Miscellaneous Mathematical Symbols-A

Range: 27C0–27EF

The Unicode Standard, Version 15.1

This file contains a excerpt from the character code tables and list of character names for
The Unicode Standard, Version 15.1

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See https://www.unicode.org/charts/ for access to a complete list of the latest character code charts.
See https://www.unicode.org/charts/PDF/Unicode-15.1/ for charts showing only the characters added in Unicode 15.1.
See https://www.unicode.org/Public/15.1.0/charts/ for a complete archived file of character code charts for Unicode 15.1.
See https://www.unicode.org/charts/About.html#Conventions for conventions used in these code charts, and other general information.

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See https://www.unicode.org/ucd/ and http://www.unicode.org/reports/

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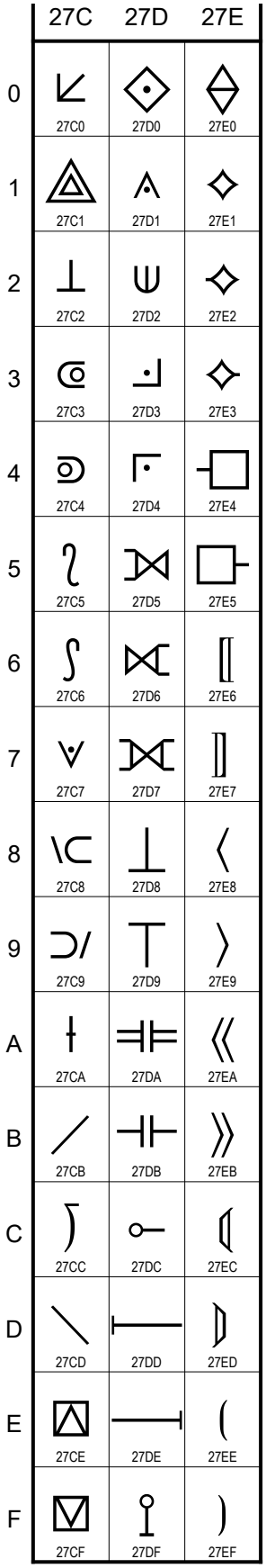

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Miscellaneous symbols

27C0 ⟀ THREE DIMENSIONAL ANGLE
• used by Euclid

27C1 ⟁ WHITE TRIANGLE CONTAINING SMALL WHITE TRIANGLE
• used by Euclid

27C2 ⟂ PERPENDICULAR
= orthogonal to
• relation, typeset with additional spacing
→ 22A5 ⊥ up tack

27C3 ⟃ OPEN SUBSET

27C4 ⟄ OPEN SUPERSET

Paired punctuation

27C5 ⟅ LEFT S-SHAPED BAG DELIMITER

27C6 ⟆ RIGHT S-SHAPED BAG DELIMITER

Operator

27C7 ⟇ OR WITH DOT INSIDE
→ 2228 ∨ logical or
→ 228D ⊍ multiset multiplication
→ 27D1 ⟑ and with dot

Miscellaneous symbols

27C8 ⟈ REVERSE SOLIDUS PRECEDING SUBSET

27C9 ⟉ SUPERSET PRECEDING SOLIDUS

Vertical line operator

27CA ⟊ VERTICAL BAR WITH HORIZONTAL STROKE
→ 2AF2 ⫲ parallel with horizontal stroke
→ 2AF5 ⫵ triple vertical bar with horizontal stroke

Miscellaneous symbol

27CB ⟋ MATHEMATICAL RISING DIAGONAL
= \diagup
→ 2215 ∕ division slash

Division operator

27CC ⟌ LONG DIVISION
• graphically extends over the dividend
→ 00F7 ÷ division sign
→ 2215 ∕ division slash
→ 221A √ square root

Miscellaneous symbol

27CD ⟍ MATHEMATICAL FALLING DIAGONAL
= \diagdown
→ 2216 ∖ set minus
→ 29F5 ⧵ reverse solidus operator

Operators

27CE ⟎ SQUARED LOGICAL AND
= box min
• morphological min product operator
• morphological erosion operator
• additive minimum operator

27CF ⟏ SQUARED LOGICAL OR
= box max
• morphological max product operator
• morphological dilation operator
• additive maximum operator

Miscellaneous symbol

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

Operators

27D1 ⟑ AND WITH DOT
→ 2227 ∧ logical and
→ 27C7 ⟇ or with dot inside
→ 2A40 ⩀ intersection with dot

27D2 ⟒ ELEMENT OF OPENING UPWARDS
→ 2AD9 ⫙ element of opening downwards

27D3 ⟓ LOWER RIGHT CORNER WITH DOT
= pullback
→ 230B ⌋ right floor

27D4 ⟔ UPPER LEFT CORNER WITH DOT
= pushout
→ 2308 ⌈ left ceiling

Database theory operators

27D5 ⟕ LEFT OUTER JOIN

27D6 ⟖ RIGHT OUTER JOIN

27D7 ⟗ FULL OUTER JOIN
→ 2A1D ⨝ join

Tacks and turnstiles

27D8 ⟘ LARGE UP TACK
→ 22A5 ⊥ up tack

27D9 ⟙ LARGE DOWN TACK
→ 22A4 ⊤ down tack

27DA ⟚ LEFT AND RIGHT DOUBLE TURNSTILE
→ 22A8 ⊨ true
→ 2AE4 ⫤ vertical bar double left turnstile

27DB ⟛ LEFT AND RIGHT TACK
→ 22A2 ⊢ right tack

27DC ⟜ LEFT MULTIMAP
→ 22B8 ⊸ multimap

27DD ⟝ LONG RIGHT TACK
→ 22A2 ⊢ right tack

27DE ⟞ LONG LEFT TACK
→ 22A3 ⊣ left tack

27DF ⟟ UP TACK WITH CIRCLE ABOVE
= radial component
→ 2AF1 ⫱ down tack with circle below

Modal logic operators

27E0 ⟠ LOZENGE DIVIDED BY HORIZONTAL RULE
• used as form of possibility in modal logic
→ 25CA ◊ lozenge

27E1 ⟡ WHITE CONCAVE-SIDED DIAMOND
= never (modal operator)
→ 25C7 ◇ white diamond

27E2 ⟢ WHITE CONCAVE-SIDED DIAMOND WITH LEFTWARDS TICK
= was never (modal operator)

27E3 ⟣ WHITE CONCAVE-SIDED DIAMOND WITH RIGHTWARDS TICK
= will never be (modal operator)

27E4 ⟤ WHITE SQUARE WITH LEFTWARDS TICK
= was always (modal operator)
→ 25A1 □ white square
→ 25FB □ white medium square

27E5 ⟥ WHITE SQUARE WITH RIGHTWARDS TICK
= will always be (modal operator)

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Mathematical brackets

These bracket characters are also used as punctuation outside of a mathematical context.

27E6 ⟦ MATHEMATICAL LEFT WHITE SQUARE BRACKET
= z notation left bag bracket
→ 301A 〚 left white square bracket

27E7 ⟧ MATHEMATICAL RIGHT WHITE SQUARE BRACKET
= z notation right bag bracket
→ 301B 〛 right white square bracket

27E8 ⟨ MATHEMATICAL LEFT ANGLE BRACKET
= bra
= z notation left sequence bracket
→ 2329 〈 left-pointing angle bracket
→ 3008 〈 left angle bracket

27E9 ⟩ MATHEMATICAL RIGHT ANGLE BRACKET
= ket
= z notation right sequence bracket
→ 232A 〉 right-pointing angle bracket
→ 3009 〉 right angle bracket

27EA ⟪ MATHEMATICAL LEFT DOUBLE ANGLE BRACKET
= z notation left chevron bracket
→ 300A 《 left double angle bracket

27EB ⟫ MATHEMATICAL RIGHT DOUBLE ANGLE BRACKET
= z notation right chevron bracket
→ 300B 》 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

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