Miscellaneous Mathematical Symbols-B

Range: 2980–29FF

This file contains an excerpt from the character code tables and list of character names for
The Unicode Standard, Version 9.0

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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-9.0/ for charts showing only the characters added in Unicode 9.0.
See http://www.unicode.org/Public/9.0.0/charts/ for a complete archived file of character code charts for Unicode 9.0.

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These charts are provided as the online reference to the character contents of the Unicode Standard, Version 9.0 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 9.0, online at http://www.unicode.org/versions/Unicode9.0.0/, as well as Unicode Standard Annexes #9, #11, #14, #15, #24, #29, #31, #34, #38, #41, #42, #44, and #45, 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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See http://www.unicode.org/pending/pending.html and http://www.unicode.org/alloc/Pipeline.html.

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	298	299	29A	29B	29C	29D	29E	29F
0	⦀ 2980	⦐ 2990	⦠ 29A0	⦰ 29B0	⧀ 29C0	⧐ 29D0	⧊ 29E0	⧖ 29F0
1	⦁ 2981	⦑ 2991	⦡ 29A1	⦱ 29B1	⧁ 29C1	⧑ 29D1	⧋ 29E1	⧗ 29F1
2	⦂ 2982	⦒ 2992	⦢ 29A2	⦲ 29B2	⧂ 29C2	⧒ 29D2	⧌ 29E2	⧘ 29F2
3	⦃ 2983	⦓ 2993	⦣ 29A3	⦳ 29B3	⧃ 29C3	⧓ 29D3	⧍ 29E3	⧙ 29F3
4	⦄ 2984	⦔ 2994	⦤ 29A4	⦴ 29B4	⧄ 29C4	⧔ 29D4	⧎ 29E4	⧚ 29F4
5	⦅ 2985	⦕ 2995	⦥ 29A5	⦵ 29B5	⧅ 29C5	⧕ 29D5	⧏ 29E5	⧛ 29F5
6	⦆ 2986	⦖ 2996	⦦ 29A6	⦶ 29B6	⧆ 29C6	⧖ 29D6	⧐ 29E6	⧜ 29F6
7	⦇ 2987	⦗ 2997	⦧ 29A7	⦷ 29B7	⧇ 29C7	⧗ 29D7	⧑ 29E7	⧝ 29F7
8	⦈ 2988	⦘ 2998	⦨ 29A8	⦸ 29B8	⧈ 29C8	⧘ 29D8	⧒ 29E8	⧞ 29F8
9	⦉ 2989	⦙ 2999	⦩ 29A9	⦹ 29B9	⧉ 29C9	⧙ 29D9	⧓ 29E9	⧟ 29F9
A	⦊ 298A	⦚ 299A	⦪ 29AA	⦺ 29BA	⧊ 29CA	⧚ 29DA	⧔ 29EA	⧠ 29FA
B	⦋ 298B	⦛ 299B	⦫ 29AB	⦻ 29BB	⧋ 29CB	⧛ 29DB	⧕ 29EB	⧡ 29FB
C	⦌ 298C	⦜ 299C	⦬ 29AC	⦼ 29BC	⧌ 29CC	⧜ 29DC	⧖ 29EC	⧢ 29FC
D	⦍ 298D	⦝ 299D	⦭ 29AD	⦽ 29BD	⧍ 29CD	⧝ 29DD	⧗ 29ED	⧣ 29FD
E	⦎ 298E	⦞ 299E	⦮ 29AE	⦾ 29BE	⧎ 29CE	⧞ 29DE	⧘ 29EE	⧤ 29FE
F	⦏ 298F	⦟ 299F	⦯ 29AF	⦿ 29BF	⧏ 29CF	⧟ 29DF	⧙ 29EF	⧥ 29FF

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Miscellaneous mathematical symbols

2980 ⦚ TRIPLE VERTICAL BAR DELIMITER
→ 2AF4 ⫼ triple vertical bar binary relation
→ 2AFC ⋿ large triple vertical bar operator

2981 • Z NOTATION SPOT
• medium-small-sized black circle
→ 2219 ∙ bullet operator
→ 25CF ● black circle

2982 ⸙ Z NOTATION TYPE COLON
→ 0F7F ⸙ tibetan sign rnam bcad

Brackets

2983 ⦃ LEFT WHITE CURLY BRACKET
2984 ⦄ RIGHT WHITE CURLY BRACKET
2985 ⦇ LEFT WHITE PARENTHESIS
→ 2E28 ⸨ left double parenthesis
→ FF5F ⦇ fullwidth left white parenthesis
2986 ⦈ RIGHT WHITE PARENTHESIS
• used for Bourbakist intervals
→ 2E29 ⸩ right double parenthesis
→ FF60 ⦈ fullwidth right white parenthesis
2987 ⦉ Z NOTATION LEFT IMAGE BRACKET
2988 ⦊ Z NOTATION RIGHT IMAGE BRACKET
2989 ⦋ Z NOTATION LEFT BINDING BRACKET
298A ⦌ Z NOTATION RIGHT BINDING BRACKET
298B ⦍ LEFT SQUARE BRACKET WITH UNDERBAR
298C ⦎ RIGHT SQUARE BRACKET WITH UNDERBAR

Brackets with ticks

For bidirectional processing, the brackets with ticks are paired on the basis of their left/right symmetric glyphs, rather than on the basis of an open/close pairing inferred from code point order.

298D ⦏ LEFT SQUARE BRACKET WITH TICK IN TOP CORNER
298E ⦐ RIGHT SQUARE BRACKET WITH TICK IN BOTTOM CORNER
298F ⦑ LEFT SQUARE BRACKET WITH TICK IN BOTTOM CORNER
2990 ⦒ RIGHT SQUARE BRACKET WITH TICK IN TOP CORNER

Brackets

2991 ⦓ LEFT ANGLE BRACKET WITH DOT
2992 ⦔ RIGHT ANGLE BRACKET WITH DOT
2993 ⦕ LEFT ARC LESS-THAN BRACKET
2994 ⦖ RIGHT ARC GREATER-THAN BRACKET
2995 ⦗ DOUBLE LEFT ARC GREATER-THAN BRACKET
2996 ⦘ DOUBLE RIGHT ARC LESS-THAN BRACKET
2997 ⦙ LEFT BLACK TORTOISE SHELL BRACKET
→ 27EC ⟬ mathematical left white tortoise shell bracket
→ 3014 〔 left tortoise shell bracket
→ 3018 〖 left white tortoise shell bracket
2998 ⦚ RIGHT BLACK TORTOISE SHELL BRACKET

Fences

2999 ⦙ DOTTED FENCE
• four close dots vertical
299A ⦚ VERTICAL ZIGZAG LINE
→ 2307 ⌇ wavy line

Angles

299B ⦛ MEASURED ANGLE OPENING LEFT
→ 2221 ∡ measured angle
299C ⦜ RIGHT ANGLE VARIANT WITH SQUARE
→ 221F ∟ right angle
299D ⦝ MEASURED RIGHT ANGLE WITH DOT
299E ⦞ ANGLE WITH S INSIDE
299F ⦟ ACUTE ANGLE
→ 2220 ∠ angle
29A0 ⦠ SPHERICAL ANGLE OPENING LEFT
→ 2222 ∢ spherical angle
29A1 ⦡ SPHERICAL ANGLE OPENING UP
29A2 ⦢ TURNED ANGLE
→ 2220 ∠ angle
29A3 ⦣ REVERSED ANGLE
29A4 ⦤ ANGLE WITH UNDERBAR
29A5 ⦥ REVERSED ANGLE WITH UNDERBAR
29A6 ⦦ OBLIQUE ANGLE OPENING UP
29A7 ⦧ OBLIQUE ANGLE OPENING DOWN
29A8 ⦨ MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING UP AND RIGHT
29A9 ⦩ MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING UP AND LEFT
29AA ⦪ MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING DOWN AND RIGHT
29AB ⦫ MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING DOWN AND LEFT
29AC ⦬ MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING RIGHT AND UP
29AD ⦭ MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING LEFT AND UP
29AE ⦮ MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING RIGHT AND DOWN
29AF ⦯ MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING LEFT AND DOWN

Empty sets

29B0 ⦰ REVERSED EMPTY SET
→ 2205 ∅ empty set
→ 2349 ⍉ apl functional symbol circle backslash
29B1 ⦱ EMPTY SET WITH OVERBAR
29B2 ⦲ EMPTY SET WITH SMALL CIRCLE ABOVE
29B3 ⦳ EMPTY SET WITH RIGHT ARROW ABOVE
29B4 ⦴ EMPTY SET WITH LEFT ARROW ABOVE

Circle symbols

29B5 ⦵ CIRCLE WITH HORIZONTAL BAR
• used in superscripted form to mean standard state (chemistry)
→ 2296 ⊖ circled minus
29B6 ⦶ CIRCLED VERTICAL BAR
→ 1F715 🜕 alchemical symbol for nitre
29B7 ⦷ CIRCLED PARALLEL
29B8 ⦸ CIRCLED REVERSE SOLIDUS
29B9 ⦹ CIRCLED PERPENDICULAR
29BA ⦺ CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF DIVIDED BY VERTICAL BAR
29BB ⦻ CIRCLE WITH SUPERIMPOSED X
→ 2297 ⊗ circled times
29BC ⦼ CIRCLED ANTICLOCKWISE-ROTATED DIVISION SIGN
29BD ⦽ UP ARROW THROUGH CIRCLE
29BE ⦾ CIRCLED WHITE BULLET
→ 229A ⊚ circled ring operator
→ 233E ⌾ apl functional symbol circle jot
→ 25CE ◎ bullseye

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29BF ◉ CIRCLED BULLET
- forms part of a graduated set of circles with enclosed black circle of different sizes

→ 2299 ⊙ circled dot operator
→ 25C9 ◉ fisheye
→ 2A00 ⨀ n-ary circled dot operator

29C0 ⧀ CIRCLED LESS-THAN
29C1 ⧁ CIRCLED GREATER-THAN
29C2 ⧂ CIRCLE WITH SMALL CIRCLE TO THE RIGHT
29C3 ⧃ CIRCLE WITH TWO HORIZONTAL STROKES TO THE RIGHT

Square symbols

29C4 ⧄ SQUARED RISING DIAGONAL SLASH
→ 2341 ⍁ apl functional symbol quad slash
→ 303C ⍝ masu mark

29C5 ⧅ SQUARED FALLING DIAGONAL SLASH
→ 2342 ⍂ apl functional symbol quad backslash

29C6 ⧆ SQUARED ASTERISK
29C7 ⧇ SQUARED SMALL CIRCLE
→ 233B ⌾ apl functional symbol quad jot

29C8 ⧈ SQUARED SQUARE
29C9 ⧉ TWO JOINED SQUARES

Triangle symbols

29CA ⧊ TRIANGLE WITH DOT ABOVE
29CB ⧋ TRIANGLE WITH UNDERBAR
29CC ⧌ S IN TRIANGLE
29CD ⧍ TRIANGLE WITH SERIFS AT BOTTOM
→ 25B3 △ white up-pointing triangle

29CE ⧎ RIGHT TRIANGLE ABOVE LEFT TRIANGLE
29CF ⧏ LEFT TRIANGLE BESIDE VERTICAL BAR
29D0 ⧐ VERTICAL BAR BESIDE RIGHT TRIANGLE

Bowtie symbols

29D1 ⧑ BOWTIE WITH LEFT HALF BLACK
→ 22C8 ⋈ bowtie

29D2 ⧒ BOWTIE WITH RIGHT HALF BLACK
29D3 ⧓ BLACK BOWTIE
29D4 ⧔ TIMES WITH LEFT HALF BLACK
→ 22C9 ⋉ left normal factor semidirect product

29D5 ⧕ TIMES WITH RIGHT HALF BLACK
→ 22CA ⋊ right normal factor semidirect product

29D6 ⧖ WHITE HOURGLASS
= vertical bowtie
= white framus
→ 231B ⌛ hourglass

29D7 ⧗ BLACK HOURGLASS

Fences

29D8 ⧘ LEFT WIGGLY FENCE
→ FE34 ︴ presentation form for vertical wavy low line

29D9 ⧙ RIGHT WIGGLY FENCE
29DA ⧚ LEFT DOUBLE WIGGLY FENCE
29DB ⧛ RIGHT DOUBLE WIGGLY FENCE

Miscellaneous mathematical symbols

29DC ⧜ INCOMPLETE INFINITY
= ISOtech entity ⧜
→ 221E ∞ infinity

29DD ⧝ TIE OVER INFINITY
29DE ⧞ INFINITY NEGATED WITH VERTICAL BAR

29DF ⧟ DOUBLE-ENDED MULTIMAP
→ 22B8 ⊸ multimap
→ 1F73A 🜺 alchemical symbol for arsenic

29E0 ⧠ SQUARE WITH CONTOURED OUTLINE
= D'Alembertian
→ 274F ❏ lower right drop-shadowed white square

29E1 ⧡ INCREASES AS
→ 22B4 ⊴ normal subgroup of or equal to

29E2 ⧢ SHUFFLE PRODUCT
→ 22FF ⋿ z notation bag membership

Relations

29E3 ⧣ EQUALS SIGN AND SLANTED PARALLEL
→ 0023 # number sign
→ 22D5 ⋕ equal and parallel to

29E4 ⧤ EQUALS SIGN AND SLANTED PARALLEL WITH TILDE ABOVE
29E5 ⧥ IDENTICAL TO AND SLANTED PARALLEL
→ 2A68 ⩨ triple horizontal bar with double vertical stroke

29E6 ⧦ GLEICH STARK
= tautological equivalent

Miscellaneous mathematical symbols

29E7 ⧧ THERMODYNAMIC
- vertical bar crossed by two horizontals

→ 2260 ≠ not equal to

29E8 ⧨ DOWN-POINTING TRIANGLE WITH LEFT HALF BLACK
→ 25ED ◭ up-pointing triangle with left half black

29E9 ⧩ DOWN-POINTING TRIANGLE WITH RIGHT HALF BLACK
→ 25EE ◮ up-pointing triangle with right half black

29EA ⧪ BLACK DIAMOND WITH DOWN ARROW
29EB ⧫ BLACK LOZENGE
→ 25CA ◊ lozenge

29EC ⧬ WHITE CIRCLE WITH DOWN ARROW
29ED ⧭ BLACK CIRCLE WITH DOWN ARROW

Error bar symbols

29EE ⧮ ERROR-BARRED WHITE SQUARE
29EF ⧯ ERROR-BARRED BLACK SQUARE
29F0 ⧰ ERROR-BARRED WHITE DIAMOND
29F1 ⧱ ERROR-BARRED BLACK DIAMOND
29F2 ⧲ ERROR-BARRED WHITE CIRCLE
29F3 ⧳ ERROR-BARRED BLACK CIRCLE

Miscellaneous mathematical symbols

29F4 ⧴ RULE-DELAYED
= colon right arrow

29F5 ⧵ REVERSE SOLIDUS OPERATOR
→ 005C \ reverse solidus
→ 2216 ∖ set minus
→ 27CD ⟍ mathematical falling diagonal

29F6 ⧶ SOLIDUS WITH OVERBAR
29F7 ⧷ REVERSE SOLIDUS WITH HORIZONTAL STROKE
→ 2340 ⍀ apl functional symbol backslash bar

Large operators

29F8 ⧸ BIG SOLIDUS
→ 2215 ∕ division slash

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29F9 ⧹ BIG REVERSE SOLIDUS
= z notation schema hiding
→ 2216 ∖ set minus

Specialized plus sign operators

29FA ⧺ DOUBLE PLUS
29FB ⧻ TRIPLE PLUS

Brackets

29FC ⧼ LEFT-POINTING CURVED ANGLE BRACKET
→ 227A ≺ precedes
→ 2329 〈 left-pointing angle bracket
29FD ⧽ RIGHT-POINTING CURVED ANGLE BRACKET
→ 227B ≻ succeeds
→ 232A 〉 right-pointing angle bracket

Miscellaneous mathematical symbols

29FE ⧾ TINY
→ 002B + plus sign
29FF ⧿ MINY
→ 2212 − minus sign

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