

Miscellaneous Mathematical Symbols-A

Range: 27C0–27EF

The Unicode Standard, Version 6.0

This file contains an excerpt from the character code tables and list of character names for *The Unicode Standard, Version 6.0*.

Characters in this chart that are new for The Unicode Standard, Version 6.0 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/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-6.0/> for charts showing only the characters added in Unicode 6.0. See <http://www.unicode.org/Public/6.0.0/charts/> for a complete archived file of character code charts for Unicode 6.0.

Disclaimer

These charts are provided as the online reference to the character contents of the Unicode Standard, Version 6.0 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 6.0, online at <http://www.unicode.org/versions/Unicode6.0.0/>, as well as Unicode Standard Annexes #9, #11, #14, #15, #24, #29, #31, #34, #38, #41, #42, and #44, 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.

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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



















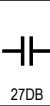





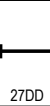







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See <http://www.unicode.org/pending/pending.html> and <http://www.unicode.org/alloc/Pipeline.html>.

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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	 27C7	 27D7	 27E7
8	 27C8	 27D8	 27E8
9	 27C9	 27D9	 27E9
A	 27CA	 27DA	 27EA
B		 27DB	 27EB
C	 27CC	 27DC	 27EC
D		 27DD	 27ED
E	 27CE	 27DE	 27EE
F	 27CF	 27DF	 27EF

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 \Subset OPEN SUBSET
- 27C4 \Supset OPEN SUPERSET
- 27C5 $\{$ LEFT S-SHAPED BAG DELIMITER
- 27C6 $\}$ RIGHT S-SHAPED BAG DELIMITER
- 27C7 \vee OR WITH DOT INSIDE
- 27C8 \lsubset REVERSE SOLIDUS PRECEDING SUBSET
- 27C9 \rsubset SUPERSET PRECEDING SOLIDUS

Vertical line operator

- 27CA \dagger VERTICAL BAR WITH HORIZONTAL STROKE
 → 2AF2 \ddagger parallel with horizontal stroke
 → 2AF5 \equiv triple vertical bar with horizontal stroke

Division operator

- 27CC \div LONG DIVISION
 • graphically extends over the dividend
 → 00F7 \div division sign
 → 2215 $/$ division slash
 → 221A \surd square root

Operators

- 27CE \boxtimes SQUARED LOGICAL AND
 = box min
 • morphological min product operator
 • morphological erosion operator
 • additive minimum operator
- 27CF \boxplus SQUARED LOGICAL OR
 = box max
 • morphological max product operator
 • morphological dilation operator
 • additive maximum operator

Miscellaneous symbol

- 27D0 \diamond WHITE DIAMOND WITH CENTRED DOT
 → 1F4A0 \diamond diamond shape with a dot inside

Operators

- 27D1 \wedge AND WITH DOT
 → 2227 \wedge logical and
 → 2A40 \cap intersection with dot
- 27D2 \updownarrow ELEMENT OF OPENING UPWARDS
 → 2AD9 \updownarrow element of opening downwards
- 27D3 \lrcorner LOWER RIGHT CORNER WITH DOT
 = pullback
 → 230B \lfloor right floor
- 27D4 \ulcorner UPPER LEFT CORNER WITH DOT
 = pushout
 → 2308 \lceil 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 \perp up tack
- 27D9 \Downarrow LARGE DOWN TACK
 → 22A4 \top down tack
- 27DA \Leftrightarrow LEFT AND RIGHT DOUBLE TURNSTILE
 → 22A8 \vDash true
 → 2AE4 \Leftrightarrow vertical bar double left turnstile
- 27DB \Rrightarrow LEFT AND RIGHT TACK
 → 22A2 \vdash right tack
- 27DC \multimap LEFT MULTIMAP
 → 22B8 \multimap multimap
- 27DD \dashv LONG RIGHT TACK
 → 22A2 \vdash right tack
- 27DE \dashv LONG LEFT TACK
 → 22A3 \dashv left tack
- 27DF \upharpoonright UP TACK WITH CIRCLE ABOVE
 = radial component
 → 2AF1 \downharpoonright down tack with circle below

Modal logic operators

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

27EC (MATHEMATICAL LEFT WHITE TORTOISE SHELL
BRACKET

→ 2997 (left black tortoise shell bracket

→ 3018 [left white tortoise shell bracket

27ED) MATHEMATICAL RIGHT WHITE TORTOISE
SHELL BRACKET

→ 2998) right black tortoise shell bracket

→ 3019] right white tortoise shell bracket

27EE (MATHEMATICAL LEFT FLATTENED
PARENTHESIS

= lgroup

27EF) MATHEMATICAL RIGHT FLATTENED
PARENTHESIS

= rgroup