

## **Letterlike Symbols**

**Range: 2100–214F**

This file contains an excerpt from the character code tables and list of character names for *The Unicode Standard, Version 12.1*

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See <http://www.unicode.org/errata/> for an up-to-date list of errata.

See <http://www.unicode.org/charts/> for access to a complete list of the latest character code charts.  
See <http://www.unicode.org/charts/PDF/Unicode-12.1/> for charts showing only the characters added in Unicode 12.1.  
See <http://www.unicode.org/Public/12.1.0/charts/> for a complete archived file of character code charts for Unicode 12.1.

### **Disclaimer**

These charts are provided as the online reference to the character contents of the Unicode Standard, Version 12.1 but do not provide all the information needed to fully support individual scripts using the Unicode Standard. For a complete understanding of the use of the characters contained in this file, please consult the appropriate sections of The Unicode Standard, Version 12.1, online at <http://www.unicode.org/versions/Unicode12.1.0/>, as well as Unicode Standard Annexes #9, #11, #14, #15, #24, #29, #31, #34, #38, #41, #42, #44, #45, and #50, the other Unicode Technical Reports and Standards, and the Unicode Character Database, which are available online.

See <http://www.unicode.org/ucd/> and <http://www.unicode.org/reports/>

A thorough understanding of the information contained in these additional sources is required for a successful implementation.

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	210	211	212	213	214
0	<i>a/c</i> 2100	<i>Œ</i> 2110	SM 2120	<i>ℰ</i> 2130	$\Sigma$ 2140
1	<i>a/s</i> 2101	<i>Œ</i> 2111	TEL 2121	<i>ℱ</i> 2131	$\mathcal{G}$ 2141
2	$\mathcal{C}$ 2102	<i>L</i> 2112	TM 2122	$\mathcal{H}$ 2132	$\mathcal{T}$ 2142
3	$^{\circ}\mathcal{C}$ 2103	<i>l</i> 2113	<i>Ÿ</i> 2123	<i>M</i> 2133	$\mathcal{J}$ 2143
4	$\mathcal{E}$ 2104	$\mathcal{W}$ 2114	$\mathcal{Z}$ 2124	<i>o</i> 2134	$\mathcal{A}$ 2144
5	<i>%</i> 2105	$\mathcal{N}$ 2115	$\mathcal{Z}$ 2125	$\mathcal{N}$ 2135	<i>D</i> 2145
6	<i>%u</i> 2106	$\mathcal{N}_o$ 2116	$\Omega$ 2126	$\mathcal{C}$ 2136	<i>d</i> 2146
7	$\mathcal{E}$ 2107	$\mathcal{P}$ 2117	$\mathcal{U}$ 2127	$\mathcal{L}$ 2137	<i>e</i> 2147
8	$\mathcal{D}$ 2108	$\mathcal{E}$ 2118	$\mathcal{Z}$ 2128	$\mathcal{T}$ 2138	<i>i</i> 2148
9	$^{\circ}\mathcal{F}$ 2109	$\mathcal{P}$ 2119	$\mathcal{I}$ 2129	$\mathcal{I}$ 2139	<i>j</i> 2149
A	<i>g</i> 210A	$\mathcal{Q}$ 211A	$\mathcal{K}$ 212A	$\mathcal{O}$ 213A	$\mathcal{P}$ 214A
B	<i>H</i> 210B	<i>R</i> 211B	$\mathcal{A}$ 212B	FAX 213B	$\mathcal{X}$ 214B
C	<i>S</i> 210C	$\mathcal{R}$ 211C	$\mathcal{B}$ 212C	$\mathcal{T}$ 213C	$\mathcal{P}$ 214C
D	$\mathcal{H}$ 210D	$\mathcal{R}$ 211D	$\mathcal{C}$ 212D	$\mathcal{Y}$ 213D	$\mathcal{A}/s$ 214D
E	<i>h</i> 210E	$\mathcal{R}$ 211E	$\mathcal{E}$ 212E	$\mathcal{T}$ 213E	$\mathcal{H}$ 214E
F	<i>h</i> 210F	$\mathcal{R}$ 211F	<i>e</i> 212F	$\mathcal{T}$ 213F	<i>lll</i> 214F

**Letterlike symbols**

Some of the letterlike symbols are intended to complete the set of mathematical alphanumeric symbols starting at 1D400.

- 2100  $\%$  **ACCOUNT OF**  
 ≈ 0061 a 002F / 0063 c
- 2101  $\%$  **ADDRESSED TO THE SUBJECT**  
 → 214D  $\%$  aktieselskab  
 ≈ 0061 a 002F / 0073 s
- 2102 **C** **DOUBLE-STRUCK CAPITAL C**  
 = the set of complex numbers  
 ≈ <font> 0043 **C** latin capital letter c
- 2103  $^{\circ}$  **DEGREE CELSIUS**  
 = degrees Centigrade  
 ≈ 00B0  $^{\circ}$  0043 **C**
- 2104 **€** **CENTRE LINE SYMBOL**  
 = clone
- 2105  $\%$  **CARE OF**  
 ≈ 0063 c 002F / 006F o
- 2106  $\%$  **CADA UNA**  
 • Spanish for "each one"  
 ≈ 0063 c 002F / 0075 u
- 2107  $\epsilon$  **EULER CONSTANT**  
 → 0045 **E** latin capital letter e  
 ≈ 0190  $\epsilon$  latin capital letter open e
- 2108  $\text{D}$  **SCRUPLE**
- 2109  $^{\circ}$  **DEGREE FAHRENHEIT**  
 ≈ 00B0  $^{\circ}$  0046 **F**
- 210A  $g$  **SCRIPT SMALL G**  
 = real number symbol  
 ≈ <font> 0067  $g$  latin small letter g
- 210B  $\mathcal{H}$  **SCRIPT CAPITAL H**  
 = Hamiltonian operator  
 ≈ <font> 0048 **H** latin capital letter h
- 210C  $\mathfrak{H}$  **BLACK-LETTER CAPITAL H**  
 = Hilbert space  
 ≈ <font> 0048 **H** latin capital letter h
- 210D  $\mathbb{H}$  **DOUBLE-STRUCK CAPITAL H**  
 ≈ <font> 0048 **H** latin capital letter h
- 210E  $h$  **PLANCK CONSTANT**  
 = height, specific enthalpy, ...  
 • simply a mathematical italic h; this character's name results from legacy usage  
 ≈ <font> 0068  $h$  latin small letter h
- 210F  $\hbar$  **PLANCK CONSTANT OVER TWO PI**  
 = reduced Planck constant, Dirac constant  
 → 045B  $\hbar$  cyrillic small letter tshe  
 ≈ <font> 0127  $\hbar$  latin small letter h with stroke
- 2110  $\mathcal{I}$  **SCRIPT CAPITAL I**  
 ≈ <font> 0049 **I** latin capital letter i
- 2111  $\mathfrak{I}$  **BLACK-LETTER CAPITAL I**  
 = imaginary part  
 ≈ <font> 0049 **I** latin capital letter i
- 2112  $\mathcal{L}$  **SCRIPT CAPITAL L**  
 = Laplace transform  
 ≈ <font> 004C **L** latin capital letter l
- 2113  $\ell$  **SCRIPT SMALL L**  
 = mathematical symbol 'ell'  
 = liter (traditional symbol)  
 • despite its character name, this symbol is derived from a special italicized version of the small letter l  
 • the SI recommended symbol for liter is 006C **L** or 004C **L**  
 → 1D4C1  $\ell$  mathematical script small l  
 ≈ <font> 006C **I** latin small letter l
- 2114  $\pounds$  **L B BAR SYMBOL**  
 = pounds  
 → 0023  $\#$  number sign
- 2115 **N** **DOUBLE-STRUCK CAPITAL N**  
 = natural number  
 • a glyph variant with doubled vertical strokes exists  
 ≈ <font> 004E **N** latin capital letter n
- 2116 **No** **NUMERO SIGN**  
 → 0023  $\#$  number sign  
 → 00BA  $^{\circ}$  masculine ordinal indicator  
 ≈ 004E **N** 006F o
- 2117  $\text{P}$  **SOUND RECORDING COPYRIGHT**  
 = published  
 = phonorecord sign  
 → 00A9  $\text{C}$  copyright sign  
 → 24C5  $\text{P}$  circled latin capital letter p
- 2118  $\wp$  **SCRIPT CAPITAL P**  
 × **WEIERSTRASS ELLIPTIC FUNCTION**  
 • actually this has the form of a lowercase calligraphic p, despite its name
- 2119 **P** **DOUBLE-STRUCK CAPITAL P**  
 ≈ <font> 0050 **P** latin capital letter p
- 211A **Q** **DOUBLE-STRUCK CAPITAL Q**  
 = the set of rational numbers  
 ≈ <font> 0051 **Q** latin capital letter q
- 211B  $\mathcal{R}$  **SCRIPT CAPITAL R**  
 = Riemann Integral  
 ≈ <font> 0052 **R** latin capital letter r
- 211C  $\Re$  **BLACK-LETTER CAPITAL R**  
 = real part  
 ≈ <font> 0052 **R** latin capital letter r
- 211D  $\mathbb{R}$  **DOUBLE-STRUCK CAPITAL R**  
 = the set of real numbers  
 ≈ <font> 0052 **R** latin capital letter r
- 211E **R** **PRESCRIPTION TAKE**  
 = recipe  
 = cross ratio
- 211F  $\mathcal{R}$  **RESPONSE**
- 2120 <sup>SM</sup> **SERVICE MARK**  
 ≈ <sup> 0053 **S** 004D **M**
- 2121  $\text{T}$  **TELEPHONE SIGN**  
 • typical forms for this symbol may use lowercase, small caps or superscripted letter shapes  
 → 260E  $\text{T}$  black telephone  
 → 2706  $\text{T}$  telephone location sign  
 → 1F4DE  $\text{T}$  telephone receiver  
 ≈ 0054 **T** 0045 **E** 004C **L**
- 2122 <sup>TM</sup> **TRADE MARK SIGN**  
 → 1F12E  $\text{T}$  circled wz  
 ≈ <sup> 0054 **T** 004D **M**
- 2123  $\text{V}$  **VERSICLE**

- 2124  $\mathbb{Z}$  **DOUBLE-STRUCK CAPITAL Z**  
= the set of integers  
≈ <font> 005A **Z** latin capital letter z
- 2125  $\text{℥}$  **OUNCE SIGN**  
→ 0292  $\text{℥}$  latin small letter ezh  
→ 1F773  $\text{℥}$  alchemical symbol for half ounce
- 2126  $\Omega$  **OHM SIGN**  
• SI unit of resistance, named after G. S. Ohm, German physicist  
• preferred representation is 03A9  $\Omega$   
→ 260A  $\text{Ω}$  ascending node  
≡ 03A9  $\Omega$  greek capital letter omega
- 2127  $\text{℧}$  **INVERTED OHM SIGN**  
= mho  
• archaic unit of conductance (= the SI unit siemens)  
• typographically a turned greek capital letter omega  
→ 01B1  $\text{Ω}$  latin capital letter upsilon  
→ 03A9  $\Omega$  greek capital letter omega  
→ 260B  $\text{Ω}$  descending node
- 2128  $\mathbb{Z}$  **BLACK-LETTER CAPITAL Z**  
≈ <font> 005A **Z** latin capital letter z
- 2129  $\text{ι}$  **TURNED GREEK SMALL LETTER IOTA**  
• unique element fulfilling a description (logic)  
→ 03B9  $\text{ι}$  greek small letter iota
- 212A  $\mathbb{K}$  **KELVIN SIGN**  
≡ 004B **K** latin capital letter k
- 212B  $\text{Å}$  **ANGSTROM SIGN**  
• non SI length unit (=0.1 nm) named after A. J. Ångström, Swedish physicist  
• preferred representation is 00C5  $\text{Å}$   
≡ 00C5  $\text{Å}$  latin capital letter a with ring above
- 212C  $\mathcal{B}$  **SCRIPT CAPITAL B**  
= Bernoulli function  
≈ <font> 0042 **B** latin capital letter b
- 212D  $\mathbb{C}$  **BLACK-LETTER CAPITAL C**  
≈ <font> 0043 **C** latin capital letter c
- 212E  $e$  **ESTIMATED SYMBOL**  
• used in European packaging  
→ 0065  $e$  latin small letter e
- 212F  $e$  **SCRIPT SMALL E**  
= error  
= natural exponent  
≈ <font> 0065  $e$  latin small letter e
- 2130  $\mathcal{E}$  **SCRIPT CAPITAL E**  
= emf (electromotive force)  
≈ <font> 0045 **E** latin capital letter e
- 2131  $\mathcal{F}$  **SCRIPT CAPITAL F**  
= Fourier transform  
≈ <font> 0046 **F** latin capital letter f
- 2132  $\text{ϳ}$  **TURNED CAPITAL F**  
= Claudian digamma inversum  
• lowercase is 214E  $\text{ϳ}$   
→ 0046 **F** latin capital letter f  
→ 03DC **ϳ** greek letter digamma
- 2133  $\mathbb{M}$  **SCRIPT CAPITAL M**  
= M-matrix (physics)  
= German Mark currency symbol, before WWII  
• when used for the Mark symbol, the range of glyph variation is restricted  
→ 20BB  $\text{₯}$  nordic mark sign  
≈ <font> 004D **M** latin capital letter m

- 2134  $o$  **SCRIPT SMALL O**  
= order, of inferior order to  
≈ <font> 006F  $o$  latin small letter o

**Hebrew letterlike math symbols**

*These are left-to-right characters.*

- 2135  $\aleph$  **ALEF SYMBOL**  
= first transfinite cardinal (countable)  
≈ 05D0  $\aleph$  hebrew letter alef
- 2136  $\beth$  **BET SYMBOL**  
= second transfinite cardinal (the continuum)  
≈ 05D1  $\beth$  hebrew letter bet
- 2137  $\aleph$  **GIMEL SYMBOL**  
= third transfinite cardinal (functions of a real variable)  
≈ 05D2  $\aleph$  hebrew letter gimel
- 2138  $\daleth$  **DALET SYMBOL**  
= fourth transfinite cardinal  
≈ 05D3  $\daleth$  hebrew letter dalet

**Additional letterlike symbols**

- 2139  $\text{ⓘ}$  **INFORMATION SOURCE**  
• intended for use with 20DD  $\text{Ⓢ}$   
→ 1F6C8  $\text{ⓘ}$  circled information source  
≈ <font> 0069  $\text{i}$  latin small letter i
- 213A  $\text{Ⓞ}$  **ROTATED CAPITAL Q**  
• a binding signature mark
- 213B  $\text{ℒ}$  **FACSIMILE SIGN**  
• typical forms for this symbol may use lowercase, small caps or superscripted letter shapes  
→ 2121  $\text{TEL}$  telephone sign  
→ 1F4E0  $\text{ℒ}$  fax machine  
≈ 0046 **F** 0041 **A** 0058 **X**
- 213C  $\text{π}$  **DOUBLE-STRUCK SMALL PI**  
≈ <font> 03C0  $\pi$  greek small letter pi
- 213D  $\text{γ}$  **DOUBLE-STRUCK SMALL GAMMA**  
≈ <font> 03B3  $\gamma$  greek small letter gamma
- 213E  $\text{Γ}$  **DOUBLE-STRUCK CAPITAL GAMMA**  
≈ <font> 0393  $\Gamma$  greek capital letter gamma
- 213F  $\text{Π}$  **DOUBLE-STRUCK CAPITAL PI**  
≈ <font> 03A0  $\Pi$  greek capital letter pi

**Double-struck large operator**

- 2140  $\text{∑}$  **DOUBLE-STRUCK N-ARY SUMMATION**  
≈ <font> 2211  $\text{∑}$  n-ary summation

**Additional letterlike symbols**

- 2141  $\text{Ⓞ}$  **TURNED SANS-SERIF CAPITAL G**  
= game
- 2142  $\text{Ⓛ}$  **TURNED SANS-SERIF CAPITAL L**
- 2143  $\text{Ⓛ}$  **REVERSED SANS-SERIF CAPITAL L**
- 2144  $\text{Ⓛ}$  **TURNED SANS-SERIF CAPITAL Y**

**Double-struck italic math symbols**

*These stylized mathematical symbols are used in some documents to distinguish special mathematical usages from ordinary variables.*

- 2145  $\text{ℳ}$  **DOUBLE-STRUCK ITALIC CAPITAL D**  
• sometimes used for the differential  
≈ <font> 0044 **D** latin capital letter d
- 2146  $\text{ℳ}$  **DOUBLE-STRUCK ITALIC SMALL D**  
• sometimes used for the differential  
≈ <font> 0064 **d** latin small letter d

- 2147 *e* DOUBLE-STRUCK ITALIC SMALL E  
 • sometimes used for the natural exponent  
 ≈ <font> 0065 **e** latin small letter e
- 2148 *i* DOUBLE-STRUCK ITALIC SMALL I  
 • sometimes used for the imaginary unit  
 ≈ <font> 0069 **i** latin small letter i
- 2149 *j* DOUBLE-STRUCK ITALIC SMALL J  
 • sometimes used for the imaginary unit  
 ≈ <font> 006A **j** latin small letter j

**Additional letterlike symbols**

- 214A  $\text{⌘}$  PROPERTY LINE
- 214B  $\text{⌘}$  TURNED AMPERSAND  
 • used in linear logic  
 → 0026 **&** ampersand
- 214C  $\text{⌘}$  PER SIGN  
 • abbreviates the word ‘per’
- 214D  $\text{⌘}$  AKTIESELSKAB  
 → 2101  $\text{⌘}$  addressed to the subject

**Lowercase Claudian letter**

*Claudian letters in inscriptions are uppercase, but may be transcribed by scholars in lowercase.*

- 214E  $\text{Ϝ}$  TURNED SMALL F  
 • uppercase is 2132  $\text{Ϝ}$   
 → 03DD **Ϝ** greek small letter digamma

**Biblical editorial symbol**

- 214F  $\text{⌘}$  SYMBOL FOR SAMARITAN SOURCE