Terminology: Functions and Operators

Functions

Glyph	Glyph Name	Unicode Glyph Name	Code	Monadic Function	Dyadic Function	
+	Plus	Plus Sign	002B	Conjugate	Plus	
−	Minus	Hyphen-Minus	002D	Negate	Minus	
×	Times	Multiplication Sign	00D7	Direction	Times	
÷	Divide	Division Sign	00F7	Reciprocal	Divide	
⌊	Downstile	Left Floor	230A	Floor	Minimum	
⌈	Upstile	Left Ceiling	2308	Ceiling	Maximum	
∣	Stile	Vertical Line	007C	Magnitude	Residue	
*	Star	Asterisk	002A	Exponential	Power	
⍟	Log	*Circle Star	235F	Natural Logarithm	Logarithm	
○	Circle	White Circle	25CB	Pi Times	Circular Functions	
!	Exclamation Mark	Exclamation Mark	0021	Factorial	Binomial	
∧	Logical AND	Logical AND	2227		Lowest Common Multiple/AND	
∨	Logical OR	Logical OR	2228		Greatest Common Divisor/OR	
⍲	Logical NAND	*Up Caret Tilde	2372		NAND	
⍱	Logical NOR	*Down Caret Tilde	2371		NOR	
<	Less Than	Less-Than Sign	003C		Less Than	
≤	Less Than Or Equal To	Less-Than Or Equal To	2264		Less Than Or Equal To	
=	Equal	Equals Sign	003D		Equal To	
≥	Greater Than Or Equal To	Greater-Than Or Equal To	2265		Greater Than Or Equal To	
>	Greater Than	Greater-Than Sign	003E		Greater Than	
≠	Not Equal	Not Equal To	2260	Unique Mask	Not Equal To	
~	Tilde	Tilde	007E	NOT	Without	
?	Question Mark	Question Mark	003F	Roll	Deal	
∈	Epsilon	Small Element Of	220A	Enlist (Type if ⎕ML=0)	Membership	
⍷	Epsilon Underbar	*Epsilon Underbar	2377		Find	
,	Comma	Comma	002C	Ravel	Catenate/Laminate	
⍪	Comma Bar	*Comma Bar	236A	Table	Catenate First/Laminate	
⌷	Squad	*Squish Quad	2337	Materialise	Index	
⍳	Iota	*Iota	2373	Index Generator	Index Of	
⍸	Iota Underbar	*Iota Underbar	2378	Where	Interval Index	
⍴	Rho	*Rho	2374	Shape	Reshape	
↑	Up Arrow	Upwards Arrow	2191	⎕ML ≤ 1 Mix ⎕ML ≥2 First	Take	
↓	Down Arrow	Downwards Arrow	2193	Split	Drop	
⊣	Left Tack	Left Tack	22A3	Same	Left	
⊢	Right Tack	Right Tack	22A2	Same	Right	
⊤	Down Tack	Down Tack	22A4		Encode	
⊥	Up Tack	Up Tack	22A5		Decode	
/	Slash	Solidus	002F		Replicate	**
⌿	Slash Bar	*Slash Bar	233F		Replicate First	**

Glyph	Glyph Name	Unicode Glyph Name	Code	Monadic Function	Dyadic Function	
\	Backslash	Reverse Solidus	005C		Expand	**
⍀	Backslash Bar	*Backslash Bar	2340		Expand First	**
⌽	Circle Stile	*Circle Stile	233D	Reverse	Rotate	
⊖	Circle Bar	Circled Minus	2296	Reverse First	Rotate First	
⍉	Circle Backslash	*Circle Backslash	2349	Transpose	Dyadic Transpose	
⍋	Grade Up	*Delta Stile	234B	Grade Up	Dyadic Grade Up	
⍒	Grade Down	*Del Stile	2352	Grade Down	Dyadic Grade Down	
⌹	Domino	*Quad Divide	2339	Matrix Inverse	Matrix Divide	
≡	Equal Underbar	Identical To	2261	Depth	Match	
≢	Equal Underbar Slash	Not Identical To	2262	Tally	Not Match	
⊂	Left Shoe	Subset Of	2282	Enclose	⎕ML ≤ 2 Partitioned Enclose ⎕ML = 3 Partition	
⊆	Left Shoe Underbar	Subset Of or Equal To	2286	Nest	Partition	
⊃	Right Shoe	Superset Of	2283	⎕ML ≤ 1 First ⎕ML ≥2 Mix	Pick	
∩	Up Shoe	Intersection	2229		Intersection	
∪	Down Shoe	Union	222A	Unique	Union	
⍎	Hydrant	*** *Down Tack Jot	234E	Execute	Dyadic Execute	
⍕	Thorn	*** *Up Tack Jot	2355	Format	Format by Specification	

* The Unicode Glyph Name is preceded by "APL FUNCTIONAL SYMBOL"
**These glyphs are *hybrids*, that is, the argument/operand to the left of the glyph determines whether it acts as a function or an operator
*** The Unicode naming of *Up Tack Jot and *Down Tack Jot is counter to the way the APL community recognises these glyphs

Operators

Glyph	Glyph Name	Unicode Glyph Name	Code	Operator	Resulting Derived Function	
/	Slash	Solidus	002F	Reduce (monadic)	monadic and dyadic	**
⌿	Slash Bar	*Slash Bar	233F	Reduce First (monadic)	monadic and dyadic	**
\	Backslash	Reverse Solidus	005C	Scan (monadic)	monadic	**
⍀	Backslash Bar	*Backslash Bar	2340	Scan First (monadic)	monadic	**
¨	Diaeresis	Diaeresis	00A8	Each (monadic)	monadic and dyadic	
⍤	Jot Diaeresis	*Jot Diaeresis	2364	Atop or Rank (dyadic)	monadic and dyadic	
⍥	Circle Diaeresis	*Circle Diaeresis	2365	Over (dyadic)	monadic and dyadic	
⌸	Quad Equal	*Quad Equal	2338	Key (monadic)	monadic and dyadic	
⍁	Quad Diamond	*Quad Diamond	233A	Stencil (dyadic)	monadic	
⍨	Tilde Diaeresis	*Tilde Diaeresis	2368	Commute or Constant (monadic)	monadic and dyadic	
⍣	Star Diaeresis	*Star Diaeresis	2363	Power (dyadic)	monadic and dyadic	
.	Dot	Full Stop	002E	Inner or Outer Product (dyadic)	dyadic	
∘	Jot	Ring Operator	2218	Beside or Bind (dyadic)	monadic and dyadic	
⍛	Jot Underbar	*Jot Underbar	235B	Behind (dyadic)	monadic and dyadic	
⍠	Quad Colon	*Quad Colon	2360	Variant (dyadic)	monadic and dyadic	
@	At	At Sign	0040	At (dyadic)	monadic and dyadic	
&	Ampersand	Ampersand	0026	Spawn (monadic)	monadic and dyadic	
⌶	I-Beam	*I-Beam	2336	I-Beam (monadic)	monadic and dyadic	

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