Miscellaneous Mathematical Symbols-A

Range: 27C0-27EF

This file contains an excerpt from the character code tables and list of character names for *The Unicode Standard, Version 7.0*

This file may be changed at any time without notice to reflect errata or other updates 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-7.0/ for charts showing only the characters added in Unicode 7.0. See http://www.unicode.org/Public/7.0.0/charts/ for a complete archived file of character code charts for Unicode 7.0.

Disclaimer

These charts are provided as the online reference to the character contents of the Unicode Standard, Version 7.0 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 7.0, online at http://www.unicode.org/versions/Unicode7.0.0/, 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/charts/fonts.html for a list.

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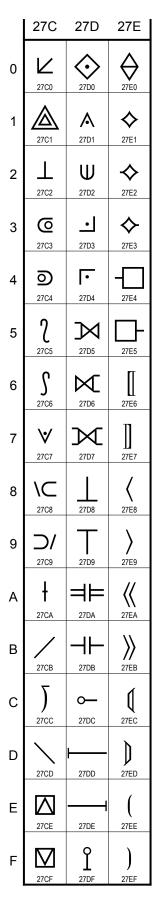
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See http://www.unicode.org/pending/pending.html and http://www.unicode.org/alloc/Pipeline.html.

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Misce	llan	eous symbols	27D4	Ŀ	UPPER LEFT CORNER WITH DOT
27C0		THREE DIMENSIONAL ANGLE			= pushout
		• used by Euclid			→ 2308 [left ceiling
27C1	\triangle	WHITE TRIANGLE CONTAINING SMALL WHITE	Data	base	theory operators
		TRIANGLE	27D5	\bowtie	LEFT OUTER JOIN
0700		• used by Euclid	27D6	M	RIGHT OUTER JOIN
27C2	Τ		27D7	\bowtie	FULL OUTER JOIN
		 orthogonal to relation, typeset with additional spacing			→ 2A1D 🔀 join
		→ 22A5 ⊥ up tack	Tacks	and	l turnstiles
27C3	ര	OPEN SUBSET	27D8	- 1	LARGE UP TACK
27C4		OPEN SUPERSET			→ 22A5 ⊥ up tack
27C5	2	LEFT S-SHAPED BAG DELIMITER	27D9	Τ	LARGE DOWN TACK
27C6		RIGHT S-SHAPED BAG DELIMITER			→ 22A4 T down tack
27C7		OR WITH DOT INSIDE	27DA	≓	LEFT AND RIGHT DOUBLE TURNSTILE
	$\backslash \subset$	REVERSE SOLIDUS PRECEDING SUBSET			→ 22A8 ⊨ true
27C9	\supset /	SUPERSET PRECEDING SOLIDUS	0700		→ 2AE4 = vertical bar double left turnstile
Vertic	al li	ne operator	2/DB	⊣⊢	LEFT AND RIGHT TACK
27CA	ł	VERTICAL BAR WITH HORIZONTAL STROKE	2700		→ 22A2 ⊢ right tack LEFT MULTIMAP
		→ 2AF2 # parallel with horizontal stroke	2100	0_	→ 22B8 → multimap
		→ 2AF5 # triple vertical bar with horizontal	2700		LONG RIGHT TACK
		stroke	2100		\rightarrow 22A2 \vdash right tack
Misce	llan	eous symbol	27DE		LONG LEFT TACK
27CB	/	MATHEMATICAL RISING DIAGONAL			→ 22A3 ⊢ left tack
		= \diagup	27DF	Î	UP TACK WITH CIRCLE ABOVE
		→ 2215 / division slash			= radial component
Divisi	on o	perator			$ ightarrow$ 2AF1 $\c J$ down tack with circle below
27CC	7	LONG DIVISION	Moda	al log	jic operators
		 graphically extends over the dividend 	27E0	\Diamond	LOZENGE DIVIDED BY HORIZONTAL RULE
		→ 00F7 ÷ division sign			 used as form of possibility in modal logic
		→ 2215 / division slash			→ 25CA ♦ lozenge
		\rightarrow 221A $$ square root	27E1	<	WHITE CONCAVE-SIDED DIAMOND
Miscellaneous symbol					= never (modal operator) → 25C7 ♦ white diamond
27CD	/		27E2	♦	WHITE CONCAVE-SIDED DIAMOND WITH
		=\diagdown		•	LEFTWARDS TICK
		→ 2216 \ set minus→ 29F5 \ reverse solidus operator			= was never (modal operator)
_			27E3	_	WHITE CONCAVE-SIDED DIAMOND WITH
Opera	atore		2,20	~	
270E			2720	~	RIGHTWARDS TICK
		SQUARED LOGICAL AND		·	RIGHTWARDS TICK = will never be (modal operator)
		SQUARED LOGICAL AND = box min		·	RIGHTWARDS TICK
		SQUARED LOGICAL AND = box min • morphological min product operator		·	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK
		 SQUARED LOGICAL AND box min morphological min product operator morphological erosion operator 	27E4	-	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square
27CF		SQUARED LOGICAL AND = box min • morphological min product operator	27E4	-	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 ☐ white square → 25FB ☐ white medium square WHITE SQUARE WITH RIGHTWARDS TICK
		SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max	27E4	-	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square
		SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator	27E4 27E5 Math	-□ -□ ema	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 ☐ white square → 25FB ☐ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets
		SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator	27E4 27E5 Math	-□ 	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation
27CF		SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator	27E4 27E5 Math These outside	ema brace	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context.
27CF	□	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator eous symbol	27E4 27E5 Math	-□ 	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE
27CF	□	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT	27E4 27E5 Math These outside	ema brace	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET
27CF	□	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator eous symbol	27E4 27E5 Math These outside	ema brace	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET = z notation left bag bracket
27CF Misce 27D0 Opera	⊠ ⊠ •	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT → 1F4A0 ❖ diamond shape with a dot inside	27E4 27E5 Math These outside	ema brace	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET
27CF Misce 27D0	⊠ ⊠ •	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT → 1F4A0 ❖ diamond shape with a dot inside AND WITH DOT	27E4 27E5 Math These outsic 27E6	ema brace de of d	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET = z notation left bag bracket → 301A
27CF Misce 27D0 Opera	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT → 1F4A0 ❖ diamond shape with a dot inside SAND WITH DOT → 2227 ∧ logical and	27E4 27E5 Math These outsic 27E6	ema brace de of d	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET = z notation left bag bracket → 301A
27CF Misce 27D0 Opera 27D1	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT → 1F4A0 ❖ diamond shape with a dot inside AND WITH DOT → 2227 ∧ logical and → 2A40 ⋂ intersection with dot	27E4 27E5 Math These outsid 27E6	ema bracede of a	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET = z notation left bag bracket → 301A
27CF Misce 27D0 Opera	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT → 1F4A0 ❖ diamond shape with a dot inside AND WITH DOT → 2227 ∧ logical and → 2A40 ⋂ intersection with dot ELEMENT OF OPENING UPWARDS	27E4 27E5 Math These outsic 27E6	ema brace de of d	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET = z notation left bag bracket → 301A
27CF Misce 27D0 Opera 27D1 27D2	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT → 1F4A0 ❖ diamond shape with a dot inside AND WITH DOT → 2227 ∧ logical and → 2A40 ⋂ intersection with dot ELEMENT OF OPENING UPWARDS → 2AD9 ⋒ element of opening downwards	27E4 27E5 Math These outsid 27E6	ema bracede of a	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB□ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET = z notation left bag bracket → 301A □ left white square bracket MATHEMATICAL RIGHT WHITE SQUARE BRACKET = z notation right bag bracket → 301B □ right white square bracket MATHEMATICAL LEFT ANGLE BRACKET = bra
27CF Misce 27D0 Opera 27D1	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT → 1F4A0 ❖ diamond shape with a dot inside AND WITH DOT → 2227 ∧ logical and → 2A40 ⋂ intersection with dot ELEMENT OF OPENING UPWARDS → 2AD9 ⋒ element of opening downwards LOWER RIGHT CORNER WITH DOT	27E4 27E5 Math These outsid 27E6	ema bracede of a	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB □ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET = z notation left bag bracket → 301A
27CF Misce 27D0 Opera 27D1 27D2	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	SQUARED LOGICAL AND = box min • morphological min product operator • morphological erosion operator • additive minimum operator SQUARED LOGICAL OR = box max • morphological max product operator • morphological dilation operator • additive maximum operator • additive maximum operator eous symbol WHITE DIAMOND WITH CENTRED DOT → 1F4A0 ❖ diamond shape with a dot inside AND WITH DOT → 2227 ∧ logical and → 2A40 ⋂ intersection with dot ELEMENT OF OPENING UPWARDS → 2AD9 ⋒ element of opening downwards	27E4 27E5 Math These outsid 27E6	ema bracede of a	RIGHTWARDS TICK = will never be (modal operator) WHITE SQUARE WITH LEFTWARDS TICK = was always (modal operator) → 25A1 □ white square → 25FB□ white medium square WHITE SQUARE WITH RIGHTWARDS TICK = will always be (modal operator) tical brackets ket characters are also used as punctuation a mathematical context. MATHEMATICAL LEFT WHITE SQUARE BRACKET = z notation left bag bracket → 301A □ left white square bracket MATHEMATICAL RIGHT WHITE SQUARE BRACKET = z notation right bag bracket → 301B □ right white square bracket MATHEMATICAL LEFT ANGLE BRACKET = bra

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
		= Igroup
27EF)	MATHEMATICAL RIGHT FLATTENED PARENTHESIS
		= rgroup