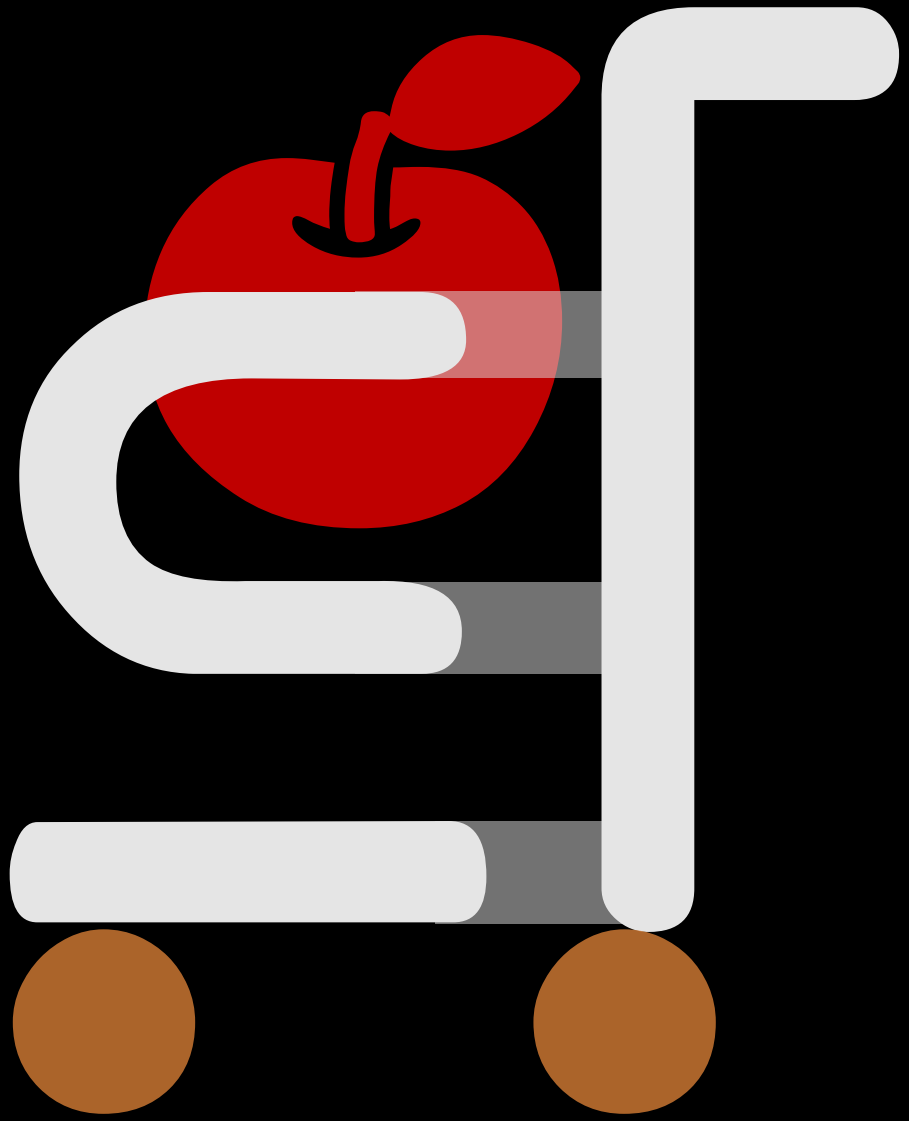
APLcart

Adám Brudzewsky adam@aplcart.info



APLcart

A novel approach to finding your way in APL

How do I …

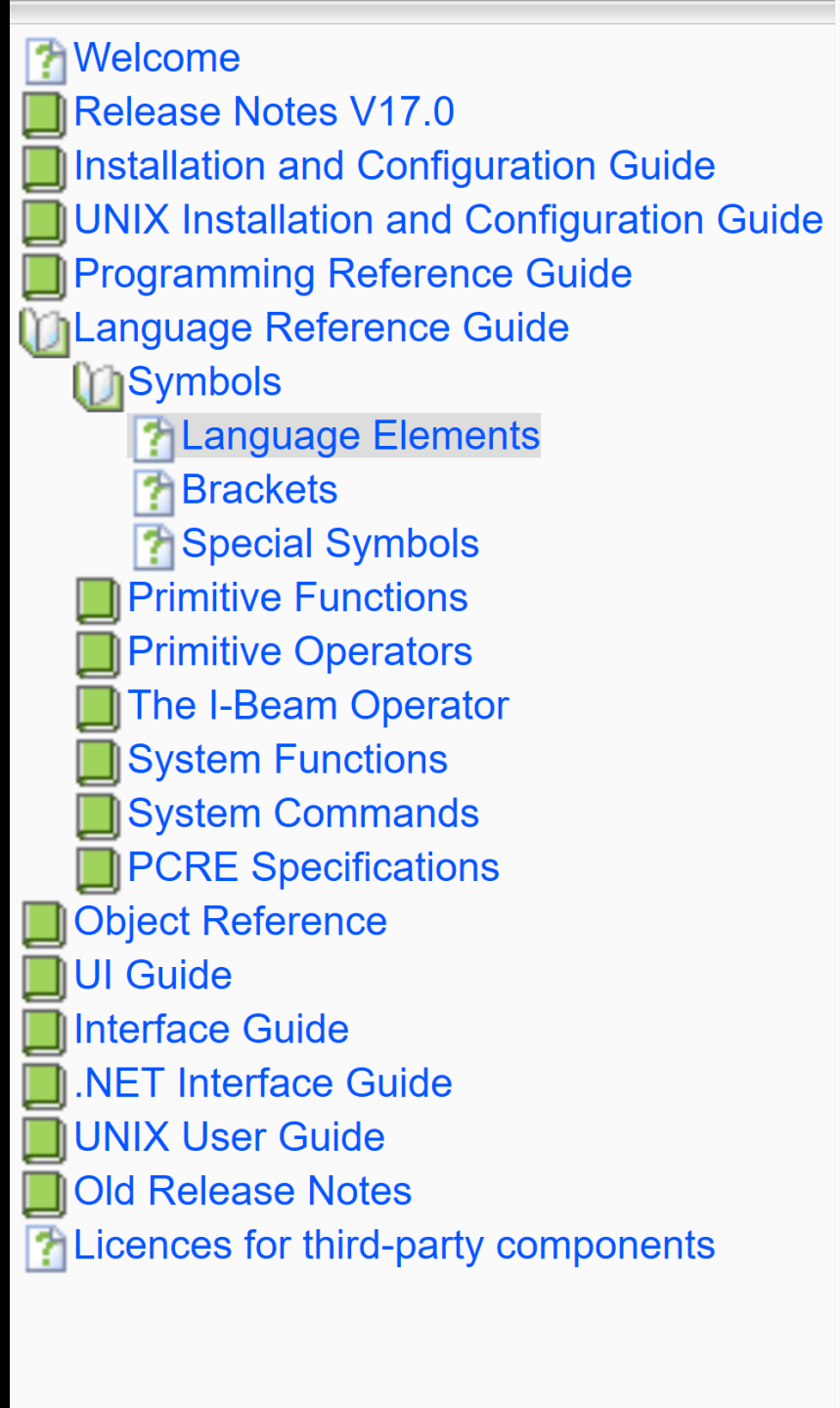
What is 🤷 …

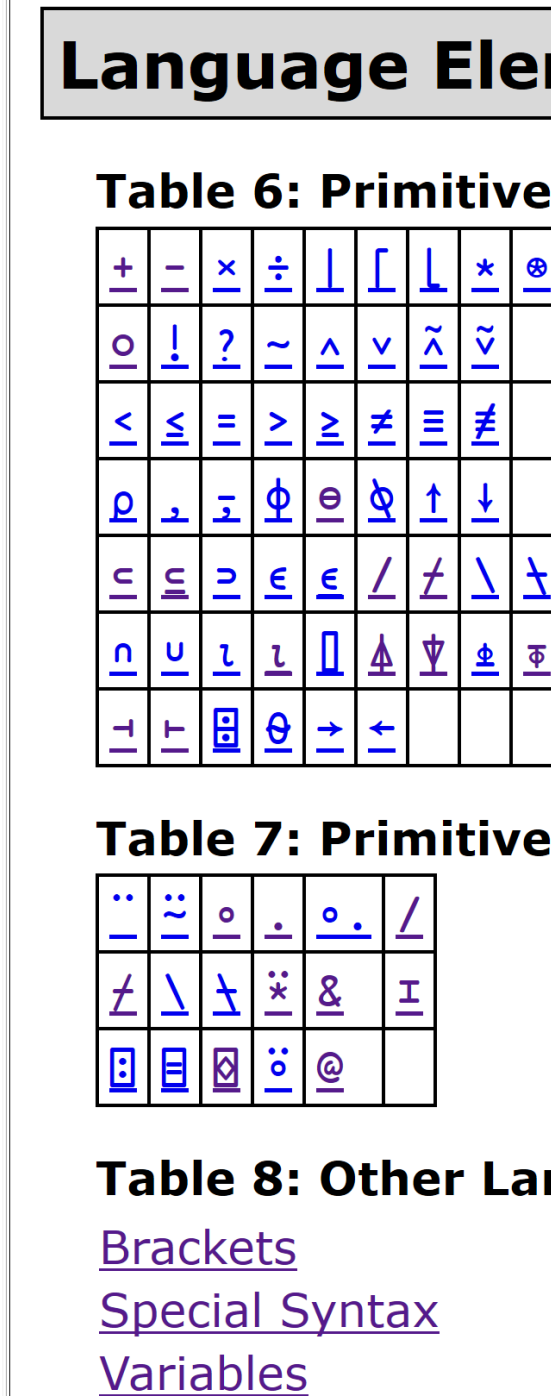
How do I …

What is ⍰ ...

What is ⍰ ...

- help.dyalog.com
  = F1,]Help





What is ⍰ …

- help.dyalog.com
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- docs.dyalog.com
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Chapter 1: Primitive Functions .....
Key to Notation .....
Migration Level .....
Scalar Functions .....
Mixed Functions .....
Conformability .....
Fill Elements .....
Axis Operator .....
Functions (A-Z) .....
Abort .....
Add .....
And, Lowest Common Multiple .....
Assignment .....
Assignment (Indexed) .....
Assignment (Selective) .....
Binomial .....
Branch .....
Catenate/Laminate .....
Catenate First .....
Ceiling .....
Circular .....
Conjugate .....

What is ⍰ ...

- help.dyalog.com
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  = PDFs in install directory
- Stack Exchange lessons
  ≈ TryAPL tutorials

Bookmarked Jan 3 '18 at 20:03 by Adám

Lesson 9 - APL functions: ⍸⍷⍯∪∩~ ⌿⍀⍀⍤

Dec 13 '17 at 18:30, 1 hour 32 minutes total – 206 messages, 5 users, 0 stars

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Lesson 7 - APL functions: ⊂⊃⊆⌷

Nov 29 '17 at 18:30, 1 hour 34 minutes total – 225 messages, 8 users, 0 stars

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Lesson 5 - Even more APL operators: ⌹ ⌸

Nov 15 '17 at 18:30, 1 hour 24 minutes total – 193 messages, 7 users, 0 stars

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Lesson 3 - Some APL Operators: / ⌿ \ ⍀ ¨ ⍣ ⍨

Nov 1 '17 at 18:30, 1 hour 36 minutes total – 365 messages, 9 users, 0 stars

What is ⍰ ...

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- docs.dyalog.com
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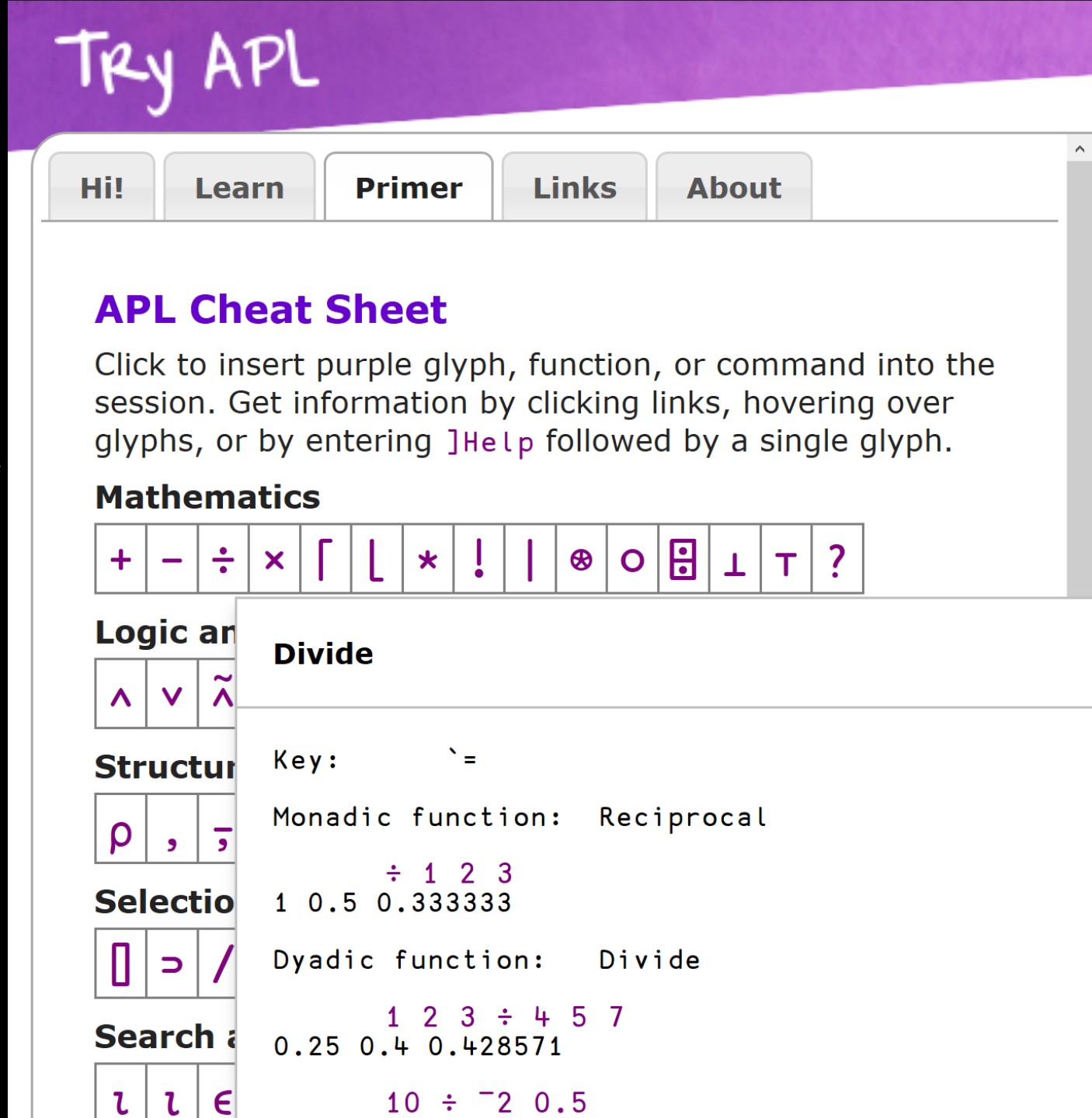
- Stack Exchange lessons
  ≈ TryAPL tutorials
- TryAPL's primer
  ≈ IDE/RIDE language bar



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- help.dyalog.com
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  = PDFs in install dire
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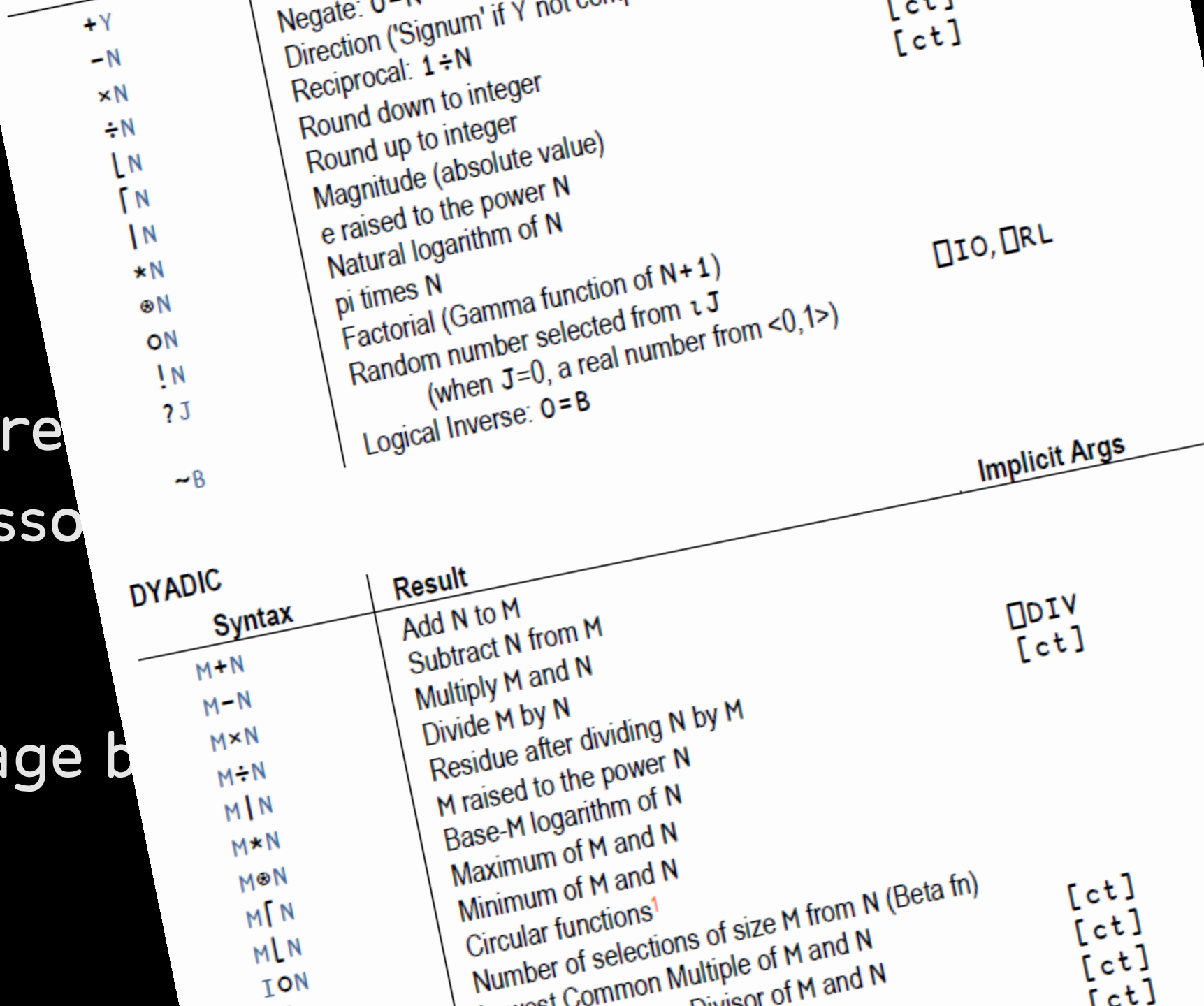
  ≈ IDE/RIDE language b
- reference card



+Y	Direction ('Signum' if Y not co
-N	Negate: 0-N
×N	Reciprocal: 1÷N
÷N	Round down to integer
⌊N	Round up to integer
⌈N	Magnitude (absolute value)
|N	e raised to the power N
*N	Natural logarithm of N
⍟N	pi times N
○N	Factorial (Gamma function of N+1)
!N	Random number selected from ⍳J
?J	(when J=0, a real number from <0,1>)
~B	Logical Inverse: 0=B

DYADIC Syntax	Result	Implicit Args
M+N	Add N to M	
M-N	Subtract N from M	⎕DIV
M×N	Multiply M and N	⎕ct
M÷N	Divide M by N	
M|N	Residue after dividing N by M	
M*N	M raised to the power N	
M⍟N	Base-M logarithm of N	
M⌈N	Maximum of M and N	
M⌊N	Minimum of M and N	
I○N	Circular functions[1]	⎕ct
	Number of selections of size M from N (Beta fn)	⎕ct
	Least Common Multiple of M and N	⎕ct
	Greatest Common Divisor of M and N	⎕ct

⎕IO, ⎕RL

What is □? ...

has plenty of answers

How do I …

How do I …

Dyalog's idiom list

How do I …

Dyalog's idiom list

performance/scope

How do I …

Dyalog's idiom list

IBM's idiom list

performance/scope

How do I …

Dyalog's idiom list — performance/scope

IBM's idiom list — requires APL2

How do I …

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IBM's idiom list

FinnAPL's idiom list

performance/scope

requires APL2

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Dyalog's idiom list	performance/scope
IBM's idiom list	requires APL2
FinnAPL's idiom list	very old-fashioned

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dfns workspace

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How do I …

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⊆⌈ ? Tell me about:

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

⍬	Empty Numeric Vector
⊢Y	Same: Y
X dop Y⊢Z	Separate dyadic operator's right operand from its right argument (same as (X dop Y)Z)
X⊢Y	Right: Y
X⊢Y	Church Boolean false (X if false, else Y)
⊣Y	Same: Y

Showing 2204 of 2204

⊆⌈ ? Tell me about:

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

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⊣Y	Same: Y

Showing 2204 of 2204

⊆⌈ ? Tell me about: stringify ⊗ ¶

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

⍕Y	Format: Character representation of Y
Iv⍕Y	Format Y using (width, decimals) pairs Iv
Is{0 1↓(2↑1+⍺)⍕⍵∘.+,10*⍺}Jv	Format with leading zeroes for non-negative Jv in fields of width Is

Showing 3 of 2204

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⊆⌈ ? Tell me about: flatten to list ⊗ ¶

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

,Y	Ravel: Reshape into a vector
∈Y	Enlist: Simple vector from elements of Y
X f@(1⍴⍨⍴)Y	Handling array Y temporarily as a vector (optionally with left argument X)

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◐

Tell me about: hermitian?

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

(⍉≡+)Nm	Is Nm a Hermitian matrix?

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⊆⌈ ? Tell me about: import javascript ⊗ ¶

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

r←0 ⎕JSON data	Convert JSON text to APL array
r←0(⎕JSON⍠'M')data	Convert JSON text to APL matrix

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Tell me about: sin( )

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

1∘○N	Sine N
¯1∘○N	Arcsine N

Showing 2 of 2204

⊆⌈ ? Tell me about: ö ⊗ ¶

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

X f{(ωω α)αα(ωω ω)}g Y

Over: preprocess (g) arguments before applying main function (f)

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⊆⌈ ? Tell me about: √⌈

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

M*∘÷⍨N	M'th Root of N
(*∘0.5)N	Square Root
(*∘÷∘3)N	Cube Root

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⊆⌈ ? Tell me about: ²√ ⊗ ¶

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

(*∘0.5)N	Square Root

Showing 1 of 2204

⊆⌈ ? Tell me about: 42 ⊗ ¶

X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

≠∓!⍋□D	Meaning of life (short)
⍋ϕ∓⌈∗○≡ϴ	Meaning of life (modern)
⍋ϴ∓⊃⊂|⌊−∗+○⌈×÷!ϕ⍉⊞~ρ⍋⍒,⊛?ι0	Meaning of life (traditional)

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⊆⌈ ? Tell me about: ⊗ ¶

X,Y,Z:array M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

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⊢Y	Same: Y
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◐

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X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

⍬	Empty Numeric Vector
⊢Y	Same: Y
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X,Y,Z:any M,N:num I,J:int A,B:Bool C,D:char f,g,h:fn ax:axis s:scal v:vec m:mat

⍬	Empty Numeric Vector
⊢Y	Same: Y
X dop Y⊢Z	Separate dyadic operator's right operand from its right argument (same as (X dop Y)Z)
X⊢Y	Right: Y
X⊣Y	Church Boolean false (X if false, else Y)
⊣Y	Same: Y

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Thank you,
Nick & dzaima

adam@
aplcart.info