

Supplemental Mathematical Operators

Range: 2A00–2AFF

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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-5.0/> for charts showing only the characters added in Unicode 5.0.
See <http://www.unicode.org/Public/5.0.0/charts/> for a complete archived file of character code charts for Unicode 5.0.

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These charts are provided as the on-line reference to the character contents of the Unicode Standard, Version 5.0 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 5.0* (ISBN 0-321-48091-0), online at <http://www.unicode.org/versions/Unicode5.0.0/>, 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.

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	2A0	2A1	2A2	2A3	2A4	2A5	2A6	2A7	2A8	2A9	2AA	2AB	2AC	2AD	2AE	2AF
0	2A00	2A10	2A20	2A30	2A40	2A50	2A60	2A70	2A80	2A90	2AA0	2AB0	2AC0	2AD0	2AE0	2AF0
1	2A01	2A11	2A21	2A31	2A41	2A51	2A61	2A71	2A81	2A91	2AA1	2AB1	2AC1	2AD1	2AE1	2AF1
2	2A02	2A12	2A22	2A32	2A42	2A52	2A62	2A72	2A82	2A92	2AA2	2AB2	2AC2	2AD2	2AE2	2AF2
3	2A03	2A13	2A23	2A33	2A43	2A53	2A63	2A73	2A83	2A93	2AA3	2AB3	2AC3	2AD3	2AE3	2AF3
4	2A04	2A14	2A24	2A34	2A44	2A54	2A64	2A74	2A84	2A94	2AA4	2AB4	2AC4	2AD4	2AE4	2AF4
5	2A05	2A15	2A25	2A35	2A45	2A55	2A65	2A75	2A85	2A95	2AA5	2AB5	2AC5	2AD5	2AE5	2AF5
6	2A06	2A16	2A26	2A36	2A46	2A56	2A66	2A76	2A86	2A96	2AA6	2AB6	2AC6	2AD6	2AE6	2AF6
7	2A07	2A17	2A27	2A37	2A47	2A57	2A67	2A77	2A87	2A97	2AA7	2AB7	2AC7	2AD7	2AE7	2AF7
8	2A08	2A18	2A28	2A38	2A48	2A58	2A68	2A78	2A88	2A98	2AA8	2AB8	2AC8	2AD8	2AE8	2AF8
9	2A09	2A19	2A29	2A39	2A49	2A59	2A69	2A79	2A89	2A99	2AA9	2AB9	2AC9	2AD9	2AE9	2AF9
A	2A0A	2A1A	2A2A	2A3A	2A4A	2A5A	2A6A	2A7A	2A8A	2A9A	2AAA	2ABA	2ACA	2ADA	2AEA	2AFA
B	2A0B	2A1B	2A2B	2A3B	2A4B	2A5B	2A6B	2A7B	2A8B	2A9B	2AAB	2ABB	2ACB	2ADB	2AEB	2AFB
C	2A0C	2A1C	2A2C	2A3C	2A4C	2A5C	2A6C	2A7C	2A8C	2A9C	2AAC	2ABC	2ACC	2ADC	2AEC	2AFC
D	2A0D	2A1D	2A2D	2A3D	2A4D	2A5D	2A6D	2A7D	2A8D	2A9D	2AAD	2ABD	2ACD	2ADD	2AED	2AFD
E	2A0E	2A1E	2A2E	2A3E	2A4E	2A5E	2A6E	2A7E	2A8E	2A9E	2AAE	2ABE	2ACE	2ADE	2AEE	2AFE
F	2A0F	2A1F	2A2F	2A3F	2A4F	2A5F	2A6F	2A7F	2A8F	2A9F	2AAF	2ABF	2ACF	2ADF	2AEF	2AFF

N-ary operators

2A00	⊙	N-ARY CIRCLED DOT OPERATOR → 2299 ⊙ circled dot operator → 25C9 ● fisheye
2A01	⊕	N-ARY CIRCLED PLUS OPERATOR → 2295 ⊕ circled plus
2A02	⊗	N-ARY CIRCLED TIMES OPERATOR → 2297 ⊗ circled times
2A03	∪	N-ARY UNION OPERATOR WITH DOT
2A04	∪	N-ARY UNION OPERATOR WITH PLUS → 228E ∪ multiset union
2A05	∩	N-ARY SQUARE INTERSECTION OPERATOR → 2293 ∩ square cap
2A06	∩	N-ARY SQUARE UNION OPERATOR → 2294 ∩ square cup
2A07	⋈	TWO LOGICAL AND OPERATOR = merge → 2A55 ⋈ two intersecting logical and
2A08	⋈	TWO LOGICAL OR OPERATOR → 2A56 ⋈ two intersecting logical or
2A09	×	N-ARY TIMES OPERATOR → 00D7 × multiplication sign

Summations and integrals

2A0A	∑	MODULO TWO SUM → 2211 ∑ n-ary summation
2A0B	∫	SUMMATION WITH INTEGRAL
2A0C	∫∫∫	QUADRUPLE INTEGRAL OPERATOR → 222D ∫∫∫ triple integral ≈ 222B ∫ 222B ∫ 222B ∫ 222B ∫
2A0D	∫	FINITE PART INTEGRAL
2A0E	∫	INTEGRAL WITH DOUBLE STROKE
2A0F	∫	INTEGRAL AVERAGE WITH SLASH
2A10	∫	CIRCULATION FUNCTION
2A11	∫	ANTICLOCKWISE INTEGRATION
2A12	∫	LINE INTEGRATION WITH RECTANGULAR PATH AROUND POLE
2A13	∫	LINE INTEGRATION WITH SEMICIRCULAR PATH AROUND POLE
2A14	∫	LINE INTEGRATION NOT INCLUDING THE POLE
2A15	∫	INTEGRAL AROUND A POINT OPERATOR → 222E ∫ contour integral
2A16	∫	QUATERNION INTEGRAL OPERATOR
2A17	∫	INTEGRAL WITH LEFTWARDS ARROW WITH HOOK
2A18	∫	INTEGRAL WITH TIMES SIGN
2A19	∫	INTEGRAL WITH INTERSECTION
2A1A	∫	INTEGRAL WITH UNION
2A1B	∫	INTEGRAL WITH OVERBAR = upper integral
2A1C	∫	INTEGRAL WITH UNDERBAR = lower integral

Miscellaneous large operators

2A1D	⋈	JOIN = large bowtie • relational database theory → 22C8 ⋈ bowtie → 27D7 ⋈ full outer join
2A1E	◁	LARGE LEFT TRIANGLE OPERATOR • relational database theory → 25C1 ◁ white left-pointing triangle
2A1F	⋈	Z NOTATION SCHEMA COMPOSITION → 2A3E ⋈ z notation relational composition
2A20	≫	Z NOTATION SCHEMA PIPING → 226B ≫ much greater-than

2A21	↑	Z NOTATION SCHEMA PROJECTION → 21BE ↑ upwards harpoon with barb rightwards
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Plus and minus sign operators

2A22	+	PLUS SIGN WITH SMALL CIRCLE ABOVE
2A23	+	PLUS SIGN WITH CIRCUMFLEX ACCENT ABOVE
2A24	+	PLUS SIGN WITH TILDE ABOVE = positive difference or sum
2A25	+	PLUS SIGN WITH DOT BELOW → 2214 + dot plus
2A26	+	PLUS SIGN WITH TILDE BELOW = sum or positive difference
2A27	+	PLUS SIGN WITH SUBSCRIPT TWO = nim-addition
2A28	+	PLUS SIGN WITH BLACK TRIANGLE
2A29	-	MINUS SIGN WITH COMMA ABOVE
2A2A	-	MINUS SIGN WITH DOT BELOW → 2238 - dot minus
2A2B	-	MINUS SIGN WITH FALLING DOTS
2A2C	-	MINUS SIGN WITH RISING DOTS
2A2D	⊕	PLUS SIGN IN LEFT HALF CIRCLE
2A2E	⊖	PLUS SIGN IN RIGHT HALF CIRCLE

Multiplication and division sign operators

2A2F	×	VECTOR OR CROSS PRODUCT → 00D7 × multiplication sign
2A30	×	MULTIPLICATION SIGN WITH DOT ABOVE
2A31	×	MULTIPLICATION SIGN WITH UNDERBAR
2A32	×	SEMIDIRECT PRODUCT WITH BOTTOM CLOSED
2A33	⊗	SMASH PRODUCT
2A34	⊗	MULTIPLICATION SIGN IN LEFT HALF CIRCLE
2A35	⊗	MULTIPLICATION SIGN IN RIGHT HALF CIRCLE
2A36	⊗	CIRCLED MULTIPLICATION SIGN WITH CIRCUMFLEX ACCENT
2A37	⊗	MULTIPLICATION SIGN IN DOUBLE CIRCLE
2A38	⊕	CIRCLED DIVISION SIGN

Miscellaneous mathematical operators

2A39	△	PLUS SIGN IN TRIANGLE
2A3A	△	MINUS SIGN IN TRIANGLE
2A3B	△	MULTIPLICATION SIGN IN TRIANGLE
2A3C	⌋	INTERIOR PRODUCT → 230B ⌋ right floor
2A3D	⌋	RIGHTHAND INTERIOR PRODUCT → 230A ⌋ left floor → 2319 ⌋ turned not sign
2A3E	⋈	Z NOTATION RELATIONAL COMPOSITION → 2A1F ⋈ z notation schema composition
2A3F	∐	AMALGAMATION OR COPRODUCT → 2210 ∐ n-ary coproduct

Intersections and unions

2A40	∩	INTERSECTION WITH DOT → 2227 ∩ logical and → 27D1 ∩ and with dot
2A41	∪	UNION WITH MINUS SIGN = z notation bag subtraction → 228E ∪ multiset union
2A42	∪	UNION WITH OVERBAR
2A43	∩	INTERSECTION WITH OVERBAR
2A44	∩	INTERSECTION WITH LOGICAL AND
2A45	∪	UNION WITH LOGICAL OR
2A46	⋈	UNION ABOVE INTERSECTION

2A47	∩	INTERSECTION ABOVE UNION
2A48	⋈	UNION ABOVE BAR ABOVE INTERSECTION
2A49	⊖	INTERSECTION ABOVE BAR ABOVE UNION
2A4A	⋈	UNION BESIDE AND JOINED WITH UNION
2A4B	⋈	INTERSECTION BESIDE AND JOINED WITH INTERSECTION
2A4C	∪	CLOSED UNION WITH SERIFS → 222A ∪ union
2A4D	∩	CLOSED INTERSECTION WITH SERIFS → 2229 ∩ intersection
2A4E	⊞	DOUBLE SQUARE INTERSECTION
2A4F	⊞	DOUBLE SQUARE UNION
2A50	⊞	CLOSED UNION WITH SERIFS AND SMASH PRODUCT

Logical ands and ors

2A51	∧	LOGICAL AND WITH DOT ABOVE
2A52	∨	LOGICAL OR WITH DOT ABOVE
2A53	⋈	DOUBLE LOGICAL AND
2A54	∨	DOUBLE LOGICAL OR
2A55	⋈	TWO INTERSECTING LOGICAL AND → 2A07 ⋈ two logical and operator
2A56	∨	TWO INTERSECTING LOGICAL OR → 2A08 ∨ two logical or operator
2A57	∨	SLOPING LARGE OR
2A58	∧	SLOPING LARGE AND
2A59	⋈	LOGICAL OR OVERLAPPING LOGICAL AND
2A5A	∧	LOGICAL AND WITH MIDDLE STEM
2A5B	∨	LOGICAL OR WITH MIDDLE STEM
2A5C	⋈	LOGICAL AND WITH HORIZONTAL DASH
2A5D	∨	LOGICAL OR WITH HORIZONTAL DASH
2A5E	∧	LOGICAL AND WITH DOUBLE OVERBAR → 2306 $\overline{\overline{\wedge}}$ perspective
2A5F	∧	LOGICAL AND WITH UNDERBAR
2A60	∧	LOGICAL AND WITH DOUBLE UNDERBAR → 2259 $\underline{\underline{\wedge}}$ estimates
2A61	∨	SMALL VEE WITH UNDERBAR → 225A $\underline{\vee}$ equiangular to
2A62	∨	LOGICAL OR WITH DOUBLE OVERBAR
2A63	∨	LOGICAL OR WITH DOUBLE UNDERBAR → 225A $\underline{\underline{\vee}}$ equiangular to

Miscellaneous mathematical operators

2A64	⊲	Z NOTATION DOMAIN ANTIRESTRICTION
2A65	⊳	Z NOTATION RANGE ANTIRESTRICTION → 2332 \triangleright conical taper

Relational operators

2A66	≈	EQUALS SIGN WITH DOT BELOW → 2250 $\dot{=}$ approaches the limit
2A67	≐	IDENTICAL WITH DOT ABOVE
2A68	≐	TRIPLE HORIZONTAL BAR WITH DOUBLE VERTICAL STROKE = identical and parallel to → 22D5 \equiv equal and parallel to → 29E5 \equiv identical to and slanted parallel
2A69	≐	TRIPLE HORIZONTAL BAR WITH TRIPLE VERTICAL STROKE
2A6A	~	TILDE OPERATOR WITH DOT ABOVE
2A6B	~	TILDE OPERATOR WITH RISING DOTS → 223B \sim homothetic
2A6C	≈	SIMILAR MINUS SIMILAR
2A6D	≐	CONGRUENT WITH DOT ABOVE → 2245 $\dot{=}$ approximately equal to
2A6E	≈	EQUALS WITH ASTERISK → 225B \approx star equals

2A6F	≈	ALMOST EQUAL TO WITH CIRCUMFLEX ACCENT
2A70	≈	APPROXIMATELY EQUAL OR EQUAL TO
2A71	±	EQUALS SIGN ABOVE PLUS SIGN • black stands slightly better (chess notation)
2A72	±	PLUS SIGN ABOVE EQUALS SIGN • white stands slightly better (chess notation)
2A73	≈	EQUALS SIGN ABOVE TILDE OPERATOR
2A74	≐	DOUBLE COLON EQUAL ≈ 003A : 003A : 003D =
2A75	==	TWO CONSECUTIVE EQUALS SIGNS ≈ 003D = 003D =
2A76	===	THREE CONSECUTIVE EQUALS SIGNS ≈ 003D = 003D = 003D =
2A77	≐	EQUALS SIGN WITH TWO DOTS ABOVE AND TWO DOTS BELOW
2A78	≐	EQUIVALENT WITH FOUR DOTS ABOVE
2A79	⋈	LESS-THAN WITH CIRCLE INSIDE
2A7A	⋈	GREATER-THAN WITH CIRCLE INSIDE
2A7B	⋈	LESS-THAN WITH QUESTION MARK ABOVE
2A7C	⋈	GREATER-THAN WITH QUESTION MARK ABOVE
2A7D	⋈	LESS-THAN OR SLANTED EQUAL TO → 2264 \leq less-than or equal to
2A7E	⋈	GREATER-THAN OR SLANTED EQUAL TO → 2265 \geq greater-than or equal to
2A7F	⋈	LESS-THAN OR SLANTED EQUAL TO WITH DOT INSIDE
2A80	⋈	GREATER-THAN OR SLANTED EQUAL TO WITH DOT INSIDE
2A81	⋈	LESS-THAN OR SLANTED EQUAL TO WITH DOT ABOVE
2A82	⋈	GREATER-THAN OR SLANTED EQUAL TO WITH DOT ABOVE
2A83	⋈	LESS-THAN OR SLANTED EQUAL TO WITH DOT ABOVE RIGHT
2A84	⋈	GREATER-THAN OR SLANTED EQUAL TO WITH DOT ABOVE LEFT
2A85	⋈	LESS-THAN OR APPROXIMATE
2A86	⋈	GREATER-THAN OR APPROXIMATE
2A87	⋈	LESS-THAN AND SINGLE-LINE NOT EQUAL TO → 2268 $\not\leq$ less-than but not equal to
2A88	⋈	GREATER-THAN AND SINGLE-LINE NOT EQUAL TO → 2269 $\not\geq$ greater-than but not equal to
2A89	⋈	LESS-THAN AND NOT APPROXIMATE
2A8A	⋈	GREATER-THAN AND NOT APPROXIMATE
2A8B	⋈	LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN → 22DA \leq less-than equal to or greater-than
2A8C	⋈	GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN → 22DB \geq greater-than equal to or less-than
2A8D	⋈	LESS-THAN ABOVE SIMILAR OR EQUAL
2A8E	⋈	GREATER-THAN ABOVE SIMILAR OR EQUAL
2A8F	⋈	LESS-THAN ABOVE SIMILAR ABOVE GREATER-THAN
2A90	⋈	GREATER-THAN ABOVE SIMILAR ABOVE LESS-THAN
2A91	⋈	LESS-THAN ABOVE GREATER-THAN ABOVE DOUBLE-LINE EQUAL
2A92	⋈	GREATER-THAN ABOVE LESS-THAN ABOVE DOUBLE-LINE EQUAL
2A93	⋈	LESS-THAN ABOVE SLANTED EQUAL ABOVE GREATER-THAN ABOVE SLANTED EQUAL
2A94	⋈	GREATER-THAN ABOVE SLANTED EQUAL ABOVE LESS-THAN ABOVE SLANTED EQUAL
2A95	⋈	SLANTED EQUAL TO OR LESS-THAN → 22DC \leq equal to or less-than

2A96	➤	SLANTED EQUAL TO OR GREATER-THAN → 22DD ≧ equal to or greater-than
2A97	⋈	SLANTED EQUAL TO OR LESS-THAN WITH DOT INSIDE
2A98	➤	SLANTED EQUAL TO OR GREATER-THAN WITH DOT INSIDE
2A99	≡	DOUBLE-LINE EQUAL TO OR LESS-THAN → 22DC ≦ equal to or less-than
2A9A	≡	DOUBLE-LINE EQUAL TO OR GREATER-THAN → 22DD ≧ equal to or greater-than
2A9B	≡	DOUBLE-LINE SLANTED EQUAL TO OR LESS-THAN
2A9C	≡	DOUBLE-LINE SLANTED EQUAL TO OR GREATER-THAN
2A9D	≈	SIMILAR OR LESS-THAN
2A9E	≈	SIMILAR OR GREATER-THAN
2A9F	≈	SIMILAR ABOVE LESS-THAN ABOVE EQUALS SIGN
2AA0	≈	SIMILAR ABOVE GREATER-THAN ABOVE EQUALS SIGN
2AA1	⋈	DOUBLE NESTED LESS-THAN = absolute continuity → 226A ≪ much less-than
2AA2	➤	DOUBLE NESTED GREATER-THAN → 226B ≫ much greater-than
2AA3	⋈	DOUBLE NESTED LESS-THAN WITH UNDERBAR
2AA4	⋈	GREATER-THAN OVERLAPPING LESS-THAN
2AA5	⋈	GREATER-THAN BESIDE LESS-THAN
2AA6	△	LESS-THAN CLOSED BY CURVE
2AA7	▽	GREATER-THAN CLOSED BY CURVE
2AA8	△	LESS-THAN CLOSED BY CURVE ABOVE SLANTED EQUAL
2AA9	▽	GREATER-THAN CLOSED BY CURVE ABOVE SLANTED EQUAL
2AAA	⋈	SMALLER THAN
2AAB	➤	LARGER THAN
2AAC	⋈	SMALLER THAN OR EQUAL TO
2AAD	➤	LARGER THAN OR EQUAL TO
2AAE	≡	EQUALS SIGN WITH BUMPY ABOVE → 224F ≐ difference between
2AAF	⋈	PRECEDES ABOVE SINGLE-LINE EQUALS SIGN → 227C ≐ precedes or equal to
2AB0	➤	SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN → 227D ≧ succeeds or equal to
2AB1	⋈	PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO
2AB2	➤	SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO
2AB3	⋈	PRECEDES ABOVE EQUALS SIGN
2AB4	⋈	SUCCEEDS ABOVE EQUALS SIGN
2AB5	⋈	PRECEDES ABOVE NOT EQUAL TO
2AB6	⋈	SUCCEEDS ABOVE NOT EQUAL TO
2AB7	⋈	PRECEDES ABOVE ALMOST EQUAL TO
2AB8	⋈	SUCCEEDS ABOVE ALMOST EQUAL TO
2AB9	⋈	PRECEDES ABOVE NOT ALMOST EQUAL TO
2ABA	⋈	SUCCEEDS ABOVE NOT ALMOST EQUAL TO
2ABB	⋈	DOUBLE PRECEDES
2ABC	➤	DOUBLE SUCCEEDS

Subset and superset relations

2ABD	⊂	SUBSET WITH DOT
2ABE	⊃	SUPERSET WITH DOT
2ABF	⊆	SUBSET WITH PLUS SIGN BELOW
2AC0	⊇	SUPERSET WITH PLUS SIGN BELOW
2AC1	⊆	SUBSET WITH MULTIPLICATION SIGN BELOW
2AC2	⊇	SUPERSET WITH MULTIPLICATION SIGN BELOW
2AC3	⊆	SUBSET OF OR EQUAL TO WITH DOT ABOVE

2AC4	⊆	SUPERSET OF OR EQUAL TO WITH DOT ABOVE
2AC5	⊆	SUBSET OF ABOVE EQUALS SIGN
2AC6	⊆	SUPERSET OF ABOVE EQUALS SIGN
2AC7	⊆	SUBSET OF ABOVE TILDE OPERATOR
2AC8	⊆	SUPERSET OF ABOVE TILDE OPERATOR
2AC9	⊆	SUBSET OF ABOVE ALMOST EQUAL TO
2ACB	⊆	SUPERSET OF ABOVE ALMOST EQUAL TO
2ACB	⊆	SUBSET OF ABOVE NOT EQUAL TO
2ACC	⊆	SUPERSET OF ABOVE NOT EQUAL TO
2ACD	⊆	SQUARE LEFT OPEN BOX OPERATOR
2ACE	⊆	SQUARE RIGHT OPEN BOX OPERATOR
2ACF	⊆	CLOSED SUBSET → 2282 ⊂ subset of
2AD0	⊆	CLOSED SUPERSET → 2283 ⊃ superset of
2AD1	⊆	CLOSED SUBSET OR EQUAL TO
2AD2	⊆	CLOSED SUPERSET OR EQUAL TO
2AD3	⊆	SUBSET ABOVE SUPERSET
2AD4	⊆	SUPERSET ABOVE SUBSET
2AD5	⊆	SUBSET ABOVE SUBSET
2AD6	⊆	SUPERSET ABOVE SUPERSET
2AD7	⊆	SUPERSET BESIDE SUBSET
2AD8	⊆	SUPERSET BESIDE AND JOINED BY DASH WITH SUBSET

Forks

2AD9	⊆	ELEMENT OF OPENING DOWNWARDS → 2208 ∈ element of → 27D2 ∩ element of opening upwards
2ADA	⊆	PITCHFORK WITH TEE TOP → 22D4 ⦏ pitchfork
2ADB	⊆	TRANSVERSAL INTERSECTION → 22D4 ⦏ pitchfork
2ADC	⊆	FORKING = not independent • an equational logic symbol, not a computing science symbol • non-independence (original concept) is related to forking ≡ 2ADD ∩ 0338 ∄
2ADD	∩	NONFORKING = independent • an equational logic symbol, not a computing science symbol • independence (original concept) is related to non-forking

Tacks and turnstiles

2ADE	⊥	SHORT LEFT TACK → 22A3 ⊥ left tack
2ADF	⊥	SHORT DOWN TACK → 22A4 ⊥ down tack
2AE0	⊥	SHORT UP TACK → 22A5 ⊥ up tack
2AE1	⊥	PERPENDICULAR WITH S
2AE2	⊥	VERTICAL BAR TRIPLE RIGHT TURNSTILE = ordinarily satisfies
2AE3	⊥	DOUBLE VERTICAL BAR LEFT TURNSTILE → 22A9 ⊥ forces
2AE4	⊥	VERTICAL BAR DOUBLE LEFT TURNSTILE → 22A8 ⊥ true
2AE5	⊥	DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE
2AE6	⊥	LONG DASH FROM LEFT MEMBER OF DOUBLE VERTICAL → 22A9 ⊥ forces

2AE7	$\overline{\downarrow}$	SHORT DOWN TACK WITH OVERBAR → 22A4 $\overline{\downarrow}$ down tack → 2351 $\overline{\uparrow}$ apl functional symbol up tack overbar	2AFE	\bar{v}	WHITE VERTICAL BAR = Dijkstra choice
2AE8	$\underline{\uparrow}$	SHORT UP TACK WITH UNDERBAR → 22A5 $\underline{\uparrow}$ up tack → 234A $\underline{\downarrow}$ apl functional symbol down tack underbar	2AFF	\bar{v}_n	N-ARY WHITE VERTICAL BAR = n-ary Dijkstra choice
2AE9	$\overline{\uparrow\downarrow}$	SHORT UP TACK ABOVE SHORT DOWN TACK			
2AEA	$\overline{\downarrow\downarrow}$	DOUBLE DOWN TACK			
2AEB	$\underline{\uparrow\uparrow}$	DOUBLE UP TACK = independence • probability theory			
2AEC	\equiv	DOUBLE STROKE NOT SIGN → 00AC \neg not sign			
2AED	$\overleftarrow{\equiv}$	REVERSED DOUBLE STROKE NOT SIGN → 2310 $\overleftarrow{\neg}$ reversed not sign			

Vertical line operators

2AEE	\nmid	DOES NOT DIVIDE WITH REVERSED NEGATION SLASH → 2224 \nmid does not divide
2AEF	\upharpoonright	VERTICAL LINE WITH CIRCLE ABOVE
2AF0	\downharpoonright	VERTICAL LINE WITH CIRCLE BELOW
2AF1	\downdownarrows	DOWN TACK WITH CIRCLE BELOW = necessarily satisfies → 27DF \downdownarrows up tack with circle above
2AF2	$\#$	PARALLEL WITH HORIZONTAL STROKE → 2226 $\#$ not parallel to → 27CA $\#$ vertical bar with horizontal stroke
2AF3	$\#$	PARALLEL WITH TILDE OPERATOR
2AF4	\equiv	TRIPLE VERTICAL BAR BINARY RELATION = interleave → 2980 \equiv triple vertical bar delimiter
2AF5	$\#$	TRIPLE VERTICAL BAR WITH HORIZONTAL STROKE → 27CA $\#$ vertical bar with horizontal stroke

Miscellaneous mathematical operator

2AF6	\vdots	TRIPLE COLON OPERATOR • logic → 205D \vdots tricolon → 22EE \vdots vertical ellipsis
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Relations

2AF7	\lll	TRIPLE NESTED LESS-THAN → 22D8 \lll very much less-than
2AF8	\ggg	TRIPLE NESTED GREATER-THAN → 22D9 \ggg very much greater-than
2AF9	\leqslant	DOUBLE-LINE SLANTED LESS-THAN OR EQUAL TO → 2266 \leqslant less-than over equal to
2AFA	\geqslant	DOUBLE-LINE SLANTED GREATER-THAN OR EQUAL TO → 2267 \geqslant greater-than over equal to
2AFB	\equiv	TRIPLE SOLIDUS BINARY RELATION → 2AF4 \equiv triple vertical bar binary relation

Operators

2AFC	\equiv	LARGE TRIPLE VERTICAL BAR OPERATOR • often n-ary → 2AF4 \equiv triple vertical bar binary relation → 2980 \equiv triple vertical bar delimiter
2AFD	\parallel	DOUBLE SOLIDUS OPERATOR → 2225 \parallel parallel to