

Miscellaneous Mathematical Symbols-A

Range: 27C0–27EF

The Unicode Standard, Version 4.1

This file contains an excerpt from the character code tables and list of character names for *The Unicode Standard, Version 4.1*.

Characters in this chart that are new for The Unicode Standard, Version 4.1 are shown in conjunction with any existing characters. For ease of reference, the new characters have been highlighted in the chart grid and in the names list.

This file will not be updated with errata, or when additional characters are assigned to the Unicode Standard. See <http://www.unicode.org/charts/> for access to a complete list of the latest character code charts. See <http://www.unicode.org/Public/4.1.0/charts/> for a complete archived file of character code charts for Unicode 4.1.

Disclaimer

These charts are provided as the on-line reference to the character contents of the Unicode Standard, Version 4.1 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 excerpt file, please consult the appropriate sections of The Unicode Standard, Version 4.1, at <http://www.unicode.org/versions/Unicode4.1.0/>, including sections unchanged in The Unicode Standard, Version 4.0 (ISBN 0-321-18578-1), as well as Unicode Standard Annexes #9, #11, #14, #15, #24, #29, #31, and #34, the other Unicode Technical Reports and Standards, and the Unicode Character Database, which are available on-line.

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.

Fonts

The shapes of the reference glyphs used in these code charts are not prescriptive. Considerable variation is to be expected in actual fonts. The particular fonts used in these charts were provided to the Unicode Consortium by a number of different font designers, who own the rights to the fonts.

See <http://www.unicode.org/charts/fonts.html> for a list.

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






























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See <http://www.unicode.org/pending/pending.html> and <http://www.unicode.org/alloc/Pipeline.html>.

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| | 27C | 27D | 27E |
|---|---|---|---|
| 0 |  27C0 |  27D0 |  27E0 |
| 1 |  27C1 |  27D1 |  27E1 |
| 2 |  27C2 |  27D2 |  27E2 |
| 3 |  27C3 |  27D3 |  27E3 |
| 4 |  27C4 |  27D4 |  27E4 |
| 5 |  27C5 |  27D5 |  27E5 |
| 6 |  27C6 |  27D6 |  27E6 |
| 7 |  |  27D7 |  27E7 |
| 8 |  |  27D8 |  27E8 |
| 9 |  |  27D9 |  27E9 |
| A |  |  27DA |  27EA |
| B |  |  27DB |  27EB |
| C |  |  27DC |  |
| D |  |  27DD |  |
| E |  |  27DE |  |
| F |  |  27DF |  |

Miscellaneous symbols

- 27C0 \sphericalangle THREE DIMENSIONAL ANGLE
• used by Euclid
- 27C1 \triangle WHITE TRIANGLE CONTAINING SMALL WHITE TRIANGLE
• used by Euclid
- 27C2 \perp PERPENDICULAR
= orthogonal to
• relation, typeset with additional spacing
→ 22A5 \perp up tack
- 27C3 \circ OPEN SUBSET
- 27C4 \odot OPEN SUPERSET
- 27C5 \int LEFT S-SHAPED BAG DELIMITER
- 27C6 \int RIGHT S-SHAPED BAG DELIMITER
- 27C7 $\text{\textcircled{$ <reserved>
- 27C8 $\text{\textcircled{$ <reserved>
- 27C9 $\text{\textcircled{$ <reserved>
- 27CA $\text{\textcircled{$ <reserved>
- 27CB $\text{\textcircled{$ <reserved>
- 27CC $\text{\textcircled{$ <reserved>
- 27CD $\text{\textcircled{$ <reserved>
- 27CE $\text{\textcircled{$ <reserved>
- 27CF $\text{\textcircled{$ <reserved>
- 27D0 \diamond WHITE DIAMOND WITH CENTRED DOT

Operators

- 27D1 \wedge AND WITH DOT
→ 2227 \wedge logical and
→ 2A40 \cap intersection with dot
- 27D2 \cup ELEMENT OF OPENING UPWARDS
→ 2AD9 \cup element of opening downwards
- 27D3 \lrcorner LOWER RIGHT CORNER WITH DOT
= pullback
→ 230B \lrcorner right floor
- 27D4 \ulcorner UPPER LEFT CORNER WITH DOT
= pushout
→ 2308 \ulcorner left ceiling

Database theory operators

- 27D5 \bowtie LEFT OUTER JOIN
- 27D6 \bowtie RIGHT OUTER JOIN
- 27D7 \bowtie FULL OUTER JOIN
→ 2A1D \bowtie join

Tacks and turnstiles

- 27D8 \Uparrow LARGE UP TACK
→ 22A5 \Uparrow up tack
- 27D9 \Downarrow LARGE DOWN TACK
→ 22A4 \Downarrow down tack
- 27DA \vDash LEFT AND RIGHT DOUBLE TURNSTILE
→ 22A8 \vDash true
→ 2AE4 \vDash vertical bar double left turnstile
- 27DB \vdash LEFT AND RIGHT TACK
→ 22A2 \vdash right tack
- 27DC \multimap LEFT MULTIMAP
→ 22B8 \multimap multimap
- 27DD \dashv LONG RIGHT TACK
→ 22A2 \dashv right tack
- 27DE \dashv LONG LEFT TACK
→ 22A3 \dashv left tack

- 27DF \upharpoonright UP TACK WITH CIRCLE ABOVE
= radial component
→ 2AF1 \upharpoonright down tack with circle below

Modal logic operators

- 27E0 \lozenge LOZENGE DIVIDED BY HORIZONTAL RULE
• used as form of possibility in modal logic
→ 25CA \lozenge lozenge
- 27E1 \diamond WHITE CONCAVE-SIDED DIAMOND
= never (modal operator)
- 27E2 \diamondleftarrow WHITE CONCAVE-SIDED DIAMOND WITH LEFTWARDS TICK
= was never (modal operator)
- 27E3 \diamondrightarrow WHITE CONCAVE-SIDED DIAMOND WITH RIGHTWARDS TICK
= will never be (modal operator)
- 27E4 \squareleftarrow WHITE SQUARE WITH LEFTWARDS TICK
= was always (modal operator)
→ 25A1 \squareleftarrow white square
- 27E5 \squaresquarerightarrow WHITE SQUARE WITH RIGHTWARDS TICK
= will always be (modal operator)

Mathematical brackets

- 27E6 \llbracket MATHEMATICAL LEFT WHITE SQUARE BRACKET
= z notation left bag bracket
→ 301A \llbracket left white square bracket
- 27E7 \rrbracket MATHEMATICAL RIGHT WHITE SQUARE BRACKET
= z notation right bag bracket
→ 301B \rrbracket right white square bracket
- 27E8 \langle MATHEMATICAL LEFT ANGLE BRACKET
= bra
= z notation left sequence bracket
→ 2329 \langle left-pointing angle bracket
→ 3008 \langle left angle bracket
- 27E9 \rangle MATHEMATICAL RIGHT ANGLE BRACKET
= ket
= z notation right sequence bracket
→ 232A \rangle right-pointing angle bracket
→ 3009 \rangle right angle bracket
- 27EA $\langle\langle$ MATHEMATICAL LEFT DOUBLE ANGLE BRACKET
= z notation left chevron bracket
→ 300A $\langle\langle$ left double angle bracket
- 27EB $\rangle\rangle$ MATHEMATICAL RIGHT DOUBLE ANGLE BRACKET
= z notation right chevron bracket
→ 300B $\rangle\rangle$ right double angle bracket