	Remarks	Sales	Quality	Country of origin
Apple	4	$ 250,000	Sold well	$ 250,000	1st choice	U.K.
Peach	2	$ 150,000		$ 150,000	1st choice	Holland
Banana	5	$ 670,000		$ 670,000	2nd choice	Germany
Pear	3	$ 560,000	Need more marketing	$ 560,000	3rd choice	Mexico
Plum	2	$ 432,000		$ 432,000	1st choice	Argentina
Walnut	**1**	**$ 35,000**		**$ 35,000**	**3rd choice**	**Uruguay**
Pineapple	15	$14,000	Prospective sales	$14,000	2nd choice	Ethiopia
Grapefruit	5	$1,345,000		$1,345,000	3rd choice	Iran
Hazelnut	3	$ 25,000		$ 25,000	2nd choice	Japan
Apple	4	$ 250,000	Different batch	$ 250,000	1st choice	U.K.
Peach	**2**	**$ 150,000**		**$ 150,000**	**1st choice**	**Holland**
Banana	5	$ 670,000		$ 670,000	2nd choice	Germany
Pear	3	$ 560,000	Negotiated a good price	$ 560,000	3rd choice	Mexico
Plum	2	$ 432,000		$ 432,000	1st choice	Argentina
Walnut	1	$ 35,000		$ 35,000	3rd choice	Uruguay
Grapefruit	5	$1,345,000		$1,345,000	3rd choice	Iran
Hazelnut	3	$ 25,000		$ 25,000	2nd choice	Japan
Apple	4	$ 250,000	Sold well	$ 250,000	1st choice	U.K.
Peach	2	$ 150,000		$ 150,000	1st choice	Holland
Banana	**5**	**$ 670,000**		**$ 670,000**	**2nd choice**	**Germany**
Pear	3	$ 560,000	Find alternative suppliers	$ 560,000	3rd choice	Mexico
Plum	2	$ 432,000		$ 432,000	1st choice	Argentina
Walnut	1	$ 35,000		$ 35,000	3rd choice	Uruguay
Pineapple	15	$14,000	Prospective sales	$14,000	2nd choice	Ethiopia
Grapefruit	5	$1,345,000		$1,345,000	3rd choice	Iran
Hazelnut	3	$ 25,000		$ 25,000	2nd choice	Japan
Total	**16**	**$3,679,000**		**$3,679,000**		

Image guideline #7: prefer HTML to images
Do not render large chunks of text as images. If an image contains whole paragraphs of text, it should not be an image. Instead it should be HTML.

Below is an example of a text heavy image that should be HTML. Note, the image will be shrunk to fit the screen and become unreadable while HTML will be paginated.

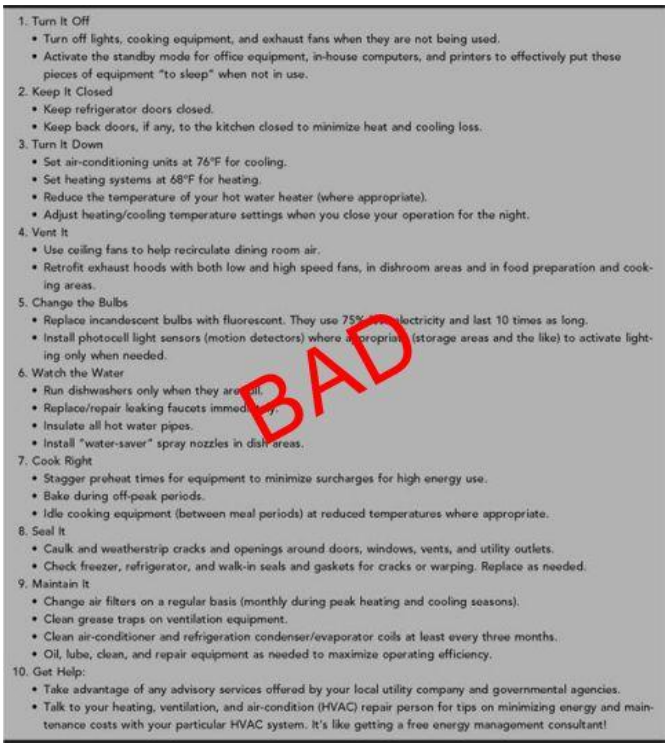

Table guidelines

Table guideline #1: use tables for tabular data only

Tables are to be used for tabular data only. Although it is common practice to use tables for layout purposes in HTML, such use is not allowed in Kindle books. Please do not use tables for transcripts, chronologies, table of contents, lists, sidebars, and so on.

The Kindle format does not support nested tables, so do not use them. For tabular data, this limitation should not be a problem since combinations of rowspan and colspan attributes should offer sufficient flexibility. Nested table are mostly needed for layout purposes.

Table guideline #2: large tables

Keep in mind that a table rendered as an image cannot be paginated, and the whole image will be drawn on one screen. If the table is rendered using HTML <table> tags, pagination will be available but user experience will be poor if the table is significantly wider than the screen and forces the user to pan the table a lot. Text may even be lost if one cell of a table is larger than the whole screen.

For the best user experience, please respect the following rule: tables should not contain whole paragraphs of text or large pictures in a cell.

If you encounter a table that is too large or that contains too much text in its cells, consider reformatting it.

In the example below, even rotating to better fit the screen does not help. It would be better to have the paragraph text as plain HTML, and only the right-most column rendered as an image or HTML table, to preserve the format and layout of the data.

Large table rendered as an image: illegible text, unacceptable quality	**The same content, reformatted as HTML and a legible, good quality table.**

Vitamin	Function/Roles in Metabolism	Deficiency Symptoms	Toxicity Symptoms	Recommended Dietary Allowance
Vitamin C	Antioxidant biosynthesis of connective tissue components (collagen, elastin, fibronectin, proteoglycans bone matrix, and elastin–associated fibrillin); carnitine and neurotransmitters	Scurvy (involves deterioration of elastic tissue); follicular hyperkeratosis, petechiae, ecchymoses, coiled hairs, inflamed and bleeding gums, perifollicular hemorrhages, joint effusions, arthralgia, and impaired wound healing; dyspnea, edema, Sjögren syndrome, weakness, fatigue, depression	Nausea, abdominal cramps, and diarrhea (from supplements)	**Adults (≥ 19 years):** Males 90 mg Females 75 mg **Infants/children:** 0-6 months.* 40 mg 7-12 months.* 50 mg 1-3 years: 15 mg 4-8 years: 25 mg 9-13 years: 45 mg 14-18 years (males) 75 mg 14-18 years (females) 65mg **Pregnancy** Age ≤ 18: 80 mg Age 19-50: 85 mg **Lactation:** Age < 18: 115 mg Age 19+: 120 mg

Vitamin C

Functions/Roles in Metabolism
Antioxidant; biosynthesis of connective tissue components (collagen, elastin, fibronectin, proteoglycans, bone matrix, and elastin–associated fibrillin); carnitine, and neurotransmitters

Deficiency Symptoms
Scurvy (involves deterioration of elastic tissue); follicular hyperkeratosis, petechiae, ecchymoses, coiled hairs, inflamed and bleeding gums, perifollicular hemorrhages, joint effusions, arthralgia, and impaired wound healing; dyspnea, edema, Sjögren syndrome, weakness, fatigue, depression

Toxicity Symptoms
Nausea, abdominal cramps, and diarrhea (from supplements)

Recommended Dietary Allowance	
Adults (> 19 years):	
Males	90 mg
Females	75 mg
Infants/children:	
0-6 months	40 mg
7-12 months	50 mg
1-3 years	15 mg
4-8 years	25 mg
9-13 years	45 mg
14-18 years (males)	75 mg
14-18 years (females)	65 mg
Pregnancy:	
Age ≤ 18	80 mg
Age 19-50	85 mg
Lactation:	
Age < 18	115 mg
Age 19+	120 mg

Table guideline #3: HTML tables

Table support was added to the Kindle platform with the Kindle 2 and Kindle for iPhone app. We recommend that simple tables that have standard rows & columns should be authored using the <Table> tags. These will be displayed as tables in

Kindle 2 and Kindle for iPhone while on Kindle 1 these will be flattened (i.e. all the content will appear in one column).

For more complex tables that have nested rows/columns or use very specific formatting, we recommend converting to an image, provided the guidelines above are respected.

Very large tables will not work and must be reformatted.

Colspan and rowspan attributes should be less than or equal to the total number of columns or rows (as appropriate) in the table.

Table guideline #4: Splitting tables

There are times when it may be necessary to format a table as an image, but it is still too large to be legible on one Kindle screen. In this case, you may want to split the image. The following is a guideline to use when splitting a 2-page table; this logic can be extended for multiple-page table images.

Split the image in half horizontally 60% the way down the image, then split the header and copy the header to the bottom half image, and stitch these into a new image. The final two images should then be the same size, with table headers. You should do all this image work on the source image, not the converted GIF, otherwise you'll be converting into GIF format twice (which might result in lower quality).

Table guideline #5: Maximum table size

Tables should be optimized to be no larger than 10 Kindle screens. Generally speaking, a Kindle screen is 24 rows of 60 characters, although the Kindle DX shows more characters. The character limit is the maximum number of characters in any one row. There are a limited number of combinations for a table that looks like this (see below); if a table has more characters in it than the maximum number specified below, given the number of rows, then the table should be split into smaller tables, or images, depending on the previous table guidelines in this document. Characters in this case are non-formatting characters, ie, the actual text which a user sees when looking at the contents of a table.

Number of rows	Maximum characters (per row)
1 - 24	600
25 - 48	300
49 - 72	180
72 - 120	120
121 - 240	60

Adobe Digital Editions Compatibility Guidelines

Adobe Digital Editions compatibility guideline #1

if you are using Adobe Digital Edition, please ensure that the Item IDs in the manifest are unique. Adobe Digital Edition does not enforce uniquiness of IDs which is wrong according to the IDPF standard.

```
<manifest>
  <item id="css1" href="core.css" media-type="text/css"/>
  <item id="css2" href="template.css" media-type="text/css"/>
…
</manifest>
```

Styling Guidelines

Nested HTML TOC guideline #1

To create useful, navigable, deep TOC entries, we recommend using syntax of the sort which follows in your HTML TOC.

```
<div>Section 1</div>
  <blockquote>
  <div>Chapter 1</div>
  <div>Chapter 2</div>
  <div>Chapter 3</div>
     <blockquote>
     <div>Subchapter 1</div>
     <div>Subchapter 2</div>
     </blockquote>
  <div>Chapter 4</div>
     <blockquote>
     <div>Very long subchapter title to test for correct wrapping of the text - paragraph indentation should be preserved on the second line</div>
     </blockquote>
  </blockquote>
<div>Section 2</div>
```

Sidebar guideline #1

When inserting sidebar content into the main flow of a Kindle book, it is recommended that content creators use <hr/> HTML tags before and after the sidebar to differentiate this from the main body flow.

Metadata Guidelines

When supplying author metadata, please provide it using only Latin-1 or Latin-9 characters using UTF-8 encoding. Be careful when copying and pasting from any internal spreadsheets or catalog systems you may have, as sometimes characters are mistranslated if they are not in these Latin-1 or Latin-9 character sets; make sure to review the description after you have entered it. Please see these links for more information:

http://en.wikipedia.org/wiki/ISO/IEC_8859-1

http://en.wikipedia.org/wiki/ISO/IEC_8859-15

A common case in which non-supported characters are introduced to a document is by copying and pasting from Microsoft Office. MS Office uses several "smart characters" that are non-supported by the standard, such as the curly single and double quotes, apostrophe and ellipse. For a complete list of these characters, see the characters bordered in bold at:

http://en.wikipedia.org/wiki/Windows-1252#Codepage_layout

Metadata Guideline #1: Author Information

When creating a Kindle-format book, you are asked to specify the title and author during the content creation process. Please use the following convention when setting the author metadata attribute.

`[Surname] [Suffix], [Given Name] [Initial]`

For example: `"Buckley Jr., William F."`

Separate multiple authors with a semicolon. If there are multiple authors, please be sure to specify them.

Please do not use the following characters in the author name: @, ©, ®, %, &, #, or any dash next to a number or word.

Metadata Guideline #2: Title Information

Include subtitles, ensure matches the content from hardcover or paperback versions (if applicable). Compare the title to title page inside book.
Please do not use the following characters in the title: @, ©, ®, %, &, #, or any dash next to a number or word.

If this book is a special or otherwise differentiated version of a work, the edition type (per ONIX standards) should also be included in the item name after the name of the work parenthetically. Without parenthetical notation in the title it will be difficult for customers to determine how this version is different when viewing it in a list with other versions of the same work.

For example:
- The Lovely Cones (Special Edition)
- The Turtle and the Hare (Illustrated)

The title should not:

- Mention pricing or other temporary promotional offers
- Use HTML tags or the following characters in the title: @, ©, ®, %, &, #, or any dash next to a number or word
- Attempt to clarify precisely what is different about this version. This level of detail adds too much clutter when expressed in the title, it should be included in the description.

Metadata Guideline #3: Description
You should supply a book description that is distinct and describes the exact content being published in the Kindle Edition, especially when it is a new version with additional content.

For example:
- Includes interviews with the author from The New Yorker and USA Today
- Full color illustrations inspired by the style of Vincent van Gogh

The description should not:
- Mention pricing or other temporary promotional offers
- Include sophisticated HTML markup

Metadata Guideline #4: Physical ISBN Information

You should supply the Physical ISBN when you provide information to Amazon, if you are the rights-holder for the physical book of the same title. Providing the Physical ISBN to us will allow us to make sure your Kindle Edition is linked properly to any hardcover or paperback titles of the same book.

HTML Guidelines

HTML Guideline #1

The Kindle file format supports most HTML 4.0 features, although the following HTML features are not fully supported in Kindle: Style Sheets, Forms, Vector Images, Frames, JavaScript, Video, Audio, and other Multimedia. When creating source HTML or XHTML for the Kindle, you may want to refer to one of the following books as a primer on constructing well-formed HTML documents:

HTML, XHTML, and CSS by Elizabeth Castro (published by Peachpit Press):
http://www.amazon.com/HTML-XHTML-and-CSS/dp/B000SEFC5Q

Beginning HTML with CSS and XHTML: Modern Guide and Reference by David Schultz

and Craig Cook (published by Apress): http://www.amazon.com/Beginning-HTML-CSS-XHTML-Reference/dp/B001D25ZPE

Beginning Web Programming with HTML, XHTML, and CSS by John Duckett (published by Wrox): http://www.amazon.com/Beginning-Programming-HTML-XHTML-ebook/dp/B000VZQVVG

Formatting Tips

1. Anchors must be added before formatting tags
   - Correct: <a name="Chapter1"/><h1>Chapter 1</h1>
   - Incorrect: <h1><a name=" Chapter1"/>Chapter 1</h1>
2. EPUB Guide Items
   Guide Items are an optional feature in the EPUB format. Kindle provides support for the **toc** and **text** guide items.

Audio and Video Guidelines

Kindle now supports audio and/or video content. To add this content to your Kindle book, please follow the below guidelines. Examples are provided.

1. Embedded Video: to embed a video inside a Kindle book, add a standard HTML5 tag such as the following:

   <video id="video_1" src="movie.mp4" **controls** poster="start.jpg" title="Video about …">

"There is video content at this location that is not currently supported for your Kindle device. The caption for this content is displayed below."

   </video>

   The file referenced in the "src" tag is the embedded video file. This is required.

   The title tag is optional, and is used to store the description of the video.

   The file referenced in the "poster" tag is the placeholder image that viewers see when the video is displayed in an eBook, but before it is played. It could be the first frame of the video, or a representative frame, depending on your preference. This is optional. (Without specifying this file, a blank black image will be displayed.)

   The "controls" tag is required, unless you wish to provide your own image for use in starting the video playback, in which case it is not necessary to set this tag. The "controls" tag tells the eBook reader to display controls to see the embedded video.

   The text content displayed between <video> and </video> tags is content which is rendered on devices which do not support video content. This is useful to specify so that if you are testing this content on a device which does not support video, you see a placeholder where the content would ordinarily be displayed.

   The identifier referenced in the "id" tag must be unique to the document if it is used, but its use is optional.

2. Streaming Video: not supported at this time. Use embedded video.
3. Embedded Audio: to embed an audio file inside a Kindle book, add a standard HTML5 tag such as the following:

<audio id="audio_1" src="audio.mp3" **controls** title="Audio about …">

"There is audio content at this location that is not currently supported for your Kindle device. The caption for this content is displayed below."

</audio>

The file referenced in the "src" tag is the embedded audio file. It must be in MP3 format. This is required.

The title tag is optional, and is used to store the description of the video.

The "controls" tag is required, unless you wish to provide your own image for use in starting the audio playback, in which case it is not necessary to set this tag. The "controls" tag tells the eBook reader to display controls to hear the embedded audio.

The text content displayed between <audio> and </audio> tags is content which is rendered on devices which do not support audio content. This is useful to specify so that if you are testing this content on a device which does not support audio, you see a placeholder where the content would ordinarily be displayed.

The identifier referenced in the "id" tag must be unique to the document if it is used, but its use is optional.

4. Streaming Audio: not supported at this time. Use embedded audio.
5. When authoring source HTML to add audio and video files, it is recommended that you create a "multimedia" directory to store these assets in, and refer to the "multimedia/filename" within your HTML source.
6. Audio Guidelines: We recommend using stereo channels in your MP3 source where possible, as Kindle supports playing back audio in stereo. Use as high a bitrate as you need in order to hear the audio content appropriately; this may be a judgment call. For good results, consider bitrates between 128kbps and 256kbps (kilobits per second). The maximum is 320 kbps at variable bit rate.
7. Video Guidelines: As audio content can be part of the video content, we recommend using stereo channels in your audio source where possible, as Kindle supports playing back audio in stereo. The following video profile is recommended:

   This is the **ideal** source spec:

Attribute	Setting
Dimensions	Widescreen: 704x396 (or any other widescreen ratio); Fullscreen: 640x480

Interlacing	Progressive
Color Space	4:2:0 YUV
Video Codec	H.264 (recommended), MPEG-2, MPEG-4
Video Mode	VBR (recommended) or CBR
Video Bit Rate	15000 kbps or higher recommended
Key Frame Interval	2 or 4 seconds recommended
Audio Codec	AAC (recommended), MP3
Audio Bit Rate	256 kbps or higher recommended
Audio Sample Rate	48 kHz (recommended), 44.1 kHz

The following container formats are acceptable:

Container	File Extensions	Mime Type	RFC
MP4	.mp4, .m4v	video/mp4, video/h264	RFC4337, RFC3984
MPEG-2 video file	.mpg, .mpeg	video/mpeg	RFC2045, RFC2046
MPEG-2 program stream	.ps	video/mp2p	RFC3555
MPEG-2 transport stream	.ts	video/mp2t	RFC3555

Will not work: Any other video codec (e.g. Windows Media, Apple ProRes), AC3 audio, audio >2 channels

8. Audio and video Metadata: Amazon requires that publishers (or their conversion houses) provide a description of the audio and video file, and the duration of the file in minutes and seconds, in the HTML immediately after the audio and video file is specified. As an example:

```
<p align=”center” style=”text-indent:0px”>
<video id=”video_1” src="movie.mp4" controls poster=”start.jpg” title=”How to create Kindle content (5:01)”>
        <br/><br/><br/>
        “There is video content at this location that is not currently supported for your Kindle device.  The caption for this content is displayed below.”
        <br/><br/><br/>
</video>
<br>How to create Kindle content (5:01)</br>
```

</p>

9. Index: When creating eBooks for audio and video content, Amazon requires the creation of an NCX file which points to the audio and video assets. This file should be a listing of all video and audio files, in reading order, with links to where they occur in the book. For descriptions of the audio and video files, please reuse the same audio and video metadata. That is, a link which points to the video clip in point #8 above would say "How to create Kindle content (5:01)" in the index. This information should be embedded in the NavList portion of the NCX file.
10. Images with play controls: It is possible for publishers and conversion houses to tag images in such a way as to enable them to be played by clicking on them. The minimum pixel width and height for such images is 45 pixels by 45 pixels. To do this, you will need to superimpose the Amazon PLAY icon onto the lower right hand side of any image (via Photoshop or alternative means). Then add the following tag to the HTML, where in this case, you are referring to an audio fie whose id attribute in HTML is "audio1" and for which no "control" is specified in the video tag:

    The Amazon PLAY icon is available on request.

11. Kindle books are case-sensitive. So when creating Kindle content, and referencing audio and video files within your HTML, please ensure you are mindful of case-sensitivity. For example, "ThisFile.mp4" is different from "Thisfile.mp4". Please also make sure to use "/" characters, and not "\" characters, if you are indicating a file in a directory. For example, "multimedia/ThisFile.mp4" is valid but "multimedia\ThisFile.mp4" is not.
12. Make sure then specifying video and audio files in the OPF that they have the correct mime-types depending on the extensions used. For example, MP4 video files should have a mime-type of "video/mp4" and not "audio/mpeg".
13. Please limit the combined filesizes of all audio and video files to 600MB or less for a given title. If the files are larger than 600MB, please transcode them manually to reduce the filesize(s).
14. If there is text on the page that gets narrated, insert the following message after the <audio> or <video> tag but before the actual text: "Listen along: Tap to begin narration of the following text". The "Listen along:" portion of the message can be in bold to differentiate it from the supplemental audio icon, in cases where a supplemental audio icon is being used as in Guideline #10.
15. When creating a table of contents, please create a list of audio and video resources at the start of your table of contents. This will aid customers in finding the video and/or audio files throughout your book.
16. Please limit the number of audio and video files to a given title at 250 or below.
17. Examples:

```
<video id="video_1" src="multimedia/movie.mp4" controls poster="start.jpg"
title="This is my video (5:01)">
        <br/><br/><br/>”There is video content at this location that is not currently
        supported for your Kindle device.  The caption for this content is displayed
        below.”<br/><br/><br/>
        </video>

    <br>This is my video (5:01)</br>

<audio id="audio_1" src="multimedia/audio.mp3" controls title="This is my audio
(1:10)">
        <br/><br/><br/>
        ”There is audio content at this location that is not currently supported for your
        Kindle device.  The caption for this content is displayed below.”
        <br/><br/><br/>

    </audio>
    <br>This is my audio (1:10)</br>
```

17. All books must have a TOC whose first section is listed as "List of Audio and Video". Thus section should be in bold. On the next line follows an indented list of audio and video assets. Each audio and video asset is a hyperlink. The hyperlink takes the user to the location in the book where the asset is. The link is formatted first with the description of the asset, and play duration in parentheses.
As an example:

List of Audio and Video
    How to make icing (1:25).
    How to make batter (1:29).

These guidelines should be used for all audio and video resources greater than 10 seconds in play length which a user would likely want to refer to within the book.

Dictionary Formatting

The Kindle format enables the production of Kindle Edition books which include alphabetical index searching capabilities and dictionaries that can be used in lookup functions. A dictionary is a Kindle Edition .prc or .mobi file. A dictionary can be used to look up words, and can be read as a standalone book in its own right.

The publishing tool builds indexes into an eBook .prc file based on the entries that are marked up in the OEB source with a set of <idx> XML tags. One or more indexes can be built into the eBook. Production of the OEB source is out of the scope of this document: the data is generally output from a database (Access, SQL, XML, ...), and written into the OEB/HTML file by a software program.

Reference list of <idx> tags

`<idx:entry>..</idx:entry>`
Marks the scope of an entry in the index

`<idx:entry name="xxx"> :`
Use the name attribute to identify an index when there is more than one index in the ebook.

`<idx:orth>Label of entry in Index</idx:orth>`
Marks the text that will appear in the index search box for that entry. Note: the label of the entry is limited to 127 characters in the index search view. If longer than 127 characters, the full text will be visible in the flow of the book but only the first 127 characters will be used in the index search.

`<idx:orth value="Label of entry in Index"/> :`
Use the value attribute to include text for the label in the entry that you do not want to display in the OEB flow.

The following is an example in an address book: you can search for an entry by the Name of the person; and as an alternative search, you can search for an entry by Company, or by City. In a first step in the index search box, you will enter the company name, and when selecting a company, this opens a second window with a list of names of people belonging to that company.

```
<idx:entry>
<idx:orth>John Martin</idx:orth>
Company : <idx:key name="company">Amazon</idx:key>
City : <idx:key name="city">Seattle</idx:key>
Phone number : 01010101
</idx:entry>
```

`<idx:key key="xxx"> :`

Use the key attribute to include text for the alternative key that you do not want to display in the OEB flow.

`<idx:gramgrp infl="xxx"> :`
used in dictionaries to indicate the list of inflections attached to a grammatical group

Inflections for dictionaries

When building the dictionaries, there might be multiple inflected forms a simgle root word for which we would want the same entry to be looked up, but adding all the inflected forms as the orth of the same entry will lead to a large index table to be generated hence affecting the performance.(also would display multiple words which will point to the same menaing when displaying a list of keywords , which might not be a good user experience)

For handling the above scenario, kindle has a disinflection engine which could use a set of rules for disinflecting any given word to its head word and use the index that just has only the head words to look up.

For generating the set of disinflection rules into the dictionary , there are some information about the inflection that is to be provided in the input . There are two ways in which the information can be given. Following section explains both the ways

Simplified Inflection Syntax

This is a very simple way of giving the information about the inflections . Previous versions of the file format supported another way of specifying inflected forms. You could use the "infl" attribute in either the <idx:orth> or the <idx:gramgrp> tag and specify a comma-separated list of inflected forms. This syntax is now deprecated as this is not so accurate when disinflecting.

Advanced Inflection Syntax

Inflections are handled by the inflection index which is built into the dictionary by the Creator software based on the inflected forms which are tagged in the content using the <idx:infl> tag. Inflections are attached to the orthography of the entry. They must be psecified inside of an <idx:orth> tag. If an entry has multiple orthographies, each must have its own inflections.

Example:

```
<idx:orth>record
<idx:infl inflgrp="noun">
<idx:iform name="plural" value="records" />
</idx:infl>
<idx:infl inflgrp="verb">
<idx:iform name="present participle" value="recording" />
<idx:iform name="past participle" value="recorded" />
<idx:iform name="present 3ps" value="records" />
</idx:infl>
</idx:orth>
```

The "inflgrp" and "name" attributes are optional. "idx:infl", "idx:iform" and the "value" attribute are manfdatory.

Custom OPF metadata for dictionaries

You also need to set source language and target language for dictionaries. If a dictionary has multiple indexes, you also have to specify the name of the primary lookup index .

```
<x-metadata>
<DictionaryInLanguage>en-us</DictionaryInLanguage>
<DictionaryOutLanguage>en-us</DictionaryOutLanguage>
<DefaultLookupIndex>Index Name goes here</DefaultLookupIndex>
...
</x-metadata>
```

How to load metadata and files

If you are using KTM

KTM allows you to upload content files and metadata. Just click the "Upload File" button on the left side of your screen and follow the guidelines for each type of file.

If you are using eBookBase

eBookBase offers two interfaces for submitting your Kindle books. The standard eBookBase interface (www.ebookbase.com) gives you access to your whole catalog and allows you to upload additional title one at a time. You can also edit the metadata of any book already in the catalog.

The eBookBase Import interface, available upon request (ebook-operations@amazon.com), is a bulk upload interface. It allows you to submit large collections of Kindle books and metadata. You can also use it to upload metadata updates for your existing titles.

eBookBase and eBookBase Import both accept books in the Kindle format. eBookBase Import however, also allows you to upload EPUB files. The compilation to the Kindle format then happens on our servers. Please be aware that any errors or warnings reported during the compilation will stop ingestion.

Using eBookBase

Requirements

- .jpg file (cover art)
- .prc file (actual content) located within the file (note – the standard eBookBase interface does not presently support EPUB files)
- Metadata (details about the book including ISBN, digital price, subject, title, author, description, etc)

Process

1. Open your account in eBookBase
2. Click on "Add an ebook" on the main page and on the following page. Follow the directions by navigating to the location of the .prc file. Upload that and continue.
3. On the next page, you will enter the Metadata. Please fill all the mandatory spaces and as many as possible. You will be required to upload the marketing cover from the metadata page, which is found in the middle of metadata and is listed as "Cover Image".
4. The range of subject codes is not as complete as on Amazon. You will have to choose the best match for your title. You can update this data later if you discover some part of it is in error.
5. If you don't have a related print ISBN, you need to uncheck the radio box titled "Print Book available". Don't enter a false ISBN here because

Amazon.com will not ingest an erroneous print ISBN reference. Both content and metadata will be rejected.

6. Hit "Submit" and the Metadata will be uploaded.

Using the eBookBase Import bulk upload interface (available upon request)

Requirements

- jpg file (cover art also known as "marketing cover")
- Mobi/prc file (actual content) or epub file
- Metadata (details about the book including ISBN, subject, title, author, description, etc) in Onix or Excel format.
- Login name and password for the ftp and Import Cabinet for each publisher.

Covers, books and metadata can be packages in different ways. A precise description of the three supported package kinds is available here, along with examples:
https://www.ebookbase.com/mobiimport/ (click on "show help")

Process

1. Make sure your covers, Kindle books and metadata are packaged as described in the documentation above.
2. Place the prc files (or epub files), cover files and your metadata on the Mobipocket FTP. (ftp://ftp.mobipocket.com/) Do not put these files in a subfolder. Respect the package rules.
3. Log in to your eBookBase Import account at: https://www.ebookbase.com/mobiimport using the import name and password provided to you.
4. Go to the 'FTP Upload Folder' link to access the list of files you just placed into the publisher's Mobipocket FTP folder.
5. Click the 'Check Files' button.
6. Once the files have been checked, look to see if the files are 'Ready' to import (under 'Ready?' column – complete with green circles if they are good to go)
7. If the files are ready, click the button and send them to the Import Cabinet for metadata validation. If any file has failed the ingestion process, click on the red text to discover why it failed. You will be automatically driven to the Import Cabinet once this step has been completed.
8. Once in the Import Cabinet, the metadata are displayed and validated. Verify the files are completely ready for ingestion to ebookbase. If they are 'Ready' a green circle will be displayed to the left of each file under the 'Importable?' column.
9. If you have any files that are importable, click 'IMPORT to eBookBase' and they will be uploaded into Mobipocket. It is okay if not all of the files in your list are Importable. The tool will upload the importable books and leave the rest in the Import Cabinet. You can edit the metadata or missing elements there in the Import Cabinet. If you are lacking cover images, these should be uploaded into the FTP (see step 4) and then proceed from there forward.
10. Any files that are not importable or have missing elements will have yellow or red circles on the beginning of their row. Either the metadata or cover is wrong or missing. Fix the elements identified by the tools by clicking on the "edit" option at the beginning of the row, correct the metadata and click on the "edit" tool again. Once the circle turns green, the files can be moved to the ebookbase account by using step 11.

11. Problems with subject codes and imprints can also be fixed in bulk for all titles in the import Cabinet, by using the two edit boxes at the top of the page.

If you are using DTP (http://dtp.amazon.com)

For DTP users please use the following links for guidance:

To upload metadata:
http://forums.digitaltextplatform.com/dtpforums/entry.jspa?externalID=20&categoryID=7

To upload files:
http://forums.digitaltextplatform.com/dtpforums/entry.jspa?externalID=19&categoryID=7

Kindle Best Practices

Testing Kindle Books

There are two ways to test your Kindle book prior to adding it to the Kindle store:

1. Using the KindleGen tools and the Kindle Previewer
   The KindleGen tools convert your book to the Kindle format. You can then test the Kindle file using the Kindle Previewer software available for both Windows and Mac OS X.

2. Using DTP
   The Digital Text Platform accepts a variety of book formats and provides preview capability right on the website.

The Kindle Previewer application can be used to preview Kindle books during their development. The final validation must also be made on a Kindle device.

Once you can read your book, use this checklist to confirm your Kindle book does not contain blatant errors. For a finer quality assurance, check against the complete formatting guidelines:

1. Open the book for the first time or go to the cover page
   - **Cover:** the Kindle book should have a cover
   - **Single Cover:** flip to next page from the cover, there should not be another image of the cover page
2. Table of Contents
   - If there is a table of contents, items in it should be clickable and jump to the correct location in the book. There should be no page numbers in the TOC
3. Go to any location in the book
   - **Font size:** change the font size in the Kindle menu - the book font should change accordingly. Regular text should not be bold or italicized and its alignment should not be forced.
4. Go back to the first page, then flip through every single page of the book

- **Images:** they should not be too small. Make sure that all the text that appears in images and tables is legible. Large pictures are scaled to fit the page.
- **Tables:** tables should appear correctly.
- **Page numbers:** there should not be any reference to page numbers in the book. The cross references should not have page numbers, nor should these be any plain text index with page numbers.

Common reasons files are rejected in eBookBase Import

When importing EPUB files, if KindleGen terminates with the message "`Info(prcgen): MOBI File generated with WARNINGS!`" your book cannot be sold by Amazon.com. The problems with the EPUB must be addressed before it is tested on Kindle. Addressing these problems will result in a better reading experience.

Missing Cover Image
All Kindle books must have a cover image. This message indicates the EPUB does not correctly specify a cover image.

```
Warning(prcgen): Cover not specified
```

Cover Image Too Small
This error message will show if the provided cover image is too small to be displayed on Kindle.

```
Warning(prcgen): Cover is too small
```

OPF Manifest Issues
The Kindle book compilation will stop with the following error message if a text content file referenced in the manifest is missing or cannot be found. Files are processed in the order they appear in the manifest. To find out which file is missing, look in the manifest for the list of files.

```
Error(core): Could not access file.
```

Missing images will generate the following warning message:

```
Warning(prcgen): media file not found <file name>
```

The table of contents could not be built
If a logical TOC is defined in the OPF but cannot be built because it contains broken links, you will see this message. Previous messages should help you identify the broken links and fix them.

Hyperlink not resolved
If your content has broken links, you will see the following warnings:

```
Warning(prcgen): Hyperlink not resolved: …
Warning(prcgen): Some hyperlinks could not be resolved.
Find the broken links and fix them.
```

Common Kindle quality errors to avoid

Once again we strongly recommend you verify your exported content before converting it in to a Kindle book because some content creation tools format content differently when exported to HTML.

In addition we encourage you to review the book to make sure there is no missing or wrong content and that there are no typos. Also, check for alignment and/or font face forced in the entire book. Every now and then the Amazon team finds these errors and needs to suppress the title to protect the reader's experience.

Appendix

Supported HTML tags

		Attributes	
HTML Tag	**Description**	**Supported**	**Not**
<?xml?>	This tag identifies a document as an XML document		
<!-- -->	Comment		
<a>	Creates an anchor point or target point for hyperlinking	href, id, name	, rel, rev, , title
<b>	Makes the enclosed text bold	Id	, , title
<big>	Makes the enclosed text one font size larger than the current or default font size		
<blockquote>	Generates a 1-em margin above the text it encloses	Id	cite, , , title
<body>	Encloses the body text of a source file		bgcolor, , id, , text, title
 	Generates a line break of a size equal to the current line-height	Id	, clear,
	Centers text horizontally		
<cite>	Indicates that a section of text is quoted from another source		
<dd>	Used within a <dl> or definition list block, this tag encloses the definition of a term that makes up part of a definition list	Id, title	,
<del>	Deleted text. Rendered with a line through the enclosed text		
<dfn>	Used at first mention when a term is defined, and renders enclosed text as italics		
	Defines a "block"	align, id,	, , title, bgcolor
<dl>	Creates a glossary-style list containing <dt> and <dd> tags.	id, title	,
<dt>	Encloses a term to be defined in a definition list.	id, title	,
	Emphasizes a text element	id, title	,
<head>	Typically encloses the <title>, <base>, <style>, and <link> tags of HTML document source		
<h1 to h6>	Defines heading styles of varying sizes, with <h1> being the largest and <h6> being the smallest		
<hr />	create an horizontal rules	color, id, width	align, , noshade, size, , title
<html>	Indicates the start and end of an HTML document		
<i>	italic	class, id	style, title
<img />	defines an inline image within the text	align, border, height, id, src, width	alt, , hspace, longdesc, lowsrc, ,

		Attributes	
HTML Tag	**Description**	**Supported**	**Not**
			title, usemap, vspace
	Used to indicate an item in an list	class, id	, type, title
	Creates a numbered list from the list items it contains, each of which has to have a tag	Id	, start, , type
<p>	Defines a paragraph of text, indents the first line of the paragraph, and creates a line break at the end of the enclosed text	align, id	, , title
<s>	Identical to <strike>	id, style, title	
<small>	Reduces the current font by one	Id	, , title
	A container for in-line text.	Bgcolor	title
<strike>	create a strikethrough text	class, id	, title
	Contains text rendered with bold. Same as <b>	class, id	, title
<sub>	Reduces the font size of the enclosed text and floats it below the baseline as subscripted text	Id	, , title
<sup>	Reduces the font size of the enclosed text and floats it below the baseline as subscripted text	class, id	, title
<title>	Encloses the title of a document		
<u>	This tag underlines any text it encloses	Id	, , title
	Generates a bulleted list from the list items it contains.	class, id	, title
<var>	Indicates a variable name or program argument		

Supported Characters

Kindle Charset Support

s/w release 1.2 (KU2)

Basic Latin (U+0020-U+007F)
Latin-1 Supplement (U+00A0-U+00FF)
Latin Extended-A (U+0100-U+017F)
Latin Extended-B (first half, U+0180 - U+01FF)
Latin Extended-B (second half U+0200 - U+024F)
IPA Extensions (U+2050 - U+20AF)
Spacing Modifier Letters (U+02B0 - U+02FF)
Greek and Coptic (U+0370 - U+03FF)
Latin Extended-Additional (U+1E00 - U+1EFF)
Greek Extended (U+1F00 - U+1FFF)
General Punctuation (U+2000 - U+206F)
Superscripts and Subscripts (U+2070 - U+209F)
Curreny Symbols (U+20A0 - U+20CF)
Letterlike Symbols (U+2100 - U+214F)
Number Forms (U+2150 - U+218F)
Arrows (U+2190 - U+21FF)
Mathematical Operators (U+2200 - U+22FF)
Miscellaneous Technical (U+2300 - U+23FF)
Enclosed Alphanumerics (U+2460 - U+24FF)
Geometric Shapes (U+25A0 - U+25FF)
Miscellaneous Symbols (U+2600 - U+26FF)
Dingbats (U+2700 - U+27BF)
Private Use (U+E000 - U+F8FF)
Alphabetic Presentation Forms (U+FB00 - U+FB4F)

Notes:

Chars marked "substitute base char" have the base Latin char substituted.
Chars marked "substitute compatible string" have a compatible string of chars substituted.
Chars are displayed in all 4 font faces (plain, bold, italic, bold-italic) in both mono-spaced and proportional spaced.

Basic Latin (U+0020-U+007F)

ASCII punctuation and symbols

	-- U+0020 Space
! ! *!* *!*	! ! ! ! -- U+0021 Exclamation Mark
" " " "	" " " " -- U+0022 Quote
# # # #	# # # # -- U+0023 Number Sign
$ $ *$* *$*	$ $ $ $ -- U+0024 Dollar Sign
% % % %	% % % % -- U+0025 Percent Sign
& & & &	& & & & -- U+0026 Ampersand
' ' ' '	' ' ' ' -- U+0027 Apostrophe
((((	((((-- U+0028 Left Parenthesis
))))	)))) -- U+0029 Right Parenthesis
* * * *	* * * * -- U+002A Asterisk
+ + + +	+ + + + -- U+002B Plus Sign
, , , ,	, , , , -- U+002C Comma
- - - -	- - - - -- U+002D Hyphen-Minus
. . . .	. . . . -- U+002E Full Stop
/ / / /	/ / / / -- U+002F Solidus

ASCII digits

0 0 *0* *0*	0 0 0 0 -- U+0030 Digit Zero
1 1 *1* *1*	1 1 1 1 -- U+0031 Digit One
2 2 *2* *2*	2 2 2 2 -- U+0032 Digit Two
3 3 *3* *3*	3 3 3 3 -- U+0033 Digit Three
4 4 4 4	4 4 4 4 -- U+0034 Digit Four
5 5 *5* *5*	5 5 5 5 -- U+0035 Digit Five
6 6 *6* *6*	6 6 6 6 -- U+0036 Digit Six
7 7 *7* *7*	7 7 7 7 -- U+0037 Digit Seven
8 8 *8* *8*	8 8 8 8 -- U+0038 Digit Eight
9 9 *9* *9*	9 9 9 9 -- U+0039 Digit Nine

ASCII punctuation and symbols

: : : :	: : : : -- U+003A Colon
; ; ; ;	; ; ; ; -- U+003B Semicolon
< < < <	< < < < -- U+003C Less-Than Sign
= = = =	= = = = -- U+003D Equals Sign
> > > >	> > > > -- U+003E Greater-Than Sign
? ? *?* *?*	? ? ? ? -- U+003F Question Mark
@ @ *@* *@*	@ @ @ @ -- U+0040 Commercial At

Uppercase Latin alphabet

A **A** *A* *A*	A A A A -- U+0041 A
B **B** *B* *B*	B B B B -- U+0042 B
C **C** *C* *C*	C C C C -- U+0043 C
D **D** *D* *D*	D D D D -- U+0044 D

E E *E* ***E*** | E E E E -- U+0045 E
F F *F* ***F*** | F F F F -- U+0046 F
G G *G* ***G*** | G G G G -- U+0047 G
H H *H* ***H*** | H H H H -- U+0048 H
I I *I* ***I*** | I I I I -- U+0049 I
J J *J* ***J*** | J J J J -- U+004A J
K K *K* ***K*** | K K K K -- U+004B K
L L *L* ***L*** | L L L L -- U+004C L
M M *M* ***M*** | M M M M -- U+004D M
N N *N* ***N*** | N N N N -- U+004E N
O O *O* ***O*** | O O O O -- U+004F O
P P *P* ***P*** | P P P P -- U+0050 P
Q Q *Q* ***Q*** | Q Q Q Q -- U+0051 Q
R R *R* ***R*** | R R R R -- U+0052 R
S S *S* ***S*** | S S S S -- U+0053 S
T T *T* ***T*** | T T T T -- U+0054 T
U U *U* ***U*** | U U U U -- U+0055 U
V V *V* ***V*** | V V V V -- U+0056 V
W W *W* ***W*** | W W W W -- U+0057 W
X X *X* ***X*** | X X X X -- U+0058 X
Y Y *Y* ***Y*** | Y Y Y Y -- U+0059 Y
Z Z *Z* ***Z*** | Z Z Z Z -- U+005A Z

ASCII punctuation and symbols

[[*[* ***[*** | [[[[-- U+005B Left Square Bracket
\ \ \ \ | \ \ \ \ -- U+005C Reverse Solidus
]] *]* ***]*** |]]]] -- U+005D Right Square Bracket
^ ^ ^ ^ | ^ ^ ^ ^ -- U+005E Circumflex Accent
_ _ _ _ | _ _ _ _ -- U+005F Low Line
` ` ` ` | ` ` ` ` -- U+0060 Grave Accent

Lowercase Latin alphabet

a a *a* ***a*** | a a a a -- U+0061 a
b b *b* ***b*** | b b b b -- U+0062 b
c c *c* ***c*** | c c c c -- U+0063 c
d d *d* ***d*** | d d d d -- U+0064 d
e e *e* ***e*** | e e e e -- U+0065 e
f f *f* ***f*** | f f f f -- U+0066 f
g g *g* ***g*** | g g g g -- U+0067 g
h h *h* ***h*** | h h h h -- U+0068 h
i i *i* ***i*** | i i i i -- U+0069 i
j j *j* ***j*** | j j j j -- U+006A j
k k *k* ***k*** | k k k k -- U+006B k
l l *l* ***l*** | l l l l -- U+006C l

m m *m* ***m*** | m m *m* ***m*** -- U+006D m
n n *n* ***n*** | n n *n* ***n*** -- U+006E n
o o *o* ***o*** | o o *o* ***o*** -- U+006F o
p p *p* ***p*** | p p *p* ***p*** -- U+0070 p
q q *q* ***q*** | q q *q* ***q*** -- U+0071 q
r r *r* ***r*** | r r *r* ***r*** -- U+0072 r
s s *s* ***s*** | s s s s -- U+0073 s
t t t t | t t t t -- U+0074 t
u u *u* ***u*** | u u *u* ***u*** -- U+0075 u
v v *v* ***v*** | v v *v* ***v*** -- U+0076 v
w w *w* ***w*** | w w *w* ***w*** -- U+0077 w
x x *x* ***x*** | x x *x* ***x*** -- U+0078 x
y y *y* ***y*** | y y y y -- U+0079 y
z z *z* ***z*** | z z z z -- U+007A a

ASCII punctuation and symbols

{ { *{* ***{*** | {{{{ -- U+007B Left Curly Bracket
| | | | | |||| -- U+007C Vertical Line
} } *}* ***}*** | }}}} -- U+007D Right Curly Bracket
~ ~ ~ ~ | ~ ~ ~ ~ -- U+007E Tilde

Latin-1 Supplement (U+00A0-U+00FF)

Latin-1 punctuation and symbols

	-- U+00A0 No-Break Space
¡ ¡ ¡ ¡	¡ ¡ ¡ ¡ -- U+00A1 Inverted Exclamation Mark
¢ ¢ ¢ ¢	¢ ¢ ¢ ¢ -- U+00A2 Cent Sign
£ £ £ £	£ £ £ £ -- U+00A3 Pound Sign
¤ ¤ ¤ ¤	¤ ¤ ¤ ¤ -- U+00A4 Currency Sign
¥ ¥ ¥ ¥	¥ ¥ ¥ ¥ -- U+00A5 Yen Sign
¦ ¦ ¦ ¦	¦ ¦ ¦ ¦ -- U+00A6 Broken Bar
§ § § §	§ § § § -- U+00A7 Section Sign
¨ ¨ ¨ ¨	¨ ¨ ¨ ¨ -- U+00A8 Diaeresis
© © © ©	© © © © -- U+00A9 Copyright Sign
ª ª ª ª	ª ª ª ª -- U+00AA Feminine Ordinal Indicator
« « « «	« « « « -- U+00AB Left-Pointing Double Angle Quote
¬ ¬ ¬ ¬	¬ ¬ ¬ ¬ -- U+00AC Not Sign
	-- U+00AD Soft Hyphen
® ® ® ®	® ® ® ® -- U+00AE Registered Sign
¯ ¯ ¯ ¯	¯ ¯ ¯ ¯ -- U+00AF Macron
° ° ° °	° ° ° ° -- U+00B0 Degree Sign
± ± ± ±	± ± ± ± -- U+00B1 Plus-Minus Sign
² ² ² ²	² ² ² ² -- U+00B2 Superscript Two
³ ³ ³ ³	³ ³ ³ ³ -- U+00B3 Superscript Three
´ ´ ´ ´	´ ´ ´ ´ -- U+00B4 Acute Accent
µ µ µ µ	µ µ µ µ -- U+00B5 Micro Sign
¶ ¶ ¶ ¶	¶ ¶ ¶ ¶ -- U+00B6 Pilcrow Sign
· · · ·	· · · · -- U+00B7 Middle Dot
¸ ¸ ¸ ¸	¸ ¸ ¸ ¸ -- U+00B8 Cedilla
¹ ¹ ¹ ¹	¹ ¹ ¹ ¹ -- U+00B9 Superscript One
º º º º	º º º º -- U+00BA Masculine Ordinal Indicator
» » » »	» » » » -- U+00BB Right-Pointing Double Angle Quote
¼ ¼ ¼ ¼	¼ ¼ ¼ ¼ -- U+00BC Vulgar Fraction One Quarter
½ ½ ½ ½	½ ½ ½ ½ -- U+00BD Vulgar Fraction One Half
¾ ¾ ¾ ¾	¾ ¾ ¾ ¾ -- U+00BE Vulgar Fraction Three Quarters
¿ ¿ ¿ ¿	¿ ¿ ¿ ¿ -- U+00BF Inverted Question Mark

Letters

À À À À	À À À À -- U+00C0 A w/ Grave
Á Á Á Á	Á Á Á Á -- U+00C1 A w/ Acute
Â Â Â Â	Â Â Â Â -- U+00C2 A w/ Circumflex
Ã Ã Ã Ã	Ã Ã Ã Ã -- U+00C3 A w/ Tilde
Ä Ä Ä Ä	Ä Ä Ä Ä -- U+00C4 A w/ Diaeresis
Å Å Å Å	Å Å Å Å -- U+00C5 A w/ Ring Above
Æ Æ Æ Æ	Æ Æ Æ Æ -- U+00C6 AE ligature

Ç Ç Ç Ç | Ç Ç Ç Ç -- U+00C7 C w/ Cedilla
È È È È | È È È È -- U+00C8 E w/ Grave
É É É É | É É É É -- U+00C9 E w/ Acute
Ê Ê Ê Ê | Ê Ê Ê Ê -- U+00CA E w/ Circumflex
Ë Ë Ë Ë | Ë Ë Ë Ë -- U+00CB E w/ Diaeresis
Ì Ì Ì Ì | Ì Ì Ì Ì -- U+00CC I w/ Grave
Í Í Í Í | Í Í Í Í -- U+00CD I w/ Acute
Î Î Î Î | Î Î Î Î -- U+00CE I w/ Circumflex
Ï Ï Ï Ï | Ï Ï Ï Ï -- U+00CF I w/ Diaeresis
Ð Ð Ð Ð | Ð Ð Ð Ð -- U+00D0 Eth
Ñ Ñ Ñ Ñ | Ñ Ñ Ñ Ñ -- U+00D1 N w/ Tilde
Ò Ò Ò Ò | Ò Ò Ò Ò -- U+00D2 O w/ Grave
Ó Ó Ó Ó | Ó Ó Ó Ó -- U+00D3 O w/ Acute
Ô Ô Ô Ô | Ô Ô Ô Ô -- U+00D4 O w/ Circumflex
Õ Õ Õ Õ | Õ Õ Õ Õ -- U+00D5 O w/ Tilde
Ö Ö Ö Ö | Ö Ö Ö Ö -- U+00D6 O w/ Diaeresis

Math operator

× × × × | × × × × -- U+00D7 Multiplication Sign

Letters

Ø Ø Ø Ø | Ø Ø Ø Ø -- U+00D8 O w/ Stroke
Ù Ù Ù Ù | Ù Ù Ù Ù -- U+00D9 U w/ Grave
Ú Ú Ú Ú | Ú Ú Ú Ú -- U+00DA U w/ Acute
Û Û Û Û | Û Û Û Û -- U+00DB U w/ Circumflex
Ü Ü Ü Ü | Ü Ü Ü Ü -- U+00DC U w/ Diaeresis
Ý Ý Ý Ý | Ý Ý Ý Ý -- U+00DD Y w/ Acute
Þ Þ Þ Þ | Þ Þ Þ Þ -- U+00DE Thorn
ß ß ß ß | ß ß ß ß -- U+00DF Sharp s
à à à à | à à à à -- U+00E0 a w/ Grave
á á á á | á á á á -- U+00E1 a w/ Acute
â â â â | â â â â -- U+00E2 a w/ Circumflex
ã ã ã ã | ã ã ã ã -- U+00E3 a w/ Tilde
ä ä ä ä | ä ä ä ä -- U+00E4 a w/ Diaeresis
å å å å | å å å å -- U+00E5 a w/ Ring Above
æ æ æ æ | æ æ æ æ -- U+00E6 ae ligature
ç ç ç ç | ç ç ç ç -- U+00E7 c w/ Cedilla
è è è è | è è è è -- U+00E8 e w/ Grave
é é é é | é é é é -- U+00E9 e w/ Acute
ê ê ê ê | ê ê ê ê -- U+00EA e w/ Circumflex
ë ë ë ë | ë ë ë ë -- U+00EB e w/ Diaeresis
ì ì ì ì | ì ì ì ì -- U+00EC i w/ Grave
í í í í | í í í í -- U+00ED i w/ Acute
î î î î | î î î î -- U+00EE i w/ Circumflex

Circumflex

ï ï ï ï	ï ï ï ï -- U+00EF i w/ Diaeresis
ð ð ð ð	ð ð ð ð -- U+00F0 eth
ñ ñ ñ ñ	ñ ñ ñ ñ -- U+00F1 n w/ Tilde
ò ò ò ò	ò ò ò ò -- U+00F2 o w/ Grave
ó ó ó ó	ó ó ó ó -- U+00F3 o w/ Acute
ô ô ô ô	ô ô ô ô -- U+00F4 o w/ Circumflex
õ õ õ õ	õ õ ö õ -- U+00F5 o w/ Tilde
ö ö ö ö	ö ö ö ö -- U+00F6 o w/ Diaeresis

Math operator

÷ ÷ ÷ ÷	÷ ÷ ÷ ÷ -- U+00F7 Division Sign

Letters

ø ø ø ø	ø ø ø ø -- U+00F8 o w/ Stroke
ù ù ù ù	ù ù ù ù -- U+00F9 u w/ Grave
ú ú ú ú	ú ú ú ú -- U+00FA u w/ Acute
û û û û	û û û û -- U+00FB u w/ Circumflex
ü ü ü ü	ü ü ü ü -- U+00FC u w/ Diaeresis
ý ý ý ý	ý ý ý ý -- U+00FD y w/ Acute
þ þ þ þ	þ þ þ þ -- U+00FE thorn
ÿ ÿ ÿ ÿ	ÿ ÿ ÿ ÿ -- U+00FF y w/ Diaeresis

Latin Extended-A (U+0100-U+017F)

European Latin

Ā Ā Ā Ā | Ā Ā Ā Ā -- U+0100 A w/ Macron
ā ā ā ā | ā ā ā ā -- U+0101 a w/ Macron
Ă Ă Ă Ă | Ă Ă Ă Ă -- U+0102 A w/ Breve
ă ă ă ă | ă ă ă ă -- U+0103 a w/ Breve
Ą Ą Ą Ą | Ą Ą Ą Ą -- U+0104 A w/ Ogonek
ą ą ą ą | ą ą ą ą -- U+0105 a w/ Ogonek
Ć Ć Ć Ć | Ć Ć Ć Ć -- U+0106 C w/ Acute
ć ć ć ć | ć ć ć ć -- U+0107 c w/ Acute
Ĉ Ĉ Ĉ Ĉ | Ĉ Ĉ Ĉ Ĉ -- U+0108 C w/ Circumflex
ĉ ĉ ĉ ĉ | ĉ ĉ ĉ ĉ -- U+0109 c w/ Circumflex
Ċ Ċ Ċ Ċ | Ċ Ċ Ċ Ċ -- U+010A C w/ Dot Above
ċ ċ ċ ċ | ċ ċ ċ ċ -- U+010B c w/ Dot Above
Č Č Č Č | Č Č Č Č -- U+010C C w/ Caron
č č č č | č č č č -- U+010D c w/ Caron
Ď Ď Ď Ď | Ď Ď Ď Ď -- U+010E D w/ Caron
ď ď ď ď | ď ď ď ď -- U+010F d w/ Caron
Đ Đ Đ Đ | Đ Đ Đ Đ -- U+0110 D w/ Stroke -- updated font
đ đ đ đ | đ đ đ đ -- U+0111 d w/ Stroke -- updated font
Ē Ē Ē Ē | Ē Ē Ē Ē -- U+0112 E w/ Macron
ē ē ē ē | ē ē ē ē -- U+0113 e w/ Macron
Ĕ Ĕ Ĕ Ĕ | Ĕ Ĕ Ĕ Ĕ -- U+0114 E w/ Breve
ĕ ĕ ĕ ĕ | ĕ ĕ ĕ ĕ -- U+0115 e w/ Breve
Ė Ė Ė Ė | Ė Ė Ė Ė -- U+0116 E w/ Dot Above
ė ė ė ė | ė ė ė ė -- U+0117 e w/ Dot Above
Ę Ę Ę Ę | Ę Ę Ę Ę -- U+0118 E w/ Ogonek
ę ę ę ę | ę ę ę ę -- U+0119 e w/ Ogonek
Ě Ě Ě Ě | Ě Ě Ě Ě -- U+011A E w/ Caron
ě ě ě ě | ě ě ě ě -- U+011B e w/ Caron
Ĝ Ĝ Ĝ Ĝ | Ĝ Ĝ Ĝ Ĝ -- U+011C G w/ Circumflex
ĝ ĝ ĝ ĝ | ĝ ĝ ĝ ĝ -- U+011D g w/ Circumflex
Ğ Ğ Ğ Ğ | Ğ Ğ Ğ Ğ -- U+011E G w/ Breve
ğ ğ ğ ğ | ğ ğ ğ ğ -- U+011F g w/ Breve
Ġ Ġ Ġ Ġ | Ġ Ġ Ġ Ġ -- U+0120 G w/ Dot Above
ġ ġ ġ ġ | ġ ġ ġ ġ -- U+0121 g w/ Dot Above
Ģ Ģ Ģ Ģ | Ģ Ģ Ģ Ģ -- U+0122 G w/ Cedilla
ģ ģ ģ ģ | ģ ģ ģ ģ -- U+0123 g w/ Cedilla
Ĥ Ĥ Ĥ Ĥ | Ĥ Ĥ Ĥ Ĥ -- U+0124 H w/ Circumflex
ĥ ĥ ĥ ĥ | ĥ ĥ ĥ ĥ -- U+0125 h w/ Circumflex
Ħ Ħ Ħ Ħ | Ħ Ħ Ħ Ħ -- U+0126 H w/ Stroke -- updated font
ħ ħ ħ ħ | ħ ħ ħ ħ -- U+0127 h w/ Stroke -- updated font

Ĩ Ĩ Ĩ Ĩ | Ĩ Ĩ Ĩ Ĩ -- U+0128 I w/ Tilde
ĩ ĩ ĩ ĩ | ĩ ĩ ĩ ĩ -- U+0129 i w/ Tilde
Ī Ī Ī Ī | Ī Ī Ī Ī -- U+012A I w/ Macron
ī ī ī ī | ī ī ī ī -- U+012B i w/ Macron
Ĭ Ĭ Ĭ Ĭ | Ĭ Ĭ Ĭ Ĭ -- U+012C I w/ Breve
ĭ ĭ ĭ ĭ | ĭ ĭ ĭ ĭ -- U+012D i w/ Breve
Į Į Į Į | Į Į Į Į -- U+012E I w/ Ogonek
į į į į | į į į į -- U+012F i w/ Ogonek
İ İ İ İ | İ İ İ İ -- U+0130 I w/ Dot Above
ı ı ı ı | ı ı ı ı -- U+0131 dotless I
IJ IJ IJ IJ | IJ IJ IJ IJ -- U+0132 IJ Ligature -- substitute compatible string
ij ij ij ij | ij ij ij ij -- U+0133 ij Ligature -- substitute compatible string
Ĵ Ĵ Ĵ Ĵ | Ĵ Ĵ Ĵ Ĵ -- U+0134 J w/ Circumflex
ĵ ĵ ĵ ĵ | ĵ ĵ ĵ ĵ -- U+0135 j w/ Circumflex
Ķ Ķ Ķ Ķ | Ķ Ķ Ķ Ķ -- U+0136 K w/ Cedilla
ķ ķ ķ ķ | ķ ķ ķ ķ -- U+0137 k w/ Cedilla
ĸ ĸ ĸ ĸ | ĸ ĸ ĸ ĸ -- U+0138 kra -- updated font
Ĺ Ĺ Ĺ Ĺ | Ĺ Ĺ Ĺ Ĺ -- U+0139 L w/ Acute
ĺ ĺ ĺ ĺ | ĺ ĺ ĺ ĺ -- U+013A l w/ Acute
Ļ Ļ Ļ Ļ | Ļ Ļ Ļ Ļ -- U+013B L w/ Cedilla
ļ ļ ļ ļ | ļ ļ ļ ļ -- U+013C l w/ Cedilla
Ľ Ľ Ľ Ľ | Ľ Ľ Ľ Ľ -- U+013D L w/ Caron
ľ ľ ľ ľ | ľ ľ ľ ľ -- U+013E l w/ Caron
L· L· L· L· | L· L· L· L· -- U+013F L w/ Middle Dot -- substitute compatible string
l· l· l· l· | l· l· l· l· -- U+0140 l w/ Middle Dot -- substitute compatible string
Ł Ł Ł Ł | Ł Ł Ł Ł -- U+0141 L w/ Stroke
ł ł ł ł | ł ł ł ł -- U+0142 l w/ Stroke
Ń Ń Ń Ń | Ń Ń Ń Ń -- U+0143 N w/ Acute
ń ń ń ń | ń ń ń ń -- U+0144 n w/ Acute
Ņ Ņ Ņ Ņ | Ņ Ņ Ņ Ņ -- U+0145 N w/ Cedilla
ņ ņ ņ ņ | ņ ņ ņ ņ -- U+0146 n w/ Cedilla
Ň Ň Ň Ň | Ň Ň Ň Ň -- U+0147 N w/ Caron
ň ň ň ň | ň ň ň ň -- U+0148 n w/ Caron
ʼn ʼn ʼn ʼn | ʼn ʼn ʼn ʼn -- U+0149 n Preceded By Apostrophe -- updated font
Ŋ Ŋ Ŋ Ŋ | Ŋ Ŋ Ŋ Ŋ -- U+014A Eng -- updated font
ŋ ŋ ŋ ŋ | ŋ ŋ ŋ ŋ -- U+014B eng -- updated font
Ō Ō Ō Ō | Ō Ō Ō Ō -- U+014C O w/ Macron
ō ō ō ō | ō ō ō ō -- U+014D o w/ Macron
Ŏ Ŏ Ŏ Ŏ | Ŏ Ŏ Ŏ Ŏ -- U+014E O w/ Breve
ŏ ŏ ŏ ŏ | ŏ ŏ ŏ ŏ -- U+014F o w/ Breve
Ő Ő Ő Ő | Ő Ő Ő Ő -- U+0150 O w/ Double Acute
ő ő ő ő | ő ő ő ő -- U+0151 o w/ Double Acute

Œ Œ Œ Œ | Œ Œ Œ Œ -- U+0152 OE Ligature
œ œ œ œ | œ œ œ œ -- U+0153 oe Ligature
Ŕ Ŕ Ŕ Ŕ | Ŕ Ŕ Ŕ Ŕ -- U+0154 R w/ Acute
ŕ ŕ ŕ ŕ | ŕ ŕ ŕ ŕ -- U+0155 r w/ Acute
Ŗ Ŗ Ŗ Ŗ | Ŗ Ŗ Ŗ Ŗ -- U+0156 R w/ Cedilla
ŗ ŗ ŗ ŗ | ŗ ŗ ŗ ŗ -- U+0157 r w/ Cedilla
Ř Ř Ř Ř | Ř Ř Ř Ř -- U+0158 R w/ Caron
ř ř ř ř | ř ř ř ř -- U+0159 r w/ Caron
Ś Ś Ś Ś | Ś Ś Ś Ś -- U+015A S w/ Acute
ś ś ś ś | ś ś ś ś -- U+015B s w/ Acute
Ŝ Ŝ Ŝ Ŝ | Ŝ Ŝ Ŝ Ŝ -- U+015C S w/ Circumflex
ŝ ŝ ŝ ŝ | ŝ ŝ ŝ ŝ -- U+015D s w/ Circumflex
Ş Ş Ş Ş | Ş Ş Ş Ş -- U+015E S w/ Cedilla
ş ş ş ş | ş ş ş ş -- U+015F s w/ Cedilla
Š Š Š Š | Š Š Š Š -- U+0160 S w/ Caron
š š š š | š š š š -- U+0161 s w/ Caron
Ţ Ţ Ţ Ţ | Ţ Ţ Ţ Ţ -- U+0162 T w/ Cedilla
ţ ţ ţ ţ | ţ ţ ţ ţ -- U+0163 t w/ Cedilla
Ť Ť Ť Ť | Ť Ť Ť Ť -- U+0164 T w/ Caron
ť ť ť ť | ť ť ť ť -- U+0165 t w/ Caron
Ŧ Ŧ Ŧ Ŧ | Ŧ Ŧ Ŧ Ŧ -- U+0166 T w/ Stroke -- updated font
ŧ ŧ ŧ ŧ | ŧ ŧ ŧ ŧ -- U+0167 t w/ Stroke -- updated font
Ũ Ũ Ũ Ũ | Ũ Ũ Ũ Ũ -- U+0168 U w/ Tilde
ũ ũ ũ ũ | ũ ũ ũ ũ -- U+0169 u w/ Tilde
Ū Ū Ū Ū | Ū Ū Ū Ū -- U+016A U w/ Macron
ū ū ū ū | ū ū ū ū -- U+016B u w/ Macron
Ŭ Ŭ Ŭ Ŭ | Ŭ Ŭ Ŭ Ŭ -- U+016C U w/ Breve
ŭ ŭ ŭ ŭ | ŭ ŭ ŭ ŭ -- U+016D u w/ Breve
Ů Ů Ů Ů | Ů Ů Ů Ů -- U+016E U w/ Ring Above
ů ů ů ů | ů ů ů ů -- U+016F u w/ Ring Above
Ű Ű Ű Ű | Ű Ű Ű Ű -- U+0170 U w/ Double Acute
ű ű ű ű | ű ű ű ű -- U+0171 u w/ Double Acute
Ų Ų Ų Ų | Ų Ų Ų Ų -- U+0172 U w/ Ogonek
ų ų ų ų | ų ų ų ų -- U+0173 u w/ Ogonek
Ŵ Ŵ Ŵ Ŵ | Ŵ Ŵ Ŵ Ŵ -- U+0174 W w/ Circumflex
ŵ ŵ ŵ ŵ | ŵ ŵ ŵ ŵ -- U+0175 w w/ Circumflex
Ŷ Ŷ Ŷ Ŷ | Ŷ Ŷ Ŷ Ŷ -- U+0176 Y w/ Circumflex
ŷ ŷ ŷ ŷ | ŷ ŷ ŷ ŷ -- U+0177 y w/ Circumflex
Ÿ Ÿ Ÿ Ÿ | Ÿ Ÿ Ÿ Ÿ -- U+0178 Y w/ Diaeresis
Ź Ź Ź Ź | Ź Ź Ź Ź -- U+0179 Z w/ Acute
ź ź ź ź | ź ź ź ź -- U+017A z w/ Acute
Ż Ż Ż Ż | Ż Ż Ż Ż -- U+017B Z w/ Dot Above

ż ż ż ż | ż ż ż ż -- U+017C z w/ Dot Above
Ž Ž Ž Ž | Ž Ž Ž Ž -- U+017D Z w/ Caron
ž ž ž ž | ž ž ž ž -- U+017E z w/ Caron
ſ ſ ſ ſ | ſ ſ ſ ſ -- U+017F long-s -- updated font

Latin Extended-B (first half, U+0180 - U+01FF)

Non-European and historic Latin

ƀ **ƀ** *ƀ* ***ƀ*** | ƀ **ƀ** *ƀ* ***ƀ*** -- U+0180 b w/ Stroke -- substitute base char

Ɓ **Ɓ** *Ɓ* ***Ɓ*** | Ɓ **Ɓ** *Ɓ* ***Ɓ*** -- U+0181 B w/ Hook -- substitute base char

Ƈ **Ƈ** *Ƈ* ***Ƈ*** | Ƈ **Ƈ** *Ƈ* ***Ƈ*** -- U+0187 C w/ Hook -- substitute base char

ƈ **ƈ** *ƈ* ***ƈ*** | ƈ **ƈ** *ƈ* ***ƈ*** -- U+0188 c w/ Hook -- substitute base char

Đ **Đ** *Đ* ***Đ*** | Đ **Đ** *Đ* ***Đ*** -- U+0189 African D

Ɗ **Ɗ** *Ɗ* ***Ɗ*** | Ɗ **Ɗ** *Ɗ* ***Ɗ*** -- U+018A D w/ Hook -- substitute base char

ə **ə** *ə* ***ə*** | ə **ə** *ə* ***ə*** -- U+018F Schwa -- updated font

Ƒ **Ƒ** *Ƒ* ***Ƒ*** | Ƒ **Ƒ** *Ƒ* ***Ƒ*** -- U+0191 F w/ Hook -- substitute base char

ƒ **ƒ** *ƒ* ***ƒ*** | ƒ **ƒ** *ƒ* ***ƒ*** -- U+0192 f w/ Hook

Ɠ **Ɠ** *Ɠ* ***Ɠ*** | Ɠ **Ɠ** *Ɠ* ***Ɠ*** -- U+0193 G w/ Hook -- substitute base char

Ɨ **Ɨ** *Ɨ* ***Ɨ*** | Ɨ **Ɨ** *Ɨ* ***Ɨ*** -- U+0197 I w/ Stroke -- substitute base char

Ƙ **Ƙ** *Ƙ* ***Ƙ*** | Ƙ **Ƙ** *Ƙ* ***Ƙ*** -- U+0198 K w/ Hook -- substitute base char

ƙ **ƙ** *ƙ* ***ƙ*** | ƙ **ƙ** *ƙ* ***ƙ*** -- U+0199 k w/ Hook -- substitute base char

ƚ **ƚ** *ƚ* ***ƚ*** | ƚ **ƚ** *ƚ* ***ƚ*** -- U+019A l w/ Bar -- substitute base char

Ơ **Ơ** *Ơ* ***Ơ*** | Ơ **Ơ** *Ơ* ***Ơ*** -- U+01A0 O w/ Horn

ơ **ơ** *ơ* ***ơ*** | ơ **ơ** *ơ* ***ơ*** -- U+01A1 o w/ Horn

Ƥ **Ƥ** *Ƥ* ***Ƥ*** | Ƥ **Ƥ** *Ƥ* ***Ƥ*** -- U+01A4 P w/ Hook -- substitute base char

ƥ **ƥ** *ƥ* ***ƥ*** | ƥ **ƥ** *ƥ* ***ƥ*** -- U+01A5 p w/ Hook -- substitute base char

ƫ **ƫ** *ƫ* ***ƫ*** | ƫ **ƫ** *ƫ* ***ƫ*** -- U+01AB t w/ Palatal Hook -- substitute base char

Ƭ **Ƭ** *Ƭ* ***Ƭ*** | Ƭ **Ƭ** *Ƭ* ***Ƭ*** -- U+01AC T w/ Hook -- substitute base char

ƭ **ƭ** *ƭ* ***ƭ*** | ƭ **ƭ** *ƭ* ***ƭ*** -- U+01AD t w/ Hook -- substitute base char

Ʈ **Ʈ** *Ʈ* ***Ʈ*** | Ʈ **Ʈ** *Ʈ* ***Ʈ*** -- U+01AE T w/ Retroflex Hook -- substitute base char

Ư **Ư** *Ư* ***Ư*** | Ư **Ư** *Ư* ***Ư*** -- U+01AF U w/ Horn

ư **ư** *ư* ***ư*** | ư **ư** *ư* ***ư*** -- U+01B0 u w/ Horn

Ʋ **Ʋ** *Ʋ* ***Ʋ*** | Ʋ **Ʋ** *Ʋ* ***Ʋ*** -- U+01B2 V w/ Hook -- substitute base char

Ƴ **Ƴ** *Ƴ* ***Ƴ*** | Ƴ **Ƴ** *Ƴ* ***Ƴ*** -- U+01B3 Y w/ Hook -- substitute base char

ƴ **ƴ** *ƴ* ***ƴ*** | ƴ **ƴ** *ƴ* ***ƴ*** -- U+01B4 y w/ Hook -- substitute base char

Ƶ **Ƶ** *Ƶ* ***Ƶ*** | Ƶ **Ƶ** *Ƶ* ***Ƶ*** -- U+01B5 Z w/ Stroke -- substitute base char

ƶ **ƶ** *ƶ* ***ƶ*** | ƶ **ƶ** *ƶ* ***ƶ*** -- U+01B6 z w/ Stroke -- substitute base char

dz **dz** *dz* ***dz*** | dz **dz** *dz* ***dz*** -- U+01BB Latin Letter Two With Stroke -- substitute compatible string

African letters for clicks

ǀ **ǀ** *ǀ* ***ǀ*** | ǀ **ǀ** *ǀ* ***ǀ*** -- U+01C0 Latin Letter Dental Click

ǁ **ǁ** *ǁ* ***ǁ*** | ǁ **ǁ** *ǁ* ***ǁ*** -- U+01C1 Latin Letter Lateral Click

ǂ **ǂ** *ǂ* ***ǂ*** | ǂ **ǂ** *ǂ* ***ǂ*** -- U+01C2 Latin Letter Alveolar Click

ǃ **ǃ** *ǃ* ***ǃ*** | ǃ **ǃ** *ǃ* ***ǃ*** -- U+01C3 Latin Letter Retroflex Click

Croation digraphs

DŽ **DŽ** *DŽ* ***DŽ*** | DŽ **DŽ** *DŽ* ***DŽ*** -- U+01C4 DZ w/ Caron digraph -- substitute compatible string

Dž **Dž** *Dž* ***Dž*** | Dž **Dž** *Dž* ***Dž*** -- U+01C5 Dz w/ Caron digraph -- substitute compatible

string

dž **dž** *dž* ***dž*** | dž **dž** *dž* ***dž*** -- U+01C6 dz w/ Caron digraph -- substitute compatible string

LJ **LJ** *LJ* ***LJ*** | LJ **LJ** *LJ* ***LJ*** -- U+01C7 LJ digraph -- substitute compatible string

Lj **Lj** *Lj* ***Lj*** | Lj **Lj** *Lj* ***Lj*** -- U+01C8 Lj digraph -- substitute compatible string

lj **lj** *lj* ***lj*** | lj **lj** *lj* ***lj*** -- U+01C9 lj digraph -- substitute compatible string

NJ **NJ** *NJ* ***NJ*** | NJ **NJ** *NJ* ***NJ*** -- U+01CA NJ digraph -- substitute compatible string

Nj **Nj** *Nj* ***Nj*** | Nj **Nj** *Nj* ***Nj*** -- U+01CB Nj digraph -- substitute compatible string

nj **nj** *nj* ***nj*** | nj **nj** *nj* ***nj*** -- U+01CC nj digraph -- substitute compatible string

Pinyin diacritic-vowel combinations

Ǎ **Ǎ** *Ǎ* ***Ǎ*** | Ǎ **Ǎ** *Ǎ* ***Ǎ*** -- U+01CD A w/ Caron

ǎ **ǎ** *ǎ* ***ǎ*** | ǎ **ǎ** *ǎ* ***ǎ*** -- U+01CE a w/ Caron

Ǐ **Ǐ** *Ǐ* ***Ǐ*** | Ǐ **Ǐ** *Ǐ* ***Ǐ*** -- U+01CF I w/ Caron

ǐ **ǐ** *ǐ* ***ǐ*** | ǐ **ǐ** *ǐ* ***ǐ*** -- U+01D0 i w/ Caron

Ǒ **Ǒ** *Ǒ* ***Ǒ*** | Ǒ **Ǒ** *Ǒ* ***Ǒ*** -- U+01D1 O w/ Caron

ǒ **ǒ** *ǒ* ***ǒ*** | ǒ **ǒ** *ǒ* ***ǒ*** -- U+01D2 o w/ Caron

Ǔ **Ǔ** *Ǔ* ***Ǔ*** | Ǔ **Ǔ** *Ǔ* ***Ǔ*** -- U+01D3 U w/ Caron

ǔ **ǔ** *ǔ* ***ǔ*** | ǔ **ǔ** *ǔ* ***ǔ*** -- U+01D4 u w/ Caron

Ǖ **Ǖ** *Ǖ* ***Ǖ*** | Ǖ **Ǖ** *Ǖ* ***Ǖ*** -- U+01D5 U w/ Macron over Diaeresis

ǖ **ǖ** *ǖ* ***ǖ*** | ǖ **ǖ** *ǖ* ***ǖ*** -- U+01D6 u w/ Macron over Diaeresis

Ǘ **Ǘ** *Ǘ* ***Ǘ*** | Ǘ **Ǘ** *Ǘ* ***Ǘ*** -- U+01D7 U w/ Acute over Diaeresis

ǘ **ǘ** *ǘ* ***ǘ*** | ǘ **ǘ** *ǘ* ***ǘ*** -- U+01D8 u w/ Acute over Diaeresis

Ǚ **Ǚ** *Ǚ* ***Ǚ*** | Ǚ **Ǚ** *Ǚ* ***Ǚ*** -- U+01D9 U w/ Caron over Diaeresis

ǚ **ǚ** *ǚ* ***ǚ*** | ǚ **ǚ** *ǚ* ***ǚ*** -- U+01DA u w/ Caron over Diaeresis

Ǜ **Ǜ** *Ǜ* ***Ǜ*** | Ǜ **Ǜ** *Ǜ* ***Ǜ*** -- U+01DB U w/ Grave over Diaeresis

ǜ **ǜ** *ǜ* ***ǜ*** | ǜ **ǜ** *ǜ* ***ǜ*** -- U+01DC u w/ Grave over Diaeresis

Phonetic and historic letters

ə **ə** *ə* ***ə*** | ə **ə** *ə* ***ə*** -- U+01DD turned E -- subs schwa U+0259 -- updated font

Ǟ **Ǟ** *Ǟ* ***Ǟ*** | Ǟ **Ǟ** *Ǟ* ***Ǟ*** -- U+01DE A w/ Macron over Diaeresis

ǟ **ǟ** *ǟ* ***ǟ*** | ǟ **ǟ** *ǟ* ***ǟ*** -- U+01DF a w/ Macron over Diaeresis

Ǡ **Ǡ** *Ǡ* ***Ǡ*** | Ǡ **Ǡ** *Ǡ* ***Ǡ*** -- U+01E0 A w/ Dot Macron over Above

ǡ **ǡ** *ǡ* ***ǡ*** | ǡ **ǡ** *ǡ* ***ǡ*** -- U+01E1 a w/ Dot Macron over Above

Ǣ **Ǣ** *Ǣ* ***Ǣ*** | Ǣ **Ǣ** *Ǣ* ***Ǣ*** -- U+01E2 AE w/ Macron

ǣ **ǣ** *ǣ* ***ǣ*** | ǣ **ǣ** *ǣ* ***ǣ*** -- U+01E3 ae w/ Macron

G **G** *G* ***G*** | G G G G -- U+01E4 G w/ Stroke -- substitute base char

g **g** *g* ***g*** | g g g g -- U+01E5 g w/ Stroke -- substitute base char

Ǧ **Ǧ** *Ǧ* ***Ǧ*** | Ǧ Ǧ Ǧ Ǧ -- U+01E6 G w/ Caron

ǧ **ǧ** *ǧ* ***ǧ*** | ǧ ǧ ǧ ǧ -- U+01E7 g w/ Caron

Ǩ **Ǩ** *Ǩ* ***Ǩ*** | Ǩ Ǩ Ǩ Ǩ -- U+01E8 K w/ Caron

ǩ **ǩ** *ǩ* ***ǩ*** | ǩ ǩ ǩ ǩ -- U+01E9 k w/ Caron

Ǫ **Ǫ** *Ǫ* ***Ǫ*** | Ǫ Ǫ Ǫ Ǫ -- U+01EA O w/ Ogonek

ǫ **ǫ** *ǫ* ***ǫ*** | ǫ ǫ ǫ ǫ -- U+01EB o w/ Ogonek

Ǭ Ǭ Ǭ Ǭ | Ǭ Ǭ Ǭ Ǭ -- U+01EC O w/ Ogonek and Macron
ǭ ǭ ǭ ǭ | ǭ ǭ ǭ ǭ -- U+01ED o w/ Ogonek and Macron
ǰ ǰ ǰ ǰ | ǰ ǰ ǰ ǰ -- U+01F0 j w/ Caron
DZ DZ DZ DZ | DZ DZ DZ DZ -- U+01F1 DZ -- substitute compatible string
Dz Dz Dz Dz | Dz Dz Dz Dz -- U+01F2 Dz -- substitute compatible string
dz dz dz dz | dz dz dz dz -- U+01F3 dz -- substitute compatible string
Ǵ Ǵ Ǵ Ǵ | Ǵ Ǵ Ǵ Ǵ -- U+01F4 G w/ Acute
ǵ ǵ ǵ ǵ | ǵ ǵ ǵ ǵ -- U+01F5 g w/ Acute
Ǹ Ǹ Ǹ Ǹ | Ǹ Ǹ Ǹ Ǹ -- U+01F8 N w/ Grave
ǹ ǹ ǹ ǹ | ǹ ǹ ǹ ǹ -- U+01F9 n w/ Grave
Ǻ Ǻ Ǻ Ǻ | Ǻ Ǻ Ǻ Ǻ -- U+01FA A w/ Acute over RingAbove
ǻ ǻ ǻ ǻ | ǻ ǻ ǻ ǻ -- U+01FB a w/ Acute over RingAbove
Ǽ Ǽ Ǽ Ǽ | Ǽ Ǽ Ǽ Ǽ -- U+01FC AE w/ Acute
ǽ ǽ ǽ ǽ | ǽ ǽ ǽ ǽ -- U+01FD ae w/ Acute
Ǿ Ǿ Ǿ Ǿ | Ǿ Ǿ Ǿ Ǿ -- U+01FE O w/ Stoke w/ Acute
ǿ ǿ ǿ ǿ | ǿ ǿ ǿ ǿ -- U+01FF o w/ Stroke w/ Acute

Latin Extended-B (second half U+0200 - U+024F)

Additions for Slovenian and Croatian

Ȁ Ȁ Ȁ Ȁ | Ȁ Ȁ Ȁ Ȁ -- U+0200 A With Double Grave
ȁ ȁ ȁ ȁ | ȁ ȁ ȁ ȁ -- U+0201 a With Double Grave
Ȃ Ȃ Ȃ Ȃ | Ȃ Ȃ Ȃ Ȃ -- U+0202 A With Inverted Breve
ȃ ȃ ȃ ȃ | ȃ ȃ ȃ ȃ -- U+0203 a With Inverted Breve
Ȅ Ȅ Ȅ Ȅ | Ȅ Ȅ Ȅ Ȅ -- U+0204 E With Double Grave
ȅ ȅ ȅ ȅ | ȅ ȅ ȅ ȅ -- U+0205 e With Double Grave
Ȇ Ȇ Ȇ Ȇ | Ȇ Ȇ Ȇ Ȇ -- U+0206 E With Inverted Breve
ȇ ȇ ȇ ȇ | ȇ ȇ ȇ ȇ -- U+0207 e With Inverted Breve
Ȉ Ȉ Ȉ Ȉ | Ȉ Ȉ Ȉ Ȉ -- U+0208 I With Double Grave
ȉ ȉ ȉ ȉ | ȉ ȉ ȉ ȉ -- U+0209 i With Double Grave
Ȋ Ȋ Ȋ Ȋ | Ȋ Ȋ Ȋ Ȋ -- U+020A I With Inverted Breve
ȋ ȋ ȋ ȋ | ȋ ȋ ȋ ȋ -- U+020B i With Inverted Breve
Ȍ Ȍ Ȍ Ȍ | Ȍ Ȍ Ȍ Ȍ -- U+020C O With Double Grave
ȍ ȍ ȍ ȍ | ȍ ȍ ȍ ȍ -- U+020D o With Double Grave
Ȏ Ȏ Ȏ Ȏ | Ȏ Ȏ Ȏ Ȏ -- U+020E O With Inverted Breve
ȏ ȏ ȏ ȏ | ȏ ȏ ȏ ȏ -- U+020F o With Inverted Breve
Ȑ Ȑ Ȑ Ȑ | Ȑ Ȑ Ȑ Ȑ -- U+0210 R With Double Grave
ȑ ȑ ȑ ȑ | ȑ ȑ ȑ ȑ -- U+0211 r With Double Grave
Ȓ Ȓ Ȓ Ȓ | Ȓ Ȓ Ȓ Ȓ -- U+0212 R With Inverted Breve
ȓ ȓ ȓ ȓ | ȓ ȓ ȓ ȓ -- U+0213 r With Inverted Breve
Ȕ Ȕ Ȕ Ȕ | Ȕ Ȕ Ȕ Ȕ -- U+0214 U With Double Grave
ȕ ȕ ȕ ȕ | ȕ ȕ ȕ ȕ -- U+0215 u With Double Grave
Ȗ Ȗ Ȗ Ȗ | Ȗ Ȗ Ȗ Ȗ -- U+0216 U With Inverted Breve
ȗ ȗ ȗ ȗ | ȗ ȗ ȗ ȗ -- U+0217 u With Inverted Breve

Additions for Romanian

Ș Ș Ș Ș | Ș Ș Ș Ș -- U+0218 S With Comma Below
ș ș ș ș | ș ș ș ș -- U+0219 s With Comma Below
Ț Ț Ț Ț | Ț Ț Ț Ț -- U+021A T With Comma Below
ț ț ț ț | ț ț ț ț -- U+021B t With Comma Below

Misc additions

Ȟ Ȟ Ȟ Ȟ | Ȟ Ȟ Ȟ Ȟ -- U+021E H With Caron
ȟ ȟ ȟ ȟ | ȟ ȟ ȟ ȟ -- U+021F h With Caron
d d d d | d d d d -- U+0221 d With Curl -- substitute base char
Z Z Z Z | Z Z Z Z -- U+0224 Z With Hook -- substitute base char
z z z z | z z z z -- U+0225 z With Hook -- substitute base char
Ȧ Ȧ Ȧ Ȧ | Ȧ Ȧ Ȧ Ȧ -- U+0226 A With Dot Above
ȧ ȧ ȧ ȧ | ȧ ȧ ȧ ȧ -- U+0227 a With Dot Above
Ȩ Ȩ Ȩ Ȩ | Ȩ Ȩ Ȩ Ȩ -- U+0228 E With Cedilla
ȩ ȩ ȩ ȩ | ȩ ȩ ȩ ȩ -- U+0229 e With Cedilla

Additions for Livonian

Ő Ő Ő Ő	Ő Ő Ő Ő -- U+022A O With Macron Over Diaeresis
ő ő ő ő	ő ő ő ő -- U+022B o With Macron Over Diaeresis
Õ Õ Õ Õ	Õ Õ Õ Õ -- U+022C O With Macron Over Tilde
õ õ õ õ	õ õ õ õ -- U+022D o With Macron Over Tilde
Ȯ Ȯ Ȯ Ȯ	Ȯ Ȯ Ȯ Ȯ -- U+022E O With Dot Above
ȯ ȯ ȯ ȯ	ȯ ȯ ȯ ȯ -- U+022F o With Dot Above
Ȱ Ȱ Ȱ Ȱ	Ȱ Ȱ Ȱ Ȱ -- U+0230 O With Macron Over DotAbove
ȱ ȱ ȱ ȱ	ȱ ȱ ȱ ȱ -- U+0231 o With Macron Over DotAbove
Ȳ Ȳ Ȳ Ȳ	Ȳ Ȳ Ȳ Ȳ -- U+0232 Y With Macron
ȳ ȳ ȳ ȳ	ȳ ȳ ȳ ȳ -- U+0233 y With Macron

Additions for Sinology

l l l l	l l l l -- U+0234 l With Curl -- substitute base char
n n n n	n n n n -- U+0235 n With Curl -- substitute base char
t t t t	t t t t -- U+0236 t With Curl -- substitute base char

Misc additions

A A A A	A A A A -- U+023A A With Stroke
C C C C	C C C C -- U+023B C With Stroke
c c c c	c c c c -- U+023C c With Stroke
L L L L	L L L L -- U+023D L With Bar -- substitute base char
T T T T	T T T T -- U+023E T With Bar
s s s s	s s s s -- U+023F s With Swash Tail -- substitute base char
z z z z	z z z z -- U+0240 z With Swash Tail -- substitute base char
B B B B	B B B B -- U+0243 B With Stroke -- substitute base char
U U U U	U U U U -- U+0244 U Bar -- substitute base char
E E E E	E E E E -- U+0246 E With Stroke
e e e e	e e e e -- U+0247 e With Stroke
J J J J	J J J J -- U+0248 J With Stroke -- substitute base char
j j j j	j j j j -- U+0249 j With Stroke -- substitute base char
Q Q Q Q	Q Q Q Q -- U+024A Q With Hook Tail -- substitute base char
q q q q	q q q q -- U+024B q With Hook Tail -- substitute base char
R R R R	R R R R -- U+024C R With Stroke -- substitute base char
r r r r	r r r r -- U+024D r With Stroke -- substitute base char
Y Y Y Y	Y Y Y Y -- U+024E Y With Stroke -- substitute base char
y y y y	y y y y -- U+024F y With Stroke -- substitute base char

IPA Extensions (U+2050 - U+20AF)

ə ə ə ə | ə ə ə ə -- U+0259 schwa -- updated font

Spacing Modifier Letters (U+02B0 - U+02FF)

Misc phonetic modifiers

′ ′ ′ ′ | ′′′′ -- U+02B9 prime
″ ″ ″ ″ | ″″″″ -- U+02BA double prime
‘ ‘ ‘ ‘ | ‘‘‘‘ -- U+02BB turned comma
’ ’ ’ ’ | ’’’’ -- U+02BC apostrophe
‘ ‘ ‘ ‘ | ‘‘‘‘ -- U+02BD reversed comma
)))) |)))) -- U+02BE right half ring)
((((| ((((-- U+02BF left half ring (
ˆ ˆ ˆ ˆ | ˆˆˆˆ -- U+02C6 circumflex
ˇ ˇ ˇ ˇ | ˇˇˇˇ -- U+02C7 caron
ˈ ˈ ˈ ˈ | ˈˈˈˈ -- U+02C8 vert line
¯ ¯ ¯ ¯ | ¯¯¯¯ -- U+02C9 macron -- updated font
´ ´ ´ ´ | ´´´´ -- U+02CA acute
` ` ` ` | `````` -- U+02CB grave
ˌ ˌ ˌ ˌ | ˌˌˌˌ -- U+02CC low vert line
: : : : | :::: -- U+02D0 tri-colon

Spacing clones of diacritics

˘ ˘ ˘ ˘ | ˘˘˘˘ -- U+02D8 breve
˙ ˙ ˙ ˙ | ˙˙˙˙ -- U+02D9 dot above
° ° ° ° | °°°° -- U+02DA ring above
˛ ˛ ˛ ˛ | ˛˛˛˛ -- U+02DB ogonek
˜ ˜ ˜ ˜ | ˜˜˜˜ -- U+02DC small tilde
˝ ˝ ˝ ˝ | ˝˝˝˝ -- U+02DD double acute

Greek and Coptic (U+0370 - U+03FF)

; ; ; ; | ; ; ; ; -- U+037E Greek Question Mark (semicolon)
΄ ΄ ΄ ΄ | ΄ ΄ ΄ ΄ -- U+0384 tonos
΅ ΅ ΅ ΅ | ΅ ΅ ΅ ΅ -- U+0385 dialytika tonos
Ά Ά Ά Ά | Ά Ά Ά Ά -- U+0386 Alpha w/ tonos
· · · · | · · · · -- U+0387 ano teleia (middle dot)
Έ Έ Έ Έ | Έ Έ Έ Έ -- U+0388 Epsilon w/ tonos
Ή Ή Ή Ή | Ή Ή Ή Ή -- U+0389 Eta w/ tonos
Ί Ί Ί Ί | Ί Ί Ί Ί -- U+038A Iota w/ tonos
Ό Ό Ό Ό | Ό Ό Ό Ό -- U+038C Omicron w/ tonos
Ύ Ύ Ύ Ύ | Ύ Ύ Ύ Ύ -- U+038E Upsilion w/ tonos
Ώ Ώ Ώ Ώ | Ώ Ώ Ώ Ώ -- U+038F Omega w/ tonos
ΐ ΐ ΐ ΐ | ΐ ΐ ΐ ΐ -- U+0390 iota w/ dialytika and tonos
Α Α Α Α | Α Α Α Α -- U+0391 Alpha
Β Β Β Β | Β Β Β Β -- U+0392 Beta
Γ Γ Γ Γ | Γ Γ Γ Γ -- U+0393 Gamma
Δ Δ Δ Δ | Δ Δ Δ Δ -- U+0394 Delta
Ε Ε Ε Ε | Ε Ε Ε Ε -- U+0395 Epsilon
Ζ Ζ Ζ Ζ | Ζ Ζ Ζ Ζ -- U+0396 Zeta
Η Η Η Η | Η Η Η Η -- U+0397 Eta
Θ Θ Θ Θ | Θ Θ Θ Θ -- U+0398 Theta
Ι Ι Ι Ι | Ι Ι Ι Ι -- U+0399 Iota
Κ Κ Κ Κ | Κ Κ Κ Κ -- U+039A Kappa
Λ Λ Λ Λ | Λ Λ Λ Λ -- U+039B Lamda
Μ Μ Μ Μ | Μ Μ Μ Μ -- U+039C Mu
Ν Ν Ν Ν | Ν Ν Ν Ν -- U+039D Nu
Ξ Ξ Ξ Ξ | Ξ Ξ Ξ Ξ -- U+039E Xi
Ο Ο Ο Ο | Ο Ο Ο Ο -- U+039F Omicron
Π Π Π Π | Π Π Π Π -- U+03A0 Pi
Ρ Ρ Ρ Ρ | Ρ Ρ Ρ Ρ -- U+03A1 Rho
Σ Σ Σ Σ | Σ Σ Σ Σ -- U+03A3 Sigma
Τ Τ Τ Τ | Τ Τ Τ Τ -- U+03A4 Tao
Υ Υ Υ Υ | Υ Υ Υ Υ -- U+03A5 Upsilon
Φ Φ Φ Φ | Φ Φ Φ Φ -- U+03A6 Phi
Χ Χ Χ Χ | Χ Χ Χ Ζ -- U+03A7 Chi
Ψ Ψ Ψ Ψ | Ψ Ψ Ψ Ψ -- U+03A8 Psi
Ω Ω Ω Ω | Ω Ω Ω Ω -- U+03A9 Omega
Ϊ Ϊ Ϊ Ϊ | Ϊ Ϊ Ϊ Ϊ -- U+03AA Iota
Ϋ Ϋ Ϋ Ϋ | Ϋ Ϋ Ϋ Ϋ -- U+03AB Upsolon
ά ά ά ά | ά ά ά ά -- U+03AC alpha w/ tonos
έ έ έ έ | έ έ έ έ -- U+03AD epsilon w/ tonos
ή ή ή ή | ή ή ή ή -- U+03AE eta w/ tonos

ί ί ί ί | ί ί ί ί -- U+03AF iota w/ tonos
ΰ ΰ ΰ ΰ | ΰ ΰ ΰ ΰ -- U+03B0 upsilon w/ dialytika and tonos -- updated font
α α α α | α α α α -- U+03B1 alpha -- updated font
β β β β | β β β β -- U+03B2 beta -- updated font
γ γ γ γ | γ γ γ γ -- U+03B3 gamma -- updated font
δ δ δ δ | δ δ δ δ -- U+03B4 delta -- updated font
ε ε ε ε | ε ε ε ε -- U+03B5 epsilon -- updated font
ζ ζ ζ ζ | ζ ζ ζ ζ -- U+03B6 zeta -- updated font
η η η η | η η η η -- U+03B7 eta -- updated font
θ θ θ θ | θ θ ϑ ϑ -- U+03B8 theta
ι ι ι ι | ι ι ι ι -- U+03B9 iota
κ κ κ κ | κ κ κ κ -- U+03BA kappa
λ λ λ λ | λ λ λ λ -- U+03BB lamda
μ μ μ μ | μ μ μ μ -- U+03BC mu
ν ν υ υ | ν ν ν ν -- U+03BD nu
ξ ξ ξ ξ | ξ ξ ξ ξ -- U+03BE xi
ο ο ο ο | ο ο ο ο -- U+03BF omicron
π π π π | π π π π -- U+03C0 pi
ρ ρ ρ ρ | ρ ρ ρ ρ -- U+03C1 rho -- updated font
ς ς ς ς | ς ς ς ς -- U+03C2 final sigma -- updated font
σ σ σ σ | σ σ σ σ -- U+03C3 sigma -- updated font
τ τ τ τ | τ τ τ τ -- U+03C4 tau -- updated font
υ υ υ υ | υ υ υ υ -- U+03C5 upsilon -- updated font
φ φ φ φ | φ φ φ φ -- U+03C6 phi -- updated font
χ χ χ χ | χ χ χ χ -- U+03C7 chi -- updated font
ψ ψ ψ ψ | ψ ψ ψ ψ -- U+03C8 psi
ω ω ω ω | ω ω ω ω -- U+03C9 omega
ϊ ϊ ϊ ϊ | ϊ ϊ ϊ ϊ -- U+03CA iota w/ dialytika
ϋ ϋ ϋ ϋ | ϋ ϋ ϋ ϋ -- U+03CB upsilon w/ dialytika
ό ό ό ό | ό ό ό ό -- U+03CC omicron w/ tonos
ύ ύ ύ ύ | ύ ύ ύ ύ -- U+03CD upsilon w/ tonos
ώ ώ ώ ώ | ώ ώ ώ ώ -- U+03CE omega w/ tonos
ϐ ϐ ϐ ϐ | ϐ ϐ β β -- U+03D0 beta symbol
ϑ ϑ ϑ ϑ | ϑ ϑ θ θ -- U+03D1 theta symbol -- updated font
ϒ ϒ ϒ ϒ | ϒ ϒ ϒ ϒ -- U+03D2 upsilon w/ hook symbol -- updated font
ϓ ϓ ϓ ϓ | ΄ϒ ΄ϒ ΄ϒ ΄ϒ -- U+03D3 upsilon w/ acute and hook symbol -- updated font
ϔ ϔ ϔ ϔ | ϔ ϔ ϔ ϔ -- U+03D4 upsilon w/ diaeresis and hook symbol -- updated font
ϕ ϕ ϕ ϕ | ϕ ϕ ϕ ϕ -- U+03D5 phi symbol -- updated font
ϖ ϖ ϖ ϖ | ϖ ϖ ϖ ϖ -- U+03D6 pi symbol (omega pi) -- updated font
ϗ ϗ ϗ ϗ | ϗ ϗ ϗ ϗ -- U+03D7 kai symbol -- updated font

Latin Extended-Additional (U+1E00 - U+1EFF)

Latin general use extensions

Ạ Ạ Ạ Ạ | Ạ Ạ Ạ Ạ -- U+1E00 A With RingBelow
ạ ạ ạ ạ | ạ ạ ạ ạ -- U+1E01 a With RingBelow
Ḃ Ḃ Ḃ Ḃ | Ḃ Ḃ Ḃ Ḃ -- U+1E02 B With DotAbove
ḃ ḃ ḃ ḃ | ḃ ḃ ḃ ḃ -- U+1E03 b With DotAbove
Ḅ Ḅ Ḅ Ḅ | Ḅ Ḅ Ḅ Ḅ -- U+1E04 B With DotBelow
ḅ ḅ ḅ ḅ | ḅ ḅ ḅ ḅ -- U+1E05 b With DotBelow
Ḇ Ḇ Ḇ Ḇ | Ḇ Ḇ Ḇ Ḇ -- U+1E06 B With LineBelow
ḇ ḇ ḇ ḇ | ḇ ḇ ḇ ḇ -- U+1E07 b With LineBelow
Ḉ Ḉ Ḉ Ḉ | Ḉ Ḉ Ḉ Ḉ -- U+1E08 Cc With Acute
ḉ ḉ ḉ ḉ | ḉ ḉ ḉ ḉ -- U+1E09 cc With Acute
Ḋ Ḋ Ḋ Ḋ | Ḋ Ḋ Ḋ Ḋ -- U+1E0A D With DotAbove
ḋ ḋ ḋ ḋ | ḋ ḋ ḋ ḋ -- U+1E0B d With DotAbove
Ḍ Ḍ Ḍ Ḍ | Ḍ Ḍ Ḍ Ḍ -- U+1E0C D With DotBelow
ḍ ḍ ḍ ḍ | ḍ ḍ ḍ ḍ -- U+1E0D d With DotBelow
Ḏ Ḏ Ḏ Ḏ | Ḏ Ḏ Ḏ Ḏ -- U+1E0E D With LineBelow
ḏ ḏ ḏ ḏ | ḏ ḏ ḏ ḏ -- U+1E0F d With LineBelow
Ḑ Ḑ Ḑ Ḑ | Ḑ Ḑ Ḑ Ḑ -- U+1E10 D With Cedilla
ḑ ḑ ḑ ḑ | ḑ ḑ ḑ ḑ -- U+1E11 d With Cedilla
Ḓ Ḓ Ḓ Ḓ | Ḓ Ḓ Ḓ Ḓ -- U+1E12 D With CircumflexBelow
ḓ ḓ ḓ ḓ | ḓ ḓ ḓ ḓ -- U+1E13 d With CircumflexBelow
Ḕ Ḕ Ḕ Ḕ | Ḕ Ḕ Ḕ Ḕ -- U+1E14 E With Grave Over Macron
ḕ ḕ ḕ ḕ | ḕ ḕ ḕ ḕ -- U+1E15 e With Grave Over Macron
Ḗ Ḗ Ḗ Ḗ | Ḗ Ḗ Ḗ Ḗ -- U+1E16 E With Acute Over Macron
ḗ ḗ ḗ ḗ | ḗ ḗ ḗ ḗ -- U+1E17 e With Acute Over Macron
Ḙ Ḙ Ḙ Ḙ | Ḙ Ḙ Ḙ Ḙ -- U+1E18 E With CircumflexBelow
ḙ ḙ ḙ ḙ | ḙ ḙ ḙ ḙ -- U+1E19 e With CircumflexBelow
Ḛ Ḛ Ḛ Ḛ | Ḛ Ḛ Ḛ Ḛ -- U+1E1A E With TildeBelow
ḛ ḛ ḛ ḛ | ḛ ḛ ḛ ḛ -- U+1E1B e With TildeBelow
Ḝ Ḝ Ḝ Ḝ | Ḝ Ḝ Ḝ Ḝ -- U+1E1C E With Cedilla And Breve
ḝ ḝ ḝ ḝ | ḝ ḝ ḝ ḝ -- U+1E1D e With Cedilla And Breve
Ḟ Ḟ Ḟ Ḟ | Ḟ Ḟ Ḟ Ḟ -- U+1E1E F With Dot Above
ḟ ḟ ḟ ḟ | ḟ ḟ ḟ ḟ -- U+1E1F f With Dot Above
Ḡ Ḡ Ḡ Ḡ | Ḡ Ḡ Ḡ Ḡ -- U+1E20 G With Macron
ḡ ḡ ḡ ḡ | ḡ ḡ ḡ ḡ -- U+1E21 g With Macron
Ḥ Ḥ Ḥ Ḥ | Ḥ Ḥ Ḥ Ḥ -- U+1E22 H With DotAbove
ḥ ḥ ḥ ḥ | ḥ ḥ ḥ ḥ -- U+1E23 h With DotAbove
Ḥ Ḥ Ḥ Ḥ | Ḥ Ḥ Ḥ Ḥ -- U+1E24 H With DotBelow
ḥ ḥ ḥ ḥ | ḥ ḥ ḥ ḥ -- U+1E25 h With DotBelow
Ḧ Ḧ Ḧ Ḧ | Ḧ Ḧ Ḧ Ḧ -- U+1E26 H With Diaeresis
ḧ ḧ ḧ ḧ | ḧ ḧ ḧ ḧ -- U+1E27 h With Diaeresis

Ḥ Ḥ Ḥ Ḥ | Ḥ Ḥ Ḥ Ḥ -- U+1E28 H With Cedilla
ḥ ḥ ḥ ḥ | ḥ ḥ ḥ ḥ -- U+1E29 h With Cedilla
Ḫ Ḫ Ḫ Ḫ | Ḫ Ḫ Ḫ Ḫ -- U+1E2A H With BreveBelow
ḫ ḫ ḫ ḫ | ḫ ḫ ḫ ḫ -- U+1E2B h With BreveBelow
Ḭ Ḭ Ḭ Ḭ | Ḭ Ḭ Ḭ Ḭ -- U+1E2C I With TildeBelow
ḭ ḭ ḭ ḭ | ḭ ḭ ḭ ḭ -- U+1E2D i With TildeBelow
Ḯ Ḯ Ḯ Ḯ | Ḯ Ḯ Ḯ Ḯ -- U+1E2E I With Acute Over Diaeresis
ḯ ḯ ḯ ḯ | ḯ ḯ ḯ ḯ -- U+1E2F i With Acute Over Diaeresis
Ḱ Ḱ Ḱ Ḱ | Ḱ Ḱ Ḱ Ḱ -- U+1E30 K With Acute
ḱ ḱ ḱ ḱ | ḱ ḱ ḱ ḱ -- U+1E31 k With Acute
Ḳ Ḳ Ḳ Ḳ | Ḳ Ḳ Ḳ Ḳ -- U+1E32 K With Dot Below
ḳ ḳ ḳ ḳ | ḳ ḳ ḳ ḳ -- U+1E33 k With Dot Below
Ḵ Ḵ Ḵ Ḵ | Ḵ Ḵ Ḵ Ḵ -- U+1E34 K With Line Below
ḵ ḵ ḵ ḵ | ḵ ḵ ḵ ḵ -- U+1E35 k With Line Below
Ḷ Ḷ Ḷ Ḷ | Ḷ Ḷ Ḷ Ḷ -- U+1E36 L With Dot Below
ḷ ḷ ḷ ḷ | ḷ ḷ ḷ ḷ -- U+1E37 l With Dot Below
Ḹ Ḹ Ḹ Ḹ | Ḹ Ḹ Ḹ Ḹ -- U+1E38 L With DotBelow And Macron
ḹ ḹ ḹ ḹ | ḹ ḹ ḹ ḹ -- U+1E39 l With DotBelow And Macron
Ḻ Ḻ Ḻ Ḻ | Ḻ Ḻ Ḻ Ḻ -- U+1E3A L With LineBelow
ḻ ḻ ḻ ḻ | ḻ ḻ ḻ ḻ -- U+1E3B l With LineBelow
Ḽ Ḽ Ḽ Ḽ | Ḽ Ḽ Ḽ Ḽ -- U+1E3C L With CircumflexBelow
ḽ ḽ ḽ ḽ | ḽ ḽ ḽ ḽ -- U+1E3D l With CircumflexBelow
Ḿ Ḿ Ḿ Ḿ | Ḿ Ḿ Ḿ Ḿ -- U+1E3E M With Acute
ḿ ḿ ḿ ḿ | ḿ ḿ ḿ ḿ -- U+1E3F m With Acute
Ṁ Ṁ Ṁ Ṁ | Ṁ Ṁ Ṁ Ṁ -- U+1E40 M With DotAbove
ṁ ṁ ṁ ṁ | ṁ ṁ ṁ ṁ -- U+1E41 m With DotAbove
Ṃ Ṃ Ṃ Ṃ | Ṃ Ṃ Ṃ Ṃ -- U+1E42 M With DotBelow
ṃ ṃ ṃ ṃ | ṃ ṃ ṃ ṃ -- U+1E43 m With DotBelow
Ṅ Ṅ Ṅ Ṅ | Ṅ Ṅ Ṅ Ṅ -- U+1E44 N With DotAbove
ṅ ṅ ṅ ṅ | ṅ ṅ ṅ ṅ -- U+1E45 n With DotAbove
Ṇ Ṇ Ṇ Ṇ | Ṇ Ṇ Ṇ Ṇ -- U+1E46 N With DotBelow
ṇ ṇ ṇ ṇ | ṇ ṇ ṇ ṇ -- U+1E47 n With DotBelow
Ṉ Ṉ Ṉ Ṉ | Ṉ Ṉ Ṉ Ṉ -- U+1E48 N With LineBelow
ṉ ṉ ṉ ṉ | ṉ ṉ ṉ ṉ -- U+1E49 n With LineBelow
Ṋ Ṋ Ṋ Ṋ | Ṋ Ṋ Ṋ Ṋ -- U+1E4A N With CircumflexBelow
ṋ ṋ ṋ ṋ | ṋ ṋ ṋ ṋ -- U+1E4B n With CircumflexBelow
Ṍ Ṍ Ṍ Ṍ | Ṍ Ṍ Ṍ Ṍ -- U+1E4C O With Acute Over Tilde
ṍ ṍ ṍ ṍ | ṍ ṍ ṍ ṍ -- U+1E4D o With Acute Over Tilde
Ṏ Ṏ Ṏ Ṏ | Ṏ Ṏ Ṏ Ṏ -- U+1E4E O With Diaeresis Over Tilde
ṏ ṏ ṏ ṏ | ṏ ṏ ṏ ṏ -- U+1E4F o With Diaeresis Over Tilde
Ṑ Ṑ Ṑ Ṑ | Ṑ Ṑ Ṑ Ṑ -- U+1E50 O With Grave Over Macron
ṑ ṑ ṑ ṑ | ṑ ṑ ṑ ṑ -- U+1E51 o With Grave Over Macron

Ṓ Ṓ Ṓ Ṓ | Ṓ Ṓ Ṓ Ṓ -- U+1E52 O With Acute Over Macron
ṓ ṓ ṓ ṓ | ṓ ṓ ṓ ṓ -- U+1E53 o With Acute Over Macron
Ṕ Ṕ Ṕ Ṕ | Ṕ Ṕ Ṕ Ṕ -- U+1E54 P With Acute
ṕ ṕ ṕ ṕ | ṕ ṕ ṕ ṕ -- U+1E55 p With Acute
Ṗ Ṗ Ṗ Ṗ | Ṗ Ṗ Ṗ Ṗ -- U+1E56 P With DotAbove
ṗ ṗ ṗ ṗ | ṗ ṗ ṗ ṗ -- U+1E57 p With DotAbove
Ṙ Ṙ Ṙ Ṙ | Ṙ Ṙ Ṙ Ṙ -- U+1E58 R With DotAbove
ṙ ṙ ṙ ṙ | ṙ ṙ ṙ ṙ -- U+1E59 r With DotAbove
Ṛ Ṛ Ṛ Ṛ | Ṛ Ṛ Ṛ Ṛ -- U+1E5A R With DotBelow
ṛ ṛ ṛ ṛ | ṛ ṛ ṛ ṛ -- U+1E5B r With DotBelow
Ṝ Ṝ Ṝ Ṝ | Ṝ Ṝ Ṝ Ṝ -- U+1E5C R With DotBelow And Macron
ṝ ṝ ṝ ṝ | ṝ ṝ ṝ ṝ -- U+1E5D r With DotBelow And Macron
Ṟ Ṟ Ṟ Ṟ | Ṟ Ṟ Ṟ Ṟ -- U+1E5E R With LineBelow
ṟ ṟ ṟ ṟ | ṟ ṟ ṟ ṟ -- U+1E5F r With LineBelow
Ṡ Ṡ Ṡ Ṡ | Ṡ Ṡ Ṡ Ṡ -- U+1E60 S With DotAbove
ṡ ṡ ṡ ṡ | ṡ ṡ ṡ ṡ -- U+1E61 s With DotAbove
Ṣ Ṣ Ṣ Ṣ | Ṣ Ṣ Ṣ Ṣ -- U+1E62 S With DotBelow
ṣ ṣ ṣ ṣ | ṣ ṣ ṣ ṣ -- U+1E63 s With DotBelow
Ṥ Ṥ Ṥ Ṥ | Ṥ Ṥ Ṥ Ṥ -- U+1E64 S With DotAbove Over Acute
ṥ ṥ ṥ ṥ | ṥ ṥ ṥ ṥ -- U+1E65 s With DotAbove Over Acute
Ṧ Ṧ Ṧ Ṧ | Ṧ Ṧ Ṧ Ṧ -- U+1E66 S With DotAbove Over Caron
ṧ ṧ ṧ ṧ | ṧ ṧ ṧ ṧ -- U+1E67 s With DotAbove Over Caron
Ṩ Ṩ Ṩ Ṩ | Ṩ Ṩ Ṩ Ṩ -- U+1E68 S With Dot Below And Dot Above
ṩ ṩ ṩ ṩ | ṩ ṩ ṩ ṩ -- U+1E69 s With Dot Below And Dot Above
Ṫ Ṫ Ṫ Ṫ | Ṫ Ṫ Ṫ Ṫ -- U+1E6A T With DotAbove
ṫ ṫ ṫ ṫ | ṫ ṫ ṫ ṫ -- U+1E6B t With DotAbove
Ṭ Ṭ Ṭ Ṭ | Ṭ Ṭ Ṭ Ṭ -- U+1E6C T With DotBelow
ṭ ṭ ṭ ṭ | ṭ ṭ ṭ ṭ -- U+1E6D t With DotBelow
Ṯ Ṯ Ṯ Ṯ | Ṯ Ṯ Ṯ Ṯ -- U+1E6E T With LineBelow
ṯ ṯ ṯ ṯ | ṯ ṯ ṯ ṯ -- U+1E6F t With LineBelow
Ṱ Ṱ Ṱ Ṱ | Ṱ Ṱ Ṱ Ṱ -- U+1E70 T With CircumflexBelow
ṱ ṱ ṱ ṱ | ṱ ṱ ṱ ṱ -- U+1E71 t With CircumflexBelow
Ṳ Ṳ Ṳ Ṳ | Ṳ Ṳ Ṳ Ṳ -- U+1E72 U With DiaeresisBelow
ṳ ṳ ṳ ṳ | ṳ ṳ ṳ ṳ -- U+1E73 u With DiaeresisBelow
Ṵ Ṵ Ṵ Ṵ | Ṵ Ṵ Ṵ Ṵ -- U+1E74 U With TildeBelow
ṵ ṵ ṵ ṵ | ṵ ṵ ṵ ṵ -- U+1E75 u With TildeBelow
Ṷ Ṷ Ṷ Ṷ | Ṷ Ṷ Ṷ Ṷ -- U+1E76 U With CircumflexBelow
ṷ ṷ ṷ ṷ | ṷ ṷ ṷ ṷ -- U+1E77 u With CircumflexBelow
Ṹ Ṹ Ṹ Ṹ | Ṹ Ṹ Ṹ Ṹ -- U+1E78 U With Acute Over Tilde
ṹ ṹ ṹ ṹ | ṹ ṹ ṹ ṹ -- U+1E79 u With Acute Over Tilde
Ṻ Ṻ Ṻ Ṻ | Ṻ Ṻ Ṻ Ṻ -- U+1E7A U With Diaeresis Over Macron
ṻ ṻ ṻ ṻ | ṻ ṻ ṻ ṻ -- U+1E7B u With Diaeresis Over Macron

Ṽ ṽ Ṽ ṽ | Ṽ ṽ Ṽ ṽ -- U+1E7C V With Tilde
ṽ ṽ ṽ ṽ | ṽ ṽ ṽ ṽ -- U+1E7D v With Tilde
Ṿ ṿ Ṿ ṿ | Ṿ ṿ Ṿ ṿ -- U+1E7E V With DotBelow
ṿ ṿ ṿ ṿ | ṿ ṿ ṿ ṿ -- U+1E7F v With DotBelow
Ẁ ẁ Ẁ ẁ | Ẁ ẁ Ẁ ẁ -- U+1E80 W With Grave
ẁ ẁ ẁ ẁ | ẁ ẁ ẁ ẁ -- U+1E81 w With Grave
Ẃ ẃ Ẃ ẃ | Ẃ ẃ Ẃ ẃ -- U+1E82 W With Acute
ẃ ẃ ẃ ẃ | ẃ ẃ ẃ ẃ -- U+1E83 w With Acute
Ẅ ẅ Ẅ ẅ | Ẅ ẅ Ẅ ẅ -- U+1E84 W With Diaeresis
ẅ ẅ ẅ ẅ | ẅ ẅ ẅ ẅ -- U+1E85 w With Diaeresis
Ẇ ẇ Ẇ ẇ | Ẇ ẇ Ẇ ẇ -- U+1E86 W With DotAbove
ẇ ẇ ẇ ẇ | ẇ ẇ ẇ ẇ -- U+1E87 w With DotAbove
Ẉ ẉ Ẉ ẉ | Ẉ ẉ Ẉ ẉ -- U+1E88 W With DotBelow
ẉ ẉ ẉ ẉ | ẉ ẉ ẉ ẉ -- U+1E89 w With DotBelow
Ẋ ẋ Ẋ ẋ | Ẋ ẋ Ẋ ẋ -- U+1E8A X With DotAbove
ẋ ẋ ẋ ẋ | ẋ ẋ ẋ ẋ -- U+1E8B x With DotAbove
Ẍ ẍ Ẍ ẍ | Ẍ ẍ Ẍ ẍ -- U+1E8C X With Diaeresis
ẍ ẍ ẍ ẍ | ẍ ẍ ẍ ẍ -- U+1E8D x With Diaeresis
Ẏ ẏ Ẏ ẏ | Ẏ ẏ Ẏ ẏ -- U+1E8E Y With DotAbove
ẏ ẏ ẏ ẏ | ẏ ẏ ẏ ẏ -- U+1E8F y With DotAbove
Ẑ ẑ Ẑ ẑ | Ẑ ẑ Ẑ ẑ -- U+1E90 Z With Circumflex
ẑ ẑ ẑ ẑ | ẑ ẑ ẑ ẑ -- U+1E91 z With Circumflex
Ẓ ẓ Ẓ ẓ | Ẓ ẓ Ẓ ẓ -- U+1E92 Z With DotBelow
ẓ ẓ ẓ ẓ | ẓ ẓ ẓ ẓ -- U+1E93 z With DotBelow
Ẕ ẕ Ẕ ẕ | Ẕ ẕ Ẕ ẕ -- U+1E94 Z With LineBelow
ẕ ẕ ẕ ẕ | ẕ ẕ ẕ ẕ -- U+1E95 z With LineBelow
ẖ ẖ ẖ ẖ | ẖ ẖ ẖ ẖ -- U+1E96 h With LineBelow
ẗ ẗ ẗ ẗ | ẗ ẗ ẗ ẗ -- U+1E97 t With Diaeresis
ẘ ẘ ẘ ẘ | ẘ ẘ ẘ ẘ -- U+1E98 w With RingAbove
ẙ ẙ ẙ ẙ | ẙ ẙ ẙ ẙ -- U+1E99 y With RingAbove
ẚ ẚ ẚ ẚ | ẚ ẚ ẚ ẚ -- U+1E9A a With RightHalfRing (U+02BE)
ẛ ẛ ẛ ẛ | ẛ ẛ ẛ ẛ -- U+1E9B long-s With DotAbove -- updated font

Latin extensions for Vietnamese

Ạ ạ Ạ ạ | Ạ Ạ Ạ Ạ -- U+1EA0 A With DotBelow
ạ ạ ạ ạ | ạ ạ ạ ạ -- U+1EA1 a With DotBelow
Ả ả Ả ả | Ả Ả Ả Ả -- U+1EA2 A With Hook Above
ả ả ả ả | ả ả ả ả -- U+1EA3 a With Hook Above
Ấ ấ Ấ ấ | Ấ Ấ Ấ Ấ -- U+1EA4 A With Acute Over Circumflex
ấ ấ ấ ấ | ấ ấ ấ ấ -- U+1EA5 a With Acute Over Circumflex
Ầ ầ Ầ ầ | Ầ Ầ Ầ Ầ -- U+1EA6 A With Grave Over Circumflex
ầ ầ ầ ầ | ầ ầ ầ ầ -- U+1EA7 a With Grave Over Circumflex
Ẩ ẩ Ẩ ẩ | Ẩ Ẩ Ẩ Ẩ -- U+1EA8 A With HookAbove Over Circumflex

ẩ ẩ ẩ ẩ | ẩ ẩ ẩ ẩ -- U+1EA9 a With HookAbove Over Circumflex
Ắ Ắ Ắ Ắ | Ắ Ắ Ắ Ắ -- U+1EAA A With Tilde Over Circumflex
ẫ ẫ ẫ ẫ | ẫ ẫ ẫ ẫ -- U+1EAB a With Tilde Over Circumflex
Ậ Ậ Ậ Ậ | Ậ Ậ Ậ Ậ -- U+1EAC A With Circumflex And DotBelow
ậ ậ ậ ậ | ậ ậ ậ ậ -- U+1EAD a With Circumflex And DotBelow
Ắ Ắ Ắ Ắ | Ắ Ắ Ắ Ắ -- U+1EAE A With Acute Over Breve
ắ ắ ắ ắ | ắ ắ ắ ắ -- U+1EAF a With Acute Over Breve
Ằ Ằ Ằ Ằ | Ằ Ằ Ằ Ằ -- U+1EB0 A With Grave Over Breve
ằ ằ ằ ằ | ằ ằ ằ ằ -- U+1EB1 a With Grave Over Breve
Ẳ Ẳ Ẳ Ẳ | Ẳ Ẳ Ẳ Ẳ -- U+1EB2 A With HookAbove Over Breve
ẳ ẳ ẳ ẳ | ẳ ẳ ẳ ẳ -- U+1EB3 a With HookAbove Over Breve
Ẵ Ẵ Ẵ Ẵ | Ẵ Ẵ Ẵ Ẵ -- U+1EB4 A With Tilde Over Breve
ẵ ẵ ẵ ẵ | ẵ ẵ ẵ ẵ -- U+1EB5 a With Tilde Over Breve
Ặ Ặ Ặ Ặ | Ặ Ặ Ặ Ặ -- U+1EB6 A With Breve And Dot Below
ặ ặ ặ ặ | ặ ặ ặ ặ -- U+1EB7 a With Breve And Dot Below
Ẹ Ẹ Ẹ Ẹ | Ẹ Ẹ Ẹ Ẹ -- U+1EB8 E With DotBelow
ẹ ẹ ẹ ẹ | ẹ ẹ ẹ ẹ -- U+1EB9 e With DotBelow
Ẻ Ẻ Ẻ Ẻ | Ẻ Ẻ Ẻ Ẻ -- U+1EBA E With HookAbove
ẻ ẻ ẻ ẻ | ẻ ẻ ẻ ẻ -- U+1EBB e With HookAbove
Ẽ Ẽ Ẽ Ẽ | Ẽ Ẽ Ẽ Ẽ -- U+1EBC E With Tilde
ẽ ẽ ẽ ẽ | ẽ ẽ ẽ ẽ -- U+1EBD e With Tilde
Ế Ế Ế Ế | Ế Ế Ế Ế -- U+1EBE E With Acute Over Circumflex
ế ế ế ế | ế ế ế ế -- U+1EBF e With Acute Over Circumflex
Ề Ề Ề Ề | Ề Ề Ề Ề -- U+1EC0 E With Grave Over Circumflex
ề ề ề ề | ề ề ề ề -- U+1EC1 e With Grave Over Circumflex
Ể Ể Ể Ể | Ể Ể Ể Ể -- U+1EC2 E With HookAbove Over Circumflex
ể ể ể ể | ể ể ể ể -- U+1EC3 e With HookAbove Over Circumflex
Ễ Ễ Ễ Ễ | Ễ Ễ Ễ Ễ -- U+1EC4 E With Tilde Over Circumflex
ễ ễ ễ ễ | ễ ễ ễ ễ -- U+1EC5 e With Tilde Over Circumflex
Ệ Ệ Ệ Ệ | Ệ Ệ Ệ Ệ -- U+1EC6 E With Circumflex And DotBelow
ệ ệ ệ ệ | ệ ệ ệ ệ -- U+1EC7 e With Circumflex And DotBelow
Ỉ Ỉ Ỉ Ỉ | Ỉ Ỉ Ỉ Ỉ -- U+1EC8 I With HookAbove
ỉ ỉ ỉ ỉ | ỉ ỉ ỉ ỉ -- U+1EC9 i With HookAbove
Ị Ị Ị Ị | Ị Ị Ị Ị -- U+1ECA I With DotBelow
ị ị ị ị | ị ị ị ị -- U+1ECB i With DotBelow
Ọ Ọ Ọ Ọ | Ọ Ọ Ọ Ọ -- U+1ECC O With DotBelow
ọ ọ ọ ọ | ọ ọ ọ ọ -- U+1ECD o With DotBelow
Ỏ Ỏ Ỏ Ỏ | Ỏ Ỏ Ỏ Ỏ -- U+1ECE O With HookAbove
ỏ ỏ ỏ ỏ | ỏ ỏ ỏ ỏ -- U+1ECF o With HookAbove
Ố Ố Ố Ố | Ố Ố Ố Ố -- U+1ED0 O With Acute Over Circumflex
ố ố ố ố | ố ố ố ố -- U+1ED1 o With Acute Over Circumflex
Ồ Ồ Ồ Ồ | Ồ Ồ Ồ Ồ -- U+1ED2 O With Grave Over Circumflex

ồ ồ ồ ồ | ồ ồ ồ ồ -- U+1ED3 o With Grave Over Circumflex
Ổ Ổ Ổ Ổ | Ổ Ổ Ổ Ổ -- U+1ED4 O With HookAbove Over Circumflex
ổ ổ ổ ổ | ổ ổ ổ ổ -- U+1ED5 o With HookAbove Over Circumflex
Ỗ Ỗ Ỗ Ỗ | Ỗ Ỗ Ỗ Ỗ -- U+1ED6 O With Tilde Over Circumflex
ỗ ỗ ỗ ỗ | ỗ ỗ ỗ ỗ -- U+1ED7 o With Tilde Over Circumflex
Ộ Ộ Ộ Ộ | Ộ Ộ Ộ Ộ -- U+1ED8 O With Circumflex And DotBelow
ộ ộ ộ ộ | ộ ộ ộ ộ -- U+1ED9 o With Circumflex And DotBelow
Ớ Ớ Ớ Ớ | Ớ Ớ Ớ Ớ -- U+1EDA O Horn With Acute
ớ ớ ớ ớ | ớ ớ ớ ớ -- U+1EDB o Horn With Acute
Ờ Ờ Ờ Ờ | Ờ Ờ Ờ Ờ -- U+1EDC O Horn With Grave
ờ ờ ờ ờ | ờ ờ ờ ờ -- U+1EDD o Horn With Grave
Ở Ở Ở Ở | Ở Ở Ở Ở -- U+1EDE O Horn With HookAbove
ở ở ở ở | ở ở ở ở -- U+1EDF o Horn With HookAbove
Ỡ Ỡ Ỡ Ỡ | Ỡ Ỡ Ỡ Ỡ -- U+1EE0 O Horn With Tilde
ỡ ỡ ỡ ỡ | ỡ ỡ ỡ ỡ -- U+1EE1 o Horn With Tilde
Ợ Ợ Ợ Ợ | Ợ Ợ Ợ Ợ -- U+1EE2 O Horn With DotBelow
ợ ợ ợ ợ | ợ ợ ợ ợ -- U+1EE3 o Horn With DotBelow
Ụ Ụ Ụ Ụ | Ụ Ụ Ụ Ụ -- U+1EE4 U With DotBelow
ụ ụ ụ ụ | ụ ụ ụ ụ -- U+1EE5 u With DotBelow
Ủ Ủ Ủ Ủ | Ủ Ủ Ủ Ủ -- U+1EE6 U With HookAbove
ủ ủ ủ ủ | ủ ủ ủ ủ -- U+1EE7 u With HookAbove
Ứ Ứ Ứ Ứ | Ứ Ứ Ứ Ứ -- U+1EE8 U Horn With Acute
ứ ứ ứ ứ | ứ ứ ứ ứ -- U+1EE9 u Horn With Acute
Ừ Ừ Ừ Ừ | Ừ Ừ Ừ Ừ -- U+1EEA U Horn With Grave
ừ ừ ừ ừ | ừ ừ ừ ừ -- U+1EEB u Horn With Grave
Ử Ử Ử Ử | Ử Ử Ử Ử -- U+1EEC U Horn With Hook Above
ử ử ử ử | ử ử ử ử -- U+1EED u Horn With Hook Above
Ữ Ữ Ữ Ữ | Ữ Ữ Ữ Ữ -- U+1EEE U Horn With Tilde
ữ ữ ữ ữ | ữ ữ ữ ữ -- U+1EEF u Horn With Tilde
Ự Ự Ự Ự | Ự Ự Ự Ự -- U+1EF0 U Horn With Dot Below
ự ự ự ự | ự ự ự ự -- U+1EF1 u Horn With Dot Below

Latin general extensions

Ỳ Ỳ Ỳ Ỳ | Ỳ Ỳ Ỳ Ỳ -- U+1EF2 Y With Grave
ỳ ỳ ỳ ỳ | ỳ ỳ ỳ ỳ -- U+1EF3 y With Grave
Ỵ Ỵ Ỵ Ỵ | Ỵ Ỵ Ỵ Ỵ -- U+1EF4 Y With DotBelow
ỵ ỵ ỵ ỵ | ỵ ỵ ỵ ỵ -- U+1EF5 y With DotBelow
Ỷ Ỷ Ỷ Ỷ | Ỷ Ỷ Ỷ Ỷ -- U+1EF6 Y With HookAbove
ỷ ỷ ỷ ỷ | ỷ ỷ ỷ ỷ -- U+1EF7 y With HookAbove
Ỹ Ỹ Ỹ Ỹ | Ỹ Ỹ Ỹ Ỹ -- U+1EF8 Y With Tilde
ỹ ỹ ỹ ỹ | ỹ ỹ ỹ ỹ -- U+1EF9 y With Tilde

Greek Extended (U+1F00 - U+1FFF)

Precomposed polytonic Greek

ἀ ἁ ἂ ἃ | ἀ ἁ ἂ ἃ -- U+1F00 alpha with psili
ἀ ἁ ἂ ἃ | ἀ ἁ ἂ ἃ -- U+1F01 alpha with dasia
ἀ ἁ ἂ ἃ | ἀ ἁ ἂ ἃ -- U+1F02 alpha with psili and varia
ἀ ἁ ἂ ἃ | ἀ ἁ ἂ ἃ -- U+1F03 alpha with dasia and varia
ἄ ἅ ἄ ἅ | ἄ ἅ ἄ ἅ -- U+1F04 alpha with psili and oxia
ἄ ἅ ἄ ἅ | ἄ ἅ ἄ ἅ -- U+1F05 alpha with dasia and oxia
ἆ ἇ ἆ ἇ | ἆ ἇ ἆ ἇ -- U+1F06 alpha with psili and perispomeni
ἆ ἇ ἆ ἇ | ἆ ἇ ἆ ἇ -- U+1F07 alpha with dasia and perispomeni
Ἀ Ἁ Ἂ Ἃ | Ἀ Ἁ Ἂ Ἃ -- U+1F08 Alpha with psili
Ἀ Ἁ Ἂ Ἃ | Ἀ Ἁ Ἂ Ἃ -- U+1F09 Alpha with dasia
Ἀ Ἁ Ἂ Ἃ | Ἀ Ἁ Ἂ Ἃ -- U+1F0A Alpha with psili and varia
Ἀ Ἁ Ἂ Ἃ | Ἀ Ἁ Ἂ Ἃ -- U+1F0B Alpha with dasia and varia
Ἄ Ἅ Ἄ Ἅ | Ἄ Ἅ Ἄ Ἅ -- U+1F0C Alpha with psili and oxia
Ἄ Ἅ Ἄ Ἅ | Ἄ Ἅ Ἄ Ἅ -- U+1F0D Alpha with dasia and oxia
Ἆ Ἇ Ἆ Ἇ | Ἆ Ἇ Ἆ Ἇ -- U+1F0E Alpha with psili and perispomeni
Ἆ Ἇ Ἆ Ἇ | Ἆ Ἇ Ἆ Ἇ -- U+1F0F Alpha with dasia and perispomeni
ἐ ἑ ἒ ἓ | ἐ ἑ ἒ ἓ -- U+1F10 epsilon with psili
ἐ ἑ ἒ ἓ | ἐ ἑ ἒ ἓ -- U+1F11 epsilon with dasia
ἐ ἑ ἒ ἓ | ἐ ἑ ἒ ἓ -- U+1F12 epsilon with psili and varia
ἐ ἑ ἒ ἓ | ἐ ἑ ἒ ἓ -- U+1F13 epsilon with dasia and varia
ἔ ἕ ἔ ἕ | ἔ ἕ ἔ ἕ -- U+1F14 epsilon with psili and oxia
ἔ ἕ ἔ ἕ | ἔ ἕ ἔ ἕ -- U+1F15 epsilon with dasia and oxia
Ἐ Ἑ Ἒ Ἓ | Ἐ Ἑ Ἒ Ἓ -- U+1F18 Epsilon with psili
Ἐ Ἑ Ἒ Ἓ | Ἐ Ἑ Ἒ Ἓ -- U+1F19 Epsilon with dasia
Ἐ Ἑ Ἒ Ἓ | Ἐ Ἑ Ἒ Ἓ -- U+1F1A Epsilon with psili and varia
Ἐ Ἑ Ἒ Ἓ | Ἐ Ἑ Ἒ Ἓ -- U+1F1B Epsilon with dasia and varia
Ἔ Ἕ Ἔ Ἕ | Ἔ Ἕ Ἔ Ἕ -- U+1F1C Epsilon with psili and oxia
Ἔ Ἕ Ἔ Ἕ | Ἔ Ἕ Ἔ Ἕ -- U+1F1D Epsilon with dasia and oxia
ἠ ἡ ἢ ἣ | ἠ ἡ ἢ ἣ -- U+1F20 eta with psili
ἠ ἡ ἢ ἣ | ἠ ἡ ἢ ἣ -- U+1F21 eta with dasia
ἠ ἡ ἢ ἣ | ἠ ἡ ἢ ἣ -- U+1F22 eta with psili and varia
ἠ ἡ ἢ ἣ | ἠ ἡ ἢ ἣ -- U+1F23 eta with dasia and varia
ἤ ἥ ἤ ἥ | ἤ ἥ ἤ ἥ -- U+1F24 eta with psili and oxia
ἤ ἥ ἤ ἥ | ἤ ἥ ἤ ἥ -- U+1F25 eta with dasia and oxia
ἦ ἧ ἦ ἧ | ἦ ἧ ἦ ἧ -- U+1F26 eta with psili and perispomeni
ἦ ἧ ἦ ἧ | ἦ ἧ ἦ ἧ -- U+1F27 eta with dasia and perispomeni
Ἠ Ἡ Ἢ Ἣ | Ἠ Ἡ Ἢ Ἣ -- U+1F28 Eta with psili
Ἠ Ἡ Ἢ Ἣ | Ἠ Ἡ Ἢ Ἣ -- U+1F29 Eta with dasia
Ἠ Ἡ Ἢ Ἣ | Ἠ Ἡ Ἢ Ἣ -- U+1F2A Eta with psili and varia
Ἠ Ἡ Ἢ Ἣ | Ἠ Ἡ Ἢ Ἣ -- U+1F2B Eta with dasia and varia

Ἤ Ἤ Ἤ Ἤ | Ἤ Ἤ Ἤ Ἤ -- U+1F2C Eta with psili and oxia
Ἥ Ἥ Ἥ Ἥ | Ἥ Ἥ Ἥ Ἥ -- U+1F2D Eta with dasia and oxia
Ἦ Ἦ Ἦ Ἦ | Ἦ Ἦ Ἦ Ἦ -- U+1F2E Eta with psili and perispomeni
Ἧ Ἧ Ἧ Ἧ | Ἧ Ἧ Ἧ Ἧ -- U+1F2F Eta with dasia and perispomeni
ἰ ἰ ἰ ἰ | ἰ ἰ ἰ ἰ -- U+1F30 iota with psili
ἱ ἱ ἱ ἱ | ἱ ἱ ἱ ἱ -- U+1F31 iota with dasia
ἲ ἲ ἲ ἲ | ἲ ἲ ἲ ἲ -- U+1F32 iota with psili and varia
ἳ ἳ ἳ ἳ | ἳ ἳ ἳ ἳ -- U+1F33 iota with dasia and varia
ἴ ἴ ἴ ἴ | ἴ ἴ ἴ ἴ -- U+1F34 iota with psili and oxia
ἵ ἵ ἵ ἵ | ἵ ἵ ἵ ἵ -- U+1F35 iota with dasia and oxia
ἶ ἶ ἶ ἶ | ἶ ἶ ἶ ἶ -- U+1F36 iota with psili and perispomeni
ἷ ἷ ἷ ἷ | ἷ ἷ ἷ ἷ -- U+1F37 iota with dasia and perispomeni
Ἰ Ἰ Ἰ Ἰ | Ἰ Ἰ Ἰ Ἰ -- U+1F38 Iota with psili
Ἱ Ἱ Ἱ Ἱ | Ἱ Ἱ Ἱ Ἱ -- U+1F39 Iota with dasia
Ἲ Ἲ Ἲ Ἲ | Ἲ Ἲ Ἲ Ἲ -- U+1F3A Iota with psili and varia
Ἳ Ἳ Ἳ Ἳ | Ἳ Ἳ Ἳ Ἳ -- U+1F3B Iota with dasia and varia
Ἴ Ἴ Ἴ Ἴ | Ἴ Ἴ Ἴ Ἴ -- U+1F3C Iota with psili and oxia
Ἵ Ἵ Ἵ Ἵ | Ἵ Ἵ Ἵ Ἵ -- U+1F3D Iota with dasia and oxia
Ἶ Ἶ Ἶ Ἶ | Ἶ Ἶ Ἶ Ἶ -- U+1F3E Iota with psili and perispomeni
Ἷ Ἷ Ἷ Ἷ | Ἷ Ἷ Ἷ Ἷ -- U+1F3F Iota with dasia and perispomeni
ὀ ὀ ὀ ὀ | ὀ ὀ ὀ ὀ -- U+1F40 omicron with psili
ὁ ὁ ὁ ὁ | ὁ ὁ ὁ ὁ -- U+1F41 omicron with dasia
ὂ ὂ ὂ ὂ | ὂ ὂ ὂ ὂ -- U+1F42 omicron with psili and varia
ὃ ὃ ὃ ὃ | ὃ ὃ ὃ ὃ -- U+1F43 omicron with dasia and varia
ὄ ὄ ὄ ὄ | ὄ ὄ ὄ ὄ -- U+1F44 omicron with psili and oxia
ὅ ὅ ὅ ὅ | ὅ ὅ ὅ ὅ -- U+1F45 omicron with dasia and oxia
Ὀ Ὀ Ὀ Ὀ | Ὀ Ὀ Ὀ Ὀ -- U+1F48 Omicron with psili
Ὁ Ὁ Ὁ Ὁ | Ὁ Ὁ Ὁ Ὁ -- U+1F49 Omicron with dasia
Ὂ Ὂ Ὂ Ὂ | Ὂ Ὂ Ὂ Ὂ -- U+1F4A Omicron with psili and varia
Ὃ Ὃ Ὃ Ὃ | Ὃ Ὃ Ὃ Ὃ -- U+1F4B Omicron with dasia and varia
Ὄ Ὄ Ὄ Ὄ | Ὄ Ὄ Ὄ Ὄ -- U+1F4C Omicron with psili and oxia
Ὅ Ὅ Ὅ Ὅ | Ὅ Ὅ Ὅ Ὅ -- U+1F4D Omicron with dasia and oxia
ὐ ὐ ὐ ὐ | ὐ ὐ ὐ ὐ -- U+1F50 upsilon with psili
ὑ ὑ ὑ ὑ | ὑ ὑ ὑ ὑ -- U+1F51 upsilon with dasia
ὒ ὒ ὒ ὒ | ὒ ὒ ὒ ὒ -- U+1F52 upsilon with psili and varia
ὓ ὓ ὓ ὓ | ὓ ὓ ὓ ὓ -- U+1F53 upsilon with dasia and varia
ὔ ὔ ὔ ὔ | ὔ ὔ ὔ ὔ -- U+1F54 upsilon with psili and oxia
ὕ ὕ ὕ ὕ | ὕ ὕ ὕ ὕ -- U+1F55 upsilon with dasia and oxia
ὖ ὖ ὖ ὖ | ὖ ὖ ὖ ὖ -- U+1F56 upsilon with psili and perispomeni
ὗ ὗ ὗ ὗ | ὗ ὗ ὗ ὗ -- U+1F57 upsilon with dasia and perispomeni
Ὑ Ὑ Ὑ Ὑ | Ὑ Ὑ Ὑ Ὑ -- U+1F59 Upsilon with dasia
Ὓ Ὓ Ὓ Ὓ | Ὓ Ὓ Ὓ Ὓ -- U+1F5B Upsilon with dasia and varia

Ὗ Ὗ Ὗ Ὗ | Ὗ Ὗ Ὗ Ὗ -- U+1F5D Upsilon with dasia and oxia
Ὗ Ὗ Ὗ Ὗ | Ὗ Ὗ Ὗ Ὗ -- U+1F5F Upsilon with dasia and perispomeni
ὠ ὠ ὠ ὠ | ὠ ὠ ὠ ὠ -- U+1F60 omega with psili
ὡ ὡ ὡ ὡ | ὡ ὡ ὡ ὡ -- U+1F61 omega with dasia
ὢ ὢ ὢ ὢ | ὢ ὢ ὢ ὢ -- U+1F62 omega with psili and varia
ὣ ὣ ὣ ὣ | ὣ ὣ ὣ ὣ -- U+1F63 omega with dasia and varia
ὤ ὤ ὤ ὤ | ὤ ὤ ὤ ὤ -- U+1F64 omega with psili and oxia
ὥ ὥ ὥ ὥ | ὥ ὥ ὥ ὥ -- U+1F65 omega with dasia and oxia
ὦ ὦ ὦ ὦ | ὦ ὦ ὦ ὦ -- U+1F66 omega with psili and perispomeni
ὧ ὧ ὧ ὧ | ὧ ὧ ὧ ὧ -- U+1F67 omega with dasia and perispomeni
Ὠ Ὠ Ὠ Ὠ | Ὠ Ὠ Ὠ Ὠ -- U+1F68 Omega with psili
Ὡ Ὡ Ὡ Ὡ | Ὡ Ὡ Ὡ Ὡ -- U+1F69 Omega with dasia
Ὢ Ὢ Ὢ Ὢ | Ὢ Ὢ Ὢ Ὢ -- U+1F6A Omega with psili and varia
Ὣ Ὣ Ὣ Ὣ | Ὣ Ὣ Ὣ Ὣ -- U+1F6B Omega with dasia and varia
Ὤ Ὤ Ὤ Ὤ | Ὤ Ὤ Ὤ Ὤ -- U+1F6C Omega with psili and oxia
Ὥ Ὥ Ὥ Ὥ | Ὥ Ὥ Ὥ Ὥ -- U+1F6D Omega with dasia and oxia
Ὦ Ὦ Ὦ Ὦ | Ὦ Ὦ Ὦ Ὦ -- U+1F6E Omega with psili and perispomeni
Ὧ Ὧ Ὧ Ὧ | Ὧ Ὧ Ὧ Ὧ -- U+1F6F Omega with dasia and perispomeni
ὰ ὰ ὰ ὰ | ὰ ὰ ὰ ὰ -- U+1F70 alpha with varia
ά ά ά ά | ά ά ά ά -- U+1F71 alpha with oxia
ὲ ὲ ὲ ὲ | ὲ ὲ ὲ ὲ -- U+1F72 epsilon with varia
έ έ έ έ | έ έ έ έ -- U+1F73 epsilon with oxia
ὴ ὴ ὴ ὴ | ὴ ὴ ὴ ὴ -- U+1F74 eta with varia
ή ή ή ή | ή ή ή ή -- U+1F75 eta with oxia
ὶ ὶ ὶ ὶ | ὶ ὶ ὶ ὶ -- U+1F76 iota with varia
ί ί ί ί | ί ί ί ί -- U+1F77 iota with oxia
ὸ ὸ ὸ ὸ | ὸ ὸ ὸ ὸ -- U+1F78 omicron with varia
ό ό ό ό | ό ό ό ό -- U+1F79 omicron with oxia
ὺ ὺ ὺ ὺ | ὺ ὺ ὺ ὺ -- U+1F7A upsilon with varia
ύ ύ ύ ύ | ύ ύ ύ ύ -- U+1F7B upsilon with oxia
ὼ ὼ ὼ ὼ | ὼ ὼ ὼ ὼ -- U+1F7C omega with varia
ώ ώ ώ ώ | ώ ώ ώ ώ -- U+1F7D omega with oxia
ᾀ ᾀ ᾀ ᾀ | ᾀ ᾀ ᾀ ᾀ -- U+1F80 alpha with psili and ypogegrammeni
ᾁ ᾁ ᾁ ᾁ | ᾁ ᾁ ᾁ ᾁ -- U+1F81 alpha with dasia and ypogegrammeni
ᾂ ᾂ ᾂ ᾂ | ᾂ ᾂ ᾂ ᾂ -- U+1F82 alpha with psili and varia and ypogegrammeni
ᾃ ᾃ ᾃ ᾃ | ᾃ ᾃ ᾃ ᾃ -- U+1F83 alpha with dasia and varia and ypogegrammeni
ᾄ ᾄ ᾄ ᾄ | ᾄ ᾄ ᾄ ᾄ -- U+1F84 alpha with psili and oxia and ypogegrammeni
ᾅ ᾅ ᾅ ᾅ | ᾅ ᾅ ᾅ ᾅ -- U+1F85 alpha with dasia and oxia and ypogegrammeni
ᾆ ᾆ ᾆ ᾆ | ᾆ ᾆ ᾆ ᾆ -- U+1F86 alpha with psili and perispomeni and ypogegrammeni
ᾇ ᾇ ᾇ ᾇ | ᾇ ᾇ ᾇ ᾇ -- U+1F87 alpha with dasia and perispomeni and ypogegrammeni
ᾈ ᾈ ᾈ ᾈ | ᾈ ᾈ ᾈ ᾈ -- U+1F88 Alpha with psili and prosgegrammeni
ᾉ ᾉ ᾉ ᾉ | ᾉ ᾉ ᾉ ᾉ -- U+1F89 Alpha with dasia and prosgegrammeni

ᾊ ᾋ ᾌ ᾍ | ᾊ ᾋ ᾌ ᾍ -- U+1F8A Alpha with psili and varia and prosgegrammeni
ᾎ ᾏ ᾎ ᾏ | ᾎ ᾏ ᾎ ᾏ -- U+1F8B Alpha with dasia and varia and prosgegrammeni
ᾊ ᾋ ᾌ ᾍ | ᾊ ᾋ ᾌ ᾍ -- U+1F8C Alpha with psili and oxia and prosgegrammeni
ᾎ ᾏ ᾎ ᾏ | ᾎ ᾏ ᾎ ᾏ -- U+1F8D Alpha with dasia and oxia and prosgegrammeni
ᾐ ᾑ ᾒ ᾓ | ᾐ ᾑ ᾒ ᾓ -- U+1F8E Alpha with psili and perispomeni and prosgegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F8F Alpha with dasia and perispomeni and prosgegrammeni
ᾐ ᾑ ᾒ ᾓ | ᾐ ᾑ ᾒ ᾓ -- U+1F90 eta with psili and ypogegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F91 eta with dasia and ypogegrammeni
ᾐ ᾑ ᾒ ᾓ | ᾐ ᾑ ᾒ ᾓ -- U+1F92 eta with psili and varia and ypogegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F93 eta with dasia and varia and ypogegrammeni
ᾐ ᾑ ᾒ ᾓ | ᾐ ᾑ ᾒ ᾓ -- U+1F94 eta with psili and oxia and ypogegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F95 eta with dasia and oxia and ypogegrammeni
ᾐ ᾑ ᾒ ᾓ | ᾐ ᾑ ᾒ ᾓ -- U+1F96 eta with psili and perispomeni and ypogegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F97 eta with dasia and perispomeni and ypogegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F98 Eta with psili and prosgegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F99 Eta with dasia and prosgegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F9A Eta with psili and varia and prosgegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F9B Eta with dasia and varia and prosgegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F9C Eta with psili and oxia and prosgegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F9D Eta with dasia and oxia and prosgegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F9E Eta with psili and perispomeni and prosgegrammeni
ᾘ ᾙ ᾚ ᾛ | ᾘ ᾙ ᾚ ᾛ -- U+1F9F Eta with dasia and perispomeni and prosgegrammeni
ᾠ ᾡ ᾠ ᾡ | ᾠ ᾡ ᾠ ᾡ -- U+1FA0 omega with psili and ypogegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FA1 omega with dasia and ypogegrammeni
ᾠ ᾡ ᾠ ᾡ | ᾠ ᾡ ᾠ ᾡ -- U+1FA2 omega with psili and varia and ypogegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FA3 omega with dasia and varia and ypogegrammeni
ᾠ ᾡ ᾠ ᾡ | ᾠ ᾡ ᾠ ᾡ -- U+1FA4 omega with psili and oxia and ypogegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FA5 omega with dasia and oxia and ypogegrammeni
ᾠ ᾡ ᾠ ᾡ | ᾠ ᾡ ᾠ ᾡ -- U+1FA6 omega with psili and perispomeni and ypogegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FA7 omega with dasia and perispomeni and ypogegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FA8 Omega with psili and prosgegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FA9 Omega with dasia and prosgegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FAA Omega with psili and varia and prosgegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FAB Omega with dasia and varia and prosgegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FAC Omega with psili and oxia and prosgegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FAD Omega with dasia and oxia and prosgegrammeni
ᾨ ᾩ ᾨ ᾩ | ᾨ ᾩ ᾨ ᾩ -- U+1FAE Omega with psili and perispomeni and prosgegrammeni

ᾯ ᾯ ᾯ ᾯ | ᾯᾯᾯᾯ -- U+1FAF Omega with dasia and perispomeni and prosgegrammeni
ᾰ ᾰ ᾰ ᾰ | ᾰᾰᾰᾰ -- U+1FB0 alpha with vrachy
ᾱ ᾱ ᾱ ᾱ | ᾱᾱᾱᾱ -- U+1FB1 alpha with macron
ᾲ ᾲ ᾲ ᾲ | ᾲᾲᾲᾲ -- U+1FB2 alpha with varia and ypogegrammeni
ᾳ ᾳ ᾳ ᾳ | ᾳᾳᾳᾳ -- U+1FB3 alpha with ypogegrammeni
ᾴ ᾴ ᾴ ᾴ | ᾴᾴᾴᾴ -- U+1FB4 alpha with oxia and ypogegrammeni
ᾶ ᾶ ᾶ ᾶ | ᾶᾶᾶᾶ -- U+1FB6 alpha with perispomeni
ᾷ ᾷ ᾷ ᾷ | ᾷᾷᾷᾷ -- U+1FB7 alpha with perispomeni and ypogegrammeni
Ᾰ Ᾰ Ᾰ Ᾰ | ᾸᾸᾸᾸ -- U+1FB8 Alpha with vrachy
Ᾱ Ᾱ Ᾱ Ᾱ | ᾹᾹᾹᾹ -- U+1FB9 Alpha with macron
Ὰ Ὰ Ὰ Ὰ | ᾺᾺᾺᾺ -- U+1FBA Alpha with varia
Ά Ά Ά Ά | ΆΆΆΆ -- U+1FBB Alpha with oxia
ᾼ ᾼ ᾼ ᾼ | ᾼᾼᾼᾼ -- U+1FBC Alpha with prosgegrammeni
᾽ ᾽ ᾽ ᾽ | ᾽᾽᾽᾽ -- U+1FBD Koronis
 | ᾼᾼᾼᾼ -- U+1FBE Prosgegrammeni
῁ ῁ ῁ ῁ | ῁῁῁῁ -- U+1FBF Psili
῀ ῀ ῀ ῀ | ῀῀῀῀ -- U+1FC0 Perispomeni
῁ ῁ ῁ ῁ | ῁῁῁῁ -- U+1FC1 Dialytika And Perispomeni
ῂ ῂ ῂ ῂ | ῂῂῂῂ -- U+1FC2 eta with varia and ypogegrammeni
ῃ ῃ ῃ ῃ | ῃῃῃῃ -- U+1FC3 eta with ypogegrammeni
ῄ ῄ ῄ ῄ | ῄῄῄῄ -- U+1FC4 eta with oxia and ypogegrammeni
ῆ ῆ ῆ ῆ | ῆῆῆῆ -- U+1FC6 eta with perispomeni
ῇ ῇ ῇ ῇ | ῇῇῇῇ -- U+1FC7 eta with perispomeni and ypogegrammeni
Ὲ Ὲ Ὲ Ὲ | ῈῈῈῈ -- U+1FC8 Epsilon with varia
Έ Έ Έ Έ | ΈΈΈΈ -- U+1FC9 Epsilon with oxia
Ὴ Ὴ Ὴ Ὴ | ῊῊῊῊ -- U+1FCA Eta with varia
Ή Ή Ή Ή | ΉΉΉΉ -- U+1FCB Eta with oxia
ῌ ῌ ῌ ῌ | ῌῌῌῌ -- U+1FCC Eta with prosgegrammeni
῍ ῍ ῍ ῍ | ῍῍῍῍ -- U+1FCD Psili And Varia
῎ ῎ ῎ ῎ | ῎῎῎῎ -- U+1FCE Psili And Oxia
῏ ῏ ῏ ῏ | ῏῏῏῏ -- U+1FCF Psili And Perispomeni
ῐ ῐ ῐ ῐ | ῐῐῐῐ -- U+1FD0 iota with vrachy
ῑ ῑ ῑ ῑ | ῑῑῑῑ -- U+1FD1 iota with macron
ῒ ῒ ῒ ῒ | ῒῒῒῒ -- U+1FD2 iota with dialytika and varia
ΐ ΐ ΐ ΐ | ΐΐΐΐ -- U+1FD3 iota with dialytika and oxia
ῖ ῖ ῖ ῖ | ῖῖῖῖ -- U+1FD6 iota with perispomeni
ῗ ῗ ῗ ῗ | ῗῗῗῗ -- U+1FD7 iota with dialytika and perispomeni
Ῐ Ῐ Ῐ Ῐ | ῘῘῘῘ -- U+1FD8 Iota with vrachy
Ῑ Ῑ Ῑ Ῑ | ῙῙῙῙ -- U+1FD9 Iota with macron
Ὶ Ὶ Ὶ Ὶ | ῚῚῚῚ -- U+1FDA Iota with varia
Ί Ί Ί Ί | ΊΊΊΊ -- U+1FDB Iota with oxia

῞ ῞ ῞ ῞ | ῞῞῞῞ -- U+1FDD Dasia And Varia
῟ ῟ ῟ ῟ | ῟῟῟῟ -- U+1FDE Dasia And Oxia
῝ ῝ ῝ ῝ | ῝῝῝῝ -- U+1FDF Dasia And Perispomeni
῰ ῰ ῰ ῰ | ῰ ῰ ῰ ῰ -- U+1FE0 upsilon with vrachy
῱ ῱ ῱ ῱ | ῱ ῱ ῱ ῱ -- U+1FE1 upsilon with macron
ῲ ῲ ῲ ῲ | ῲ ῲ ῲ ῲ -- U+1FE2 upsilon with dialytika and varia
ῳ ῳ ῳ ῳ | ῳ ῳ ῳ ῳ -- U+1FE3 upsilon with dialytika and oxia
ῴ ῴ ῴ ῴ | ῴ ῴ ῴ ῴ -- U+1FE4 rho with psili
῵ ῵ ῵ ῵ | ῵ ῵ ῵ ῵ -- U+1FE5 rho with dasia
ῶ ῶ ῶ ῶ | ῶ ῶ ῶ ῶ -- U+1FE6 upsilon with perispomeni
ῷ ῷ ῷ ῷ | ῷ ῷ ῷ ῷ -- U+1FE7 upsilon with dialytika and perispomeni
Ῠ Ῠ Ῠ Ῠ | Ῠ Ῠ Ῠ Ῠ -- U+1FE8 Upsilon with vrachy
Ῡ Ῡ Ῡ Ῡ | Ῡ Ῡ Ῡ Ῡ -- U+1FE9 Upsilon with macron
Ὺ Ὺ Ὺ Ὺ | Ὺ Ὺ Ὺ Ὺ -- U+1FEA Upsilon with varia
Ύ Ύ Ύ Ύ | Ύ Ύ Ύ Ύ -- U+1FEB Upsilon with oxia
Ῥ Ῥ Ῥ Ῥ | Ῥ Ῥ Ῥ Ῥ -- U+1FEC Rho with dasia
῭ ῭ ῭ ῭ | ῭῭῭῭ -- U+1FED Dialytika And Varia
΅ ΅ ΅ ΅ | ΅΅΅΅ -- U+1FEE Dialytika And Oxia
` ` ` ` | ```` -- U+1FEF Varia
ῲ ῲ ῲ ῲ | ῲ ῲ ῲ ῲ -- U+1FF2 omega with varia and ypogegrammeni
ῳ ῳ ῳ ῳ | ῳ ῳ ῳ ῳ -- U+1FF3 omega with ypogegrammeni
ῴ ῴ ῴ ῴ | ῴ ῴ ῴ ῴ -- U+1FF4 omega with oxia and ypogegrammeni
ῶ ῶ ῶ ῶ | ῶ ῶ ῶ ῶ -- U+1FF6 omega with perispomeni
ῷ ῷ ῷ ῷ | ῷ ῷ ῷ ῷ -- U+1FF7 omega with perispomeni and ypogegrammeni
Ὸ Ὸ Ὸ Ὸ | Ὸ Ὸ Ὸ Ὸ -- U+1FF8 Omicron with varia
Ό Ό Ό Ό | Ό Ό Ό Ό -- U+1FF9 Omicron with oxia
Ὼ Ὼ Ὼ Ὼ | Ὼ Ὼ Ὼ Ὼ -- U+1FFA Omega with varia
Ώ Ώ Ώ Ώ | Ώ Ώ Ώ Ώ -- U+1FFB Omega with oxia
ῼ ῼ ῼ ῼ | ῼ ῼ ῼ ῼ -- U+1FFC Omega with prosgegrammeni
´ ´ ´ ´ | ´´´´ -- U+1FFD Oxia
᾽ ᾽ ᾽ ᾽ | ᾽᾽᾽᾽ -- U+1FFE Dasia

General Punctuation (U+2000 - U+206F)

Spaces

| -- U+2000 en quad = 2 spaces
| -- U+2001 em quad = 4 spaces
| -- U+2002 en space = 2 spaces
| -- U+2003 em space = 4 spaces
| -- U+2004 em/3 space = 2 spaces
| -- U+2005 em/4 space = 1 space
| -- U+2006 em/6 space = 1 space
| -- U+2007 figure space = 1 space
| -- U+2008 punct space = 1 space
| -- U+2009 thin space = 1 space
| -- U+200A hair space = 1 space
| -- U+200B zero width space = 0 spaces -- invisible format char

Format characters

| |||| -- U+200C zero width non-joiner = 0 spaces -- invisible format char
| -- U+200D zero width joiner = 0 spaces -- invisible format char
| -- U+200E left-to-right mark = 0 spaces -- invisible format char
| -- U+200F right-to-left mark = 0 spaces -- invisible format char

Dashes

‐ ‐ ‐ ‐ | ‐ ‐ ‐ ‐ ‐ -- U+2010 Hyphen = hyphen-minus (U+002D)
‑ ‑ ‑ ‑ | ‑ ‑ ‑ ‑ ‑ -- U+2011 Non-Breaking Hyphen = hyphen-minus (U+002D)
‒ ‒ ‒ ‒ | ‒ ‒ ‒ ‒ ‒ -- U+2012 Figure dash = en-dash
– – – – | – – – – – -- U+2013 en dash
— — — — | — — — — — -- U+2014 em dash
― ― ― ― | ― ― ― ― ― -- U+2015 Horz bar = em dash

General punctuation

‖ ‖ ‖ ‖ | ‖ ‖ ‖ ‖ ‖ -- U+2016 double vertical line = ‖
‗ ‗ ‗ ‗ | ‗ ‗ ‗ ‗ ‗ -- U+2017 double low line
‘ ‘ ‘ ‘ | ‘ ‘ ‘ ‘ ‘ -- U+2018 left single quote (
’ ’ ’ ’ | ’ ’ ’ ’ ’ -- U+2019 right single quote)
‚ ‚ ‚ ‚ | ‚ ‚ ‚ ‚ ‚ -- U+201A single low-9 quote)
‛ ‛ ‛ ‛ | ‛ ‛ ‛ ‛ ‛ -- U+201B single high-reversed-9 quote (= left single quote -- updated font
“ “ “ “ | “ “ “ “ “ -- U+201C left double quote (
” ” ” ” | ” ” ” ” ” -- U+201D right double quote)
„ „ „ „ | „ „ „ „ „ -- U+201E double low-9 quote)
‟ ‟ ‟ ‟ | ‟ ‟ ‟ ‟ ‟ -- U+201F double high-reversed-9 quote (= left double quote -- updated font
† † † † | † † † † † -- U+2020 dagger
‡ ‡ ‡ ‡ | ‡ ‡ ‡ ‡ ‡ -- U+2021 double dagger
• • • • | • • • • • -- U+2022 bullet

‣ ‣ ‣ ‣ | ‣‣‣‣ -- U+2023 triangular bullet
. . . . | . . . . -- U+2024 one dot leader
.. .. | .. .. -- U+2025 two dot leader
… … … … | … … … … -- U+2026 horizontal ellipsis
· · · · | · · · · -- U+2027 hyphenation point = middle dot (U+00B7)

Format characters

| -- U+2028 line separator -- invisible format char
| -- U+2029 paragraph separator -- invisible format char
| -- U+202A left-to-right embedding -- invisible format char
| -- U+202B right-to-left embedding -- invisible format char
| -- U+202C pop dir formatting -- invisible format char
| -- U+202D left-to-right override -- invisible format char
| -- U+202E right-to-left override -- invisible format char
| -- U+202F narrow no-break space

General punctuation

‰ ‰ ‰ ‰ | ‰ ‰ ‰ ‰ -- U+2030 per mille sign
′ ′ ′ ′ | ′ ′ ′ ′ -- U+2032 prime
″ ″ ″ ″ | ″ ″ ″ ″ -- U+2033 double prime
‴ ‴ ‴ ‴ | ‴ ‴ ‴ ‴ -- U+2034 triple prime
‵ ‵ ‵ ‵ | ‵ ‵ ‵ ‵ -- U+2035 reversed prime
‶ ‶ ‶ ‶ | ‶ ‶ ‶ ‶ -- U+2036 double reversed prime
‷ ‷ ‷ ‷ | ‷ ‷ ‷ ‷ -- U+2037 triple reversed prime
| ^ ^ ^ ^ -- U+2038 caret
‹ ‹ ‹ ‹ | ‹ ‹ ‹ ‹ -- U+2039 left pointing angle quotes
› › › › | › › › › -- U+203A right pointing angle quotes
※ ※ ※ ※ | ※ ※ ※ ※ -- U+203B reference mark

Double punct for vert text

!! !! !! !! | ‼ ‼ ‼ ‼ -- U+203C double exclamation mark -- substitute compatible string

General punctuation

‾ ‾ ‾ ‾ | ‾ ‾ ‾ ‾ -- U+203E overline
- - - - | - - - - -- U+2043 hyphen bullet = hyphen-minus (U+002D)
/ / / / | //// -- U+2044 fraction slash

Double punct for vert text

?? ?? ?? ?? | ?? ?? ?? ?? -- U+2047 double question mark -- substitute compatible string
?! ?! ?! ?! | ?! ?! ?! ?! -- U+2048 question exclamation mark -- substitute compatible string
!? !? !? !? | ⁉ ⁉ ⁉ ⁉ -- U+2049 exclamation question mark -- substitute compatible string

General punctuation

~ ~ ~ ~ | ~ ~ ~ ~ -- U+2053 swung dash = tilde

```
Archaic punctuation
General punctuation
  ⁗  ⁗  ⁗  ⁗  |  ⁗ ⁗ ⁗ ⁗ -- U+2057 quad prime
Archaic punctuation
Space
              |        -- U+205F medium mathematical space = 1 space
Format character
        |     -- U+2060 word joiner = 0 spaces -- invisible format char
Invisible operators
        |     -- U+2061 function application = 0 spaces -- invisible format char
        |     -- U+2062 invisible times = 0 spaces -- invisible format char
        |     -- U+2063 invisible separator = 0 spaces -- invisible format char
        |     -- U+2064 invisible plus = 0 spaces -- invisible format char
```

Superscripts and Subscripts (U+2070 - U+209F)

ⁿ ⁿ ⁿ ⁿ | ⁿ ⁿ ⁿ ⁿ -- U+207F superscript n -- updated font

Curreny Symbols (U+20A0 - U+20CF)

€ € € € | € € € € -- U+20AC euro

Letterlike Symbols (U+2100 - U+214F)

a/c **a/c** *a/c* ***a/c*** | a/c **a/c** *a/c* ***a/c*** -- U+2100 account of = a/c -- substitute compatible string

a/s **a/s** *a/s* ***a/s*** | a/s **a/s** *a/s* ***a/s*** -- U+2101 addressed to the subject = a/s -- substitute compatible string

°C **°C** *°C* ***°C*** | °C **°C** *°C* ***°C*** -- U+2103 degree celsius -- substitute compatible string

c/o **c/o** *c/o* ***c/o*** | c/o **c/o** *c/o* ***c/o*** -- U+2105 Care of = c/o -- substitute compatible string

c/u **c/u** *c/u* ***c/u*** | c/u **c/u** *c/u* ***c/u*** -- U+2106 cada una = c/u -- substitute compatible string

°F **°F** *°F* ***°F*** | °F **°F** *°F* **°F** -- U+2109 degree fahrenheit -- substitute compatible string

ℓ ℓ ℓ ℓ | ℓ ℓ ℓ ℓ -- U+2113 Script small l

No. **No.** *No.* ***No.*** | No. **No.** *No.* **No.** -- U+2116 Numero sign = No. -- substitute compatible string

Rx **Rx** *Rx* ***Rx*** | Rx **Rx** *Rx* **Rx** -- U+211E prescription take = Rx -- substitute compatible string

TEL **TEL** *TEL* ***TEL*** | TEL **TEL** *TEL* **TEL** -- U+2121 telephone sign = TEL -- substitute compatible string

™ ™ ™ ™ | ™ ™ ™ ™ -- U+2122 trade mark sign

Ω Ω Ω Ω | Ω Ω Ω Ω -- U+2126 ohm sign

K K K K | K K K K -- U+212A kelvin sign

Å Å Å Å | Å Å Å Å -- U+212B angstrom sign = A-ring

e **e** *e* ***e*** | e **e** *e* **e** -- U+212E estimated symbol

FAX **FAX** *FAX* ***FAX*** | FAX **FAX** *FAX* **FAX** -- U+213B FACSIMILE SIGN = FAX -- substitute compatible string

Number Forms (U+2150 - U+218F)

Fractions

1/3 **1/3** *1/3* ***1/3*** | 1/3 **1/3** *1/3* ***1/3*** -- U+2153 Fraction 1/3 -- substitute compatible string

2/3 **2/3** *2/3* ***2/3*** | 2/3 **2/3** *2/3* ***2/3*** -- U+2154 Fraction 2/3 -- substitute compatible string

1/5 **1/5** *1/5* ***1/5*** | 1/5 **1/5** *1/5* ***1/5*** -- U+2155 Fraction 1/5 -- substitute compatible string

2/5 **2/5** *2/5* ***2/5*** | 2/5 **2/5** *2/5* ***2/5*** -- U+2156 Fraction 2/5 -- substitute compatible string

3/5 **3/5** *3/5* ***3/5*** | 3/5 **3/5** *3/5* ***3/5*** -- U+2157 Fraction 3/5 -- substitute compatible string

4/5 **4/5** *4/5* ***4/5*** | 4/5 **4/5** *4/5* ***4/5*** -- U+2158 Fraction 4/5 -- substitute compatible string

1/6 **1/6** *1/6* ***1/6*** | 1/6 **1/6** *1/6* ***1/6*** -- U+2159 Fraction 2/6 -- substitute compatible string

5/6 **5/6** *5/6* ***5/6*** | 5/6 **5/6** *5/6* ***5/6*** -- U+215A Fraction 2/6 -- substitute compatible string

1/8 **1/8** *1/8* ***1/8*** | 1/8 **1/8** *1/8* ***1/8*** -- U+215B Fraction 1/8 -- substitute compatible string

3/8 **3/8** *3/8* ***3/8*** | 3/8 **3/8** *3/8* ***3/8*** -- U+215C Fraction 3/8 -- substitute compatible string

5/8 **5/8** *5/8* ***5/8*** | 5/8 **5/8** *5/8* ***5/8*** -- U+215D Fraction 5/8 -- substitute compatible string

7/8 **7/8** *7/8* ***7/8*** | 7/8 **7/8** *7/8* ***7/8*** -- U+215E Fraction 7/8 -- substitute compatible string

1/ **1/** *1/* ***1/*** | 1/ **1/** *1/* ***1/*** -- U+215F Fraction Numerator 1/ -- substitute compatible string

Roman Numerals

I **I** *I* ***I*** | I **I** *I* ***I*** -- U+2160 Roman Numeral 1 I -- substitute compatible string

II **II** *II* ***II*** | II **II** *II* ***II*** -- U+2161 Roman Numeral 2 II -- substitute compatible string

III **III** *III* ***III*** | III **III** *III* ***III*** -- U+2162 Roman Numeral 3 III -- substitute compatible string

IV **IV** *IV* ***IV*** | IV **IV** *IV* ***IV*** -- U+2163 Roman Numeral 4 IV -- substitute compatible string

V **V** *V* ***V*** | V **V** *V* ***V*** -- U+2164 Roman Numeral 5 V -- substitute compatible string

VI **VI** *VI* ***VI*** | VI **VI** *VI* ***VI*** -- U+2165 Roman Numeral 6 VI -- substitute compatible string

VII **VII** *VII* ***VII*** | VII **VII** *VII* ***VII*** -- U+2166 Roman Numeral 7 VII -- substitute compatible string

VIII **VIII** *VIII* ***VIII*** | VIII **VIII** *VIII* ***VIII*** -- U+2167 Roman Numeral 8 VIII --

substitute compatible string
IX **IX** *IX* ***IX*** | IX **IX** *IX* ***IX*** -- U+2168 Roman Numeral 9 IX -- substitute compatible string
X **X** *X* ***X*** | X **X** *X* ***X*** -- U+2169 Roman Numeral 10 X -- substitute compatible string
XI **XI** *XI* ***XI*** | XI **XI** *XI* ***XI*** -- U+216A Roman Numeral 11 XI -- substitute compatible string
XII **XII** *XII* ***XII*** | XII **XII** *XII* ***XII*** -- U+216B Roman Numeral 12 XII -- substitute compatible string
L **L** *L* ***L*** | L **L** *L* ***L*** -- U+216C Roman Numeral 50 L -- substitute compatible string
C **C** *C* ***C*** | C **C** *C* ***C*** -- U+216D Roman Numeral 100 C -- substitute compatible string
D **D** *D* ***D*** | D **D** *D* ***D*** -- U+216E Roman Numeral 500 D -- substitute compatible string
M **M** *M* ***M*** | M **M** *M* ***M*** -- U+216F Roman Numeral 1000 M -- substitute compatible string
i **i** *i* ***i*** | i **i** *i* ***i*** -- U+2170 Small Roman Numeral 1 i -- substitute compatible string
ii **ii** *ii* ***ii*** | ii **ii** *ii* ***ii*** -- U+2171 Small Roman Numeral 2 ii -- substitute compatible string
iii **iii** *iii* ***iii*** | iii **iii** *iii* ***iii*** -- U+2172 Small Roman Numeral 3 iii -- substitute compatible string
iv **iv** *iv* ***iv*** | iv **iv** *iv* ***iv*** -- U+2173 Small Roman Numeral 4 iv -- substitute compatible string
v **v** *v* ***v*** | v **v** *v* ***v*** -- U+2174 Small Roman Numeral 5 v -- substitute compatible string
vi **vi** *vi* ***vi*** | vi **vi** *vi* ***vi*** -- U+2175 Small Roman Numeral 6 vi -- substitute compatible string
vii **vii** *vii* ***vii*** | vii **vii** *vii* ***vii*** -- U+2176 Small Roman Numeral 7 vii -- substitute compatible string
viii **viii** *viii* ***viii*** | viii **viii** *viii* ***viii*** -- U+2177 Small Roman Numeral 8 viii -- substitute compatible string
ix **ix** *ix* ***ix*** | ix **ix** *ix* ***ix*** -- U+2178 Small Roman Numeral 9 ix -- substitute compatible string
x **x** *x* ***x*** | x **x** *x* ***x*** -- U+2179 Small Roman Numeral 10 x -- substitute compatible string
xi **xi** *xi* ***xi*** | xi **xi** *xi* ***xi*** -- U+217A Small Roman Numeral 11 xi -- substitute compatible string
xii **xii** *xii* ***xii*** | xii **xii** *xii* ***xii*** -- U+217B Small Roman Numeral 12 xii -- substitute compatible string
l **l** *l* ***l*** | l **l** *l* ***l*** -- U+217C Small Roman Numeral 50 l -- substitute compatible string
c **c** *c* ***c*** | c **c** *c* ***c*** -- U+217D Small Roman Numeral 100 c -- substitute compatible string
d **d** *d* ***d*** | d **d** *d* ***d*** -- U+217E Small Roman Numeral 500 d -- substitute compatible string
m **m** *m* ***m*** | m **m** *m* ***m*** -- U+217F Small Roman Numeral 1000 m -- substitute compatible string

Arrows (U+2190 - U+21FF)

← ← ← ←	← ← ← ← -- U+2190 leftwards arrow
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑ -- U+2191 upwards arrow
→ → → →	→ → → → -- U+2192 rightwards arrow
↓ ↓ ↓ ↓	↓ ↓ ↓ ↓ -- U+2193 downwards arrow
↔ ↔ ↔ ↔	↔ ↔ ↔ ↔ -- U+2194 left-right arrow
↕ ↕ ↕ ↕	↕ ↕ ↕ ↕ -- U+2195 up-down arrow
↨ ↨ ↨ ↨	↨ ↨ ↨ ↨ -- U+21A8 up-down arrow with base
↲ ↲ ↲ ↲	↲ ↲ ↲ ↲ -- U+21B2 arrow with tip leftwards
↳ ↳ ↳ ↳	↳ ↳ ↳ ↳ -- U+21B3 arrow with tip rightwards
↵ ↵ ↵ ↵	↵ ↵ ↵ ↵ -- U+21B5 arrow with corner leftwards (carriage return)
⇐ ⇐ ⇐ ⇐	⇐ ⇐ ⇐ ⇐ -- U+21D0 leftwards double arrow
⇑ ⇑ ⇑ ⇑	⇑ ⇑ ⇑ ⇑ -- U+21D1 upwards double arrow
⇒ ⇒ ⇒ ⇒	⇒ ⇒ ⇒ ⇒ -- U+21D2 rightwards double arrow
⇓ ⇓ ⇓ ⇓	⇓ ⇓ ⇓ ⇓ -- U+21D3 downwards double arrow
⇔ ⇔ ⇔ ⇔	⇔ ⇔ ⇔ ⇔ -- U+21D4 left-right double arrow

Mathematical Operators (U+2200 - U+22FF)

Misc math symbols

∀ ∀ ∀ ∀ | ∀ ∀ ∀ ∀ -- U+2200 for all
∂ ∂ ∂ ∂ | ∂ ∂ ∂ ∂ -- U+2202 partial diff
∃ ∃ ∃ ∃ | ∃ ∃ ∃ ∃ -- U+2203 there exists
∅ ∅ ∅ ∅ | ∅ ∅ ∅ ∅ -- U+2205 empty set
∆ ∆ ∆ ∆ | ∆ ∆ ∆ ∆ -- U+2206 increment
∇ ∇ ∇ ∇ | ∇ ∇ ∇ ∇ -- U+2207 nabla

Set membership

∈ ∈ ∈ ∈ | ∈ ∈ ∈ ∈ -- U+2208 element of
∉ ∉ ∉ ∉ | ∉ ∉ ∉ ∉ -- U+2209 not element of
∊ ∊ ∊ ∊ | ∊ ∊ ∊ ∊ -- U+220A small element of
∋ ∋ ∋ ∋ | ∋ ∋ ∋ ∋ -- U+220B contains as member
∌ ∌ ∌ ∌ | ∌ ∌ ∌ ∌ -- U+220C does not contains as member
∍ ∍ ∍ ∍ | ∍ ∍ ∍ ∍ -- U+220D small contains as member

N-ary operators

∏ ∏ ∏ ∏ | ∏ ∏ ∏ ∏ -- U+220F n-ary product
∑ ∑ ∑ ∑ | ∑ ∑ ∑ ∑ -- U+2211 n-ary summation

Operators

− − − − | − − − − -- U+2212 minus sign
∕ ∕ ∕ ∕ | //// -- U+2215 division slash = fraction slash
∖ ∖ ∖ ∖ | \\\\ -- U+2216 set minus = reverse solidus (backslash)
∗ ∗ ∗ ∗ | ∗ ∗ ∗ ∗ -- U+2217 asterisk operator
∘ ∘ ∘ ∘ | ∘ ∘ ∘ ∘ -- U+2218 ring operator
∙ ∙ ∙ ∙ | ∙ ∙ ∙ ∙ -- U+2219 bullet operator
√ √ √ √ | √ √ √ √ -- U+221A square root
∝ ∝ ∝ ∝ | ∝ ∝ ∝ ∝ -- U+221D proportional to

Misc math symbols

∞ ∞ ∞ ∞ | ∞ ∞ ∞ ∞ -- U+221E infinity
∟ ∟ ∟ ∟ | ∟ ∟ ∟ ∟ -- U+221F right angle
∠ ∠ ∠ ∠ | ∠ ∠ ∠ ∠ -- U+2220 angle

Operators

∣ ∣ ∣ ∣ | |||| -- U+2223 divides = vertical line
∥ ∥ ∥ ∥ | ∥ ∥ ∥ ∥ -- U+2225 parallel to = double vertical line
∧ ∧ ∧ ∧ | ∧ ∧ ∧ ∧ -- U+2227 logical and
∨ ∨ ∨ ∨ | ∨ ∨ ∨ ∨ -- U+2228 logical or
∩ ∩ ∩ ∩ | ∩ ∩ ∩ ∩ -- U+2229 intersection, union
∪ ∪ ∪ ∪ | ∪ ∪ ∪ ∪ -- U+222A intersection, union

Intergrals

∫ ∫ ∫ ∫ | ∫ ∫ ∫ ∫ -- U+222B intergal

Misc math symbols

∴ ∴ ∴ ∴ | ∴ ∴ ∴ ∴ -- U+2234 therefore

∵ ∵ ∵ ∵ | ∵ ∵ ∵ ∵ ∵ -- U+2235 because

Relations

: : : : | : : : : -- U+2236 ratio = colon

:: :: :: :: | :: :: :: :: -- U+2237 proportion = double colon

Operators

~ ~ ~ ~ | ~ ~ ~ ~ ~ -- U+223C tilde op

Relations

≅ ≅ ≅ ≅ | ≅ ≅ ≅ ≅ ≅ -- U+2245 approximately equal to

≈ ≈ ≈ ≈ | ≈ ≈ ≈ ≈ ≈ -- U+2248 almost equals

≍ ≍ ≍ ≍ | ≍ ≍ ≍ ≍ ≍ -- U+224D equivalent to

≠ ≠ ≠ ≠ | ≠ ≠ ≠ ≠ ≠ -- U+2260 not equals

≡ ≡ ≡ ≡ | ≡ ≡ ≡ ≡ ≡ -- U+2261 identical to

≤ ≤ ≤ ≤ | ≤ ≤ ≤ ≤ ≤ -- U+2264 less than or equals

≥ ≥ ≥ ≥ | ≥ ≥ ≥ ≥ ≥ -- U+2265 greater than or equals

≪ ≪ ≪ ≪ | ≪ ≪ ≪ ≪ ≪ -- U+226A much less than

≫ ≫ ≫ ≫ | ≫ ≫ ≫ ≫ ≫ -- U+226B much greater than

⊂ ⊂ ⊂ ⊂ | ⊂ ⊂ ⊂ ⊂ ⊂ -- U+2282 subset of

⊃ ⊃ ⊃ ⊃ | ⊃ ⊃ ⊃ ⊃ ⊃ -- U+2283 superset of

⊄ ⊄ ⊄ ⊄ | ⊄ ⊄ ⊄ ⊄ ⊄ -- U+2284 not a subset of

⊅ ⊅ ⊅ ⊅ | ⊅ ⊅ ⊅ ⊅ ⊅ -- U+2285 not a superset of

⊆ ⊆ ⊆ ⊆ | ⊆ ⊆ ⊆ ⊆ ⊆ -- U+2286 subset of or equal to

⊇ ⊇ ⊇ ⊇ | ⊇ ⊇ ⊇ ⊇ ⊇ -- U+2287 superset of or equal to

⊕ ⊕ ⊕ ⊕ | ⊕ ⊕ ⊕ ⊕ ⊕ -- U+2295 circled plus

⊖ ⊖ ⊖ ⊖ | ⊖ ⊖ ⊖ ⊖ ⊖ -- U+2296 circled minus

⊗ ⊗ ⊗ ⊗ | ⊗ ⊗ ⊗ ⊗ ⊗ -- U+2297 circled times

⊘ ⊘ ⊘ ⊘ | ⊘ ⊘ ⊘ ⊘ ⊘ -- U+2298 circled division slash

⊥ ⊥ ⊥ ⊥ | ⊥ ⊥ ⊥ ⊥ ⊥ -- U+22A5 up tack

⋅ ⋅ ⋅ ⋅ | ⋅ ⋅ ⋅ ⋅ -- U+22C5 dot operator

⋯ ⋯ ⋯ ⋯ | ⋯ ⋯ ⋯ ⋯ ⋯ -- U+22EF midline horizontal ellipsis

Miscellaneous Technical (U+2300 - U+23FF)

⌈ ⌈ ⌈ ⌈ | ⌈⌈⌈⌈ -- U+2308 left ceiling
⌉ ⌉ ⌉ ⌉ | ⌉⌉⌉⌉ -- U+2309 right ceiling
⌊ ⌊ ⌊ ⌊ | ⌊⌊⌊⌊ -- U+230A left floor
⌋ ⌋ ⌋ ⌋ | ⌋⌋⌋⌋ -- U+230B right floor
⌘ ⌘ ⌘ ⌘ | ⌘ ⌘ ⌘ ⌘ -- U+2318 place of intrest sign (commad key)
〈 〈 〈 〈 | 〈〈〈〈 -- U+2329 left-pointing angle bracket
〉 〉 〉 〉 | 〉〉〉〉 -- U+232A right-pointing angle bracket
⏎ ⏎ ⏎ ⏎ | ⏎ ⏎ ⏎ ⏎ -- U+23CE return symbol
⏏ ⏏ ⏏ ⏏ | ⏏⏏⏏⏏ -- U+23CF eject symbol

Enclosed Alphanumerics (U+2460 - U+24FF)

⓫ ⓫ ⓫ ⓫ | ⓫ ⓫ ⓫ ⓫ -- U+24EB neg circled 11
⓬ ⓬ ⓬ ⓬ | ⓬ ⓬ ⓬ ⓬ -- U+24EC neg circled 12
⓭ ⓭ ⓭ ⓭ | ⓭ ⓭ ⓭ ⓭ -- U+24ED neg circled 13
⓮ ⓮ ⓮ ⓮ | ⓮ ⓮ ⓮ ⓮ -- U+24EE neg circled 14
⓯ ⓯ ⓯ ⓯ | ⓯ ⓯ ⓯ ⓯ -- U+24EF neg circled 15
⓰ ⓰ ⓰ ⓰ | ⓰ ⓰ ⓰ ⓰ -- U+24F0 neg circled 16
⓱ ⓱ ⓱ ⓱ | ⓱ ⓱ ⓱ ⓱ -- U+24F1 neg circled 17
⓲ ⓲ ⓲ ⓲ | ⓲ ⓲ ⓲ ⓲ -- U+24F2 neg circled 18
⓳ ⓳ ⓳ ⓳ | ⓳ ⓳ ⓳ ⓳ -- U+24F3 neg circled 19
⓴ ⓴ ⓴ ⓴ | ⓴ ⓴ ⓴ ⓴ -- U+24F4 neg circled 20
⓿ ⓿ ⓿ ⓿ | ⓿ ⓿ ⓿ ⓿ -- U+24FF neg circled 0

Geometric Shapes (U+25A0 - U+25FF)

■ ■ ■ ■ | ■ ■ ■ ■ -- U+25A0 black square
□ □ □ □ | □ □ □ □ -- U+25A1 white square
▪ ▪ ▪ ▪ | ▪ ▪ ▪ ▪ -- U+25AA black small square
▫ ▫ ▫ ▫ | ▫ ▫ ▫ ▫ -- U+25AB white small square
▬ ▬ ▬ ▬ | ▬ ▬ ▬ ▬ -- U+25AC black rectangle
▭ ▭ ▭ ▭ | ▭ ▭ ▭ ▭ -- U+25AD white rectangle
▮ ▮ ▮ ▮ | ▮ ▮ ▮ ▮ -- U+25AE black vert rectangle
▯ ▯ ▯ ▯ | ▯ ▯ ▯ ▯ -- U+25AF white vert rectangle
▲ ▲ ▲ ▲ | ▲ ▲ ▲ ▲ -- U+25B2 black up-pointing triangle
△ △ △ △ | △ △ △ △ -- U+25B3 white up-pointing triangle
▴ ▴ ▴ ▴ | ▴ ▴ ▴ ▴ -- U+25B4 black up-pointing small triangle
▵ ▵ ▵ ▵ | ▵ ▵ ▵ ▵ -- U+25B5 white up-pointing small triangle
▶ ▶ ▶ ▶ | ▶ ▶ ▶ ▶ -- U+25B6 black right-pointing triangle
▷ ▷ ▷ ▷ | ▷ ▷ ▷ ▷ -- U+25B7 white right-pointing triangle
▸ ▸ ▸ ▸ | ▸ ▸ ▸ ▸ -- U+25B8 black right-pointing small triangle
▹ ▹ ▹ ▹ | ▹ ▹ ▹ ▹ -- U+25B9 white right-pointing small triangle
► ► ► ► | ► ► ► ► -- U+25BA black right-pointing pointer
▻ ▻ ▻ ▻ | ▻ ▻ ▻ ▻ -- U+25BB white right-pointing pointer
▼ ▼ ▼ ▼ | ▼ ▼ ▼ ▼ -- U+25BC black down-pointing triangle
▽ ▽ ▽ ▽ | ▽ ▽ ▽ ▽ -- U+25BD white down-pointing triangle
▾ ▾ ▾ ▾ | ▾ ▾ ▾ ▾ -- U+25BE black down-pointing small triangle
▿ ▿ ▿ ▿ | ▿ ▿ ▿ ▿ -- U+25BF white down-pointing small triangle
◀ ◀ ◀ ◀ | ◀ ◀ ◀ ◀ -- U+25C0 black left-pointing triangle
◁ ◁ ◁ ◁ | ◁ ◁ ◁ ◁ -- U+25C1 white left-pointing triangle
◂ ◂ ◂ ◂ | ◂ ◂ ◂ ◂ -- U+25C2 black left-pointing small triangle
◃ ◃ ◃ ◃ | ◃ ◃ ◃ ◃ -- U+25C3 white left-pointing small triangle
◄ ◄ ◄ ◄ | ◄ ◄ ◄ ◄ -- U+25C4 black left-pointing pointer
◅ ◅ ◅ ◅ | ◅ ◅ ◅ ◅ -- U+25C5 white left-pointing pointer
◊ ◊ ◊ ◊ | ◊ ◊ ◊ ◊ -- U+25CA lozenge
○ ○ ○ ○ | ○ ○ ○ ○ -- U+25CB white circle
● ● ● ● | ● ● ● ● -- U+25CF black circle
◘ ◘ ◘ ◘ | ◘ ◘ ◘ ◘ -- U+25D8 inverse bullet
◙ ◙ ◙ ◙ | ◙ ◙ ◙ ◙ -- U+25D9 inverse white circle
◦ ◦ ◦ ◦ | ◦ ◦ ◦ ◦ -- U+25E6 white circle
◯ ◯ ◯ ◯ | ◯ ◯ ◯ ◯ -- U+25EF large circle

Miscellaneous Symbols (U+2600 - U+26FF)

★ ★ ★ ★ | ★ ★ ★ ★ -- U+2605 black star
☆ ☆ ☆ ☆ | ☆ ☆ ☆ ☆ -- U+2606 white star
☺ ☺ ☺ ☺ | ☺ ☺ ☺ ☺ -- U+263A white smiling face
☻ ☻ ☻ ☻ | ☻ ☻ ☻ ☻ -- U+263B black smiling face
☼ ☼ ☼ ☼ | ☼ ☼ ☼ ☼ -- U+263C white sun with rays
♀ ♀ ♀ ♀ | ♀ ♀ ♀ ♀ -- U+2640 female sign
♂ ♂ ♂ ♂ | ♂ ♂ ♂ ♂ -- U+2642 male sign
♠ ♠ ♠ ♠ | ♠ ♠ ♠ ♠ -- U+2660 black spade suit
♡ ♡ ♡ ♡ | ♡ ♡ ♡ ♡ -- U+2661 white heart suit
♢ ♢ ♢ ♢ | ♢ ♢ ♢ ♢ -- U+2662 white diamond suit
♣ ♣ ♣ ♣ | ♣ ♣ ♣ ♣ -- U+2663 black club suit
♤ ♤ ♤ ♤ | ♤ ♤ ♤ ♤ -- U+2664 white spade suit
♥ ♥ ♥ ♥ | ♥ ♥ ♥ ♥ -- U+2665 black heart suit
♦ ♦ ♦ ♦ | ♦ ♦ ♦ ♦ -- U+2666 black diamond suit
♧ ♧ ♧ ♧ | ♧ ♧ ♧ ♧ -- U+2667 white club suit
♩ ♩ ♩ ♩ | ♩ ♩ ♩ ♩ -- U+2669 quarter note
♪ ♪ ♪ ♪ | ♪ ♪ ♪ ♪ -- U+266A eight note
♫ ♫ ♫ ♫ | ♫ ♫ ♫ ♫ -- U+266B beamed eight notes
♬ ♬ ♬ ♬ | ♬ ♬ ♬ ♬ -- U+266C beamed sixteenth notes
♭ ♭ ♭ ♭ | ♭ ♭ ♭ ♭ -- U+266D music flat sign
♮ ♮ ♮ ♮ | ♮ ♮ ♮ ♮ -- U+266E music natural sign
♯ ♯ ♯ ♯ | ♯ ♯ ♯ ♯ -- U+266F music sharp sign

Dingbats (U+2700 - U+27BF)

✓ ✓ ✓ ✓ | ✓✓✓✓ -- U+2713 check mark
✲ ✲ ✲ ✲ | ✲✲✲✲ -- U+2720 maltese cross
✪ ✪ ✪ ✪ | ✪✪✪✪ -- U+272A circled white star
✻ ✻ ✻ ✻ | ✻✻✻✻ -- U+273D heavy asterisk
❑ ❑ ❑ ❑ | ❑❑❑❑ -- U+274F shadow white square
❙ ❙ ❙ ❙ | ❙❙❙❙ -- U+2759 medium vertical bar
❶ ❶ ❶ ❶ | ❶❶❶❶ -- U+278A neg circled 1
❷ ❷ ❷ ❷ | ❷❷❷❷ -- U+278B neg circled 2
❸ ❸ ❸ ❸ | ❸❸❸❸ -- U+278C neg circled 3
❹ ❹ ❹ ❹ | ❹❹❹❹ -- U+278D neg circled 4
❺ ❺ ❺ ❺ | ❺❺❺❺ -- U+278E neg circled 5
❻ ❻ ❻ ❻ | ❻❻❻❻ -- U+278F neg circled 6
❼ ❼ ❼ ❼ | ❼❼❼❼ -- U+2790 neg circled 7
❽ ❽ ❽ ❽ | ❽❽❽❽ -- U+2791 neg circled 8
❾ ❾ ❾ ❾ | ❾❾❾❾ -- U+2792 neg circled 9
❿ ❿ ❿ ❿ | ❿❿❿❿ -- U+2793 neg circled 10
➤ ➤ ➤ ➤ | ➤➤➤➤ -- U+27A4 black rightwards arrowhead
➲ ➲ ➲ ➲ | ➲➲➲➲ -- U+27B2 circled right arrow

Private Use (U+E000 - U+F8FF)

fi fi fi fi | fi fi fi fi -- U+F001 private use: latin small ligature fi
fl fl fl fl | fl fl fl fl -- U+F002 private use: latin small ligature fl

Alphabetic Presentation Forms (U+FB00 - U+FB4F)

ff ff ff ff | ff ff ff ff -- U+FB00 latin small ligature ff -- substitute compatible string
fi fi fi fi | fi fi fi fi -- U+FB01 latin small ligature fi
fl fl fl fl | fl fl fl fl -- U+FB02 latin small ligature fl
ffi ffi ffi ffi | ffi ffi ffi ffi -- U+FB03 latin small ligature ffi -- substitute compatible string
ffl ffl ffl ffl | ffl ffl ffl ffl -- U+FB04 latin small ligature ffl -- substitute compatible string
ſt ſt ſt ſt | ſt ſt ſt ſt -- U+FB05 latin small ligature long-s t -- substitute compatible string -- updated font
st st st st | st st st st -- U+FB06 latin small ligature st -- substitute compatible string