

Predefined native! values

all

USAGE:

ALL conds

DESCRIPTION:

Evaluates and returns the last value if all are truthy; else NONE.
ALL is a native! value.

ARGUMENTS:

conds [block!]

>> help all

USAGE:

ALL conds

DESCRIPTION:

Evaluates and returns the last value if all are truthy; else NONE.
ALL is a native! value.

ARGUMENTS:

conds [block!]

any

USAGE:

ANY conds

DESCRIPTION:

Evaluates and returns the first truthy value, if any; else NONE.
ANY is a native! value.

ARGUMENTS:

conds [block!]

arccosine

USAGE:

ARCCOSINE cosine

DESCRIPTION:

Returns the trigonometric arccosine (in degrees by default in range $[0,180]$).
ARCCOSINE is a native! value.

ARGUMENTS:

cosine [number!] "in range $[-1,1]$."

REFINEMENTS:

/radians => Angle is returned in radians $[0,\pi]$.

RETURNS:

[float!]

arcsine

USAGE:

ARCSINE sine

DESCRIPTION:

Returns the trigonometric arcsine (in degrees by default in range $[-90,90]$).
ARCSINE is a native! value.

ARGUMENTS:

sine [number!] "in range $[-1,1]$."

REFINEMENTS:

/radians => Angle is returned in radians $[-\pi/2,\pi/2]$.

RETURNS:

[float!]

arctangent

USAGE:

ARCTANGENT tangent

DESCRIPTION:

Returns the trigonometric arctangent (in degrees by default in range $[-90,90]$).
ARCTANGENT is a native! value.

ARGUMENTS:

tangent [number!] "in range $[-\text{inf},+\text{inf}]$."

REFINEMENTS:

/radians => Angle is returned in radians $[-\pi/2,\pi/2]$.

RETURNS:

[float!]

arctangent2

USAGE:

ARCTANGENT2 y x

DESCRIPTION:

Returns the smallest angle between the vectors $(1,0)$ and (x,y) in degrees by default $(-180,180]$.
ARCTANGENT2 is a native! value.

ARGUMENTS:

y [number!]
x [number!]

REFINEMENTS:

/radians => Angle is returned in radians $(-\pi,\pi]$.

RETURNS:

[float!]

as

USAGE:

AS type spec

DESCRIPTION:

Coerce a series into a compatible datatype without copying it.

AS is a native! value.

ARGUMENTS:

| | | |
|------|---|----------------------------------|
| type | [datatype! block! paren! any-path! any-string!] | "The datatype or example value." |
| spec | [block! paren! any-path! any-string!] | "The series to coerce." |

as-money

USAGE:

AS-MONEY currency amount

DESCRIPTION:

Combine currency code and amount into a monetary value.

AS-MONEY is a native! value.

ARGUMENTS:

| | |
|----------|-------------------|
| currency | [word!] |
| amount | [integer! float!] |

RETURNS:

[money!]

as-pair

USAGE:

AS-PAIR x y

DESCRIPTION:

Combine X and Y values into a pair.

AS-PAIR is a native! value.

ARGUMENTS:

| | |
|---|-------------------|
| x | [integer! float!] |
| y | [integer! float!] |

bind

USAGE:

`BIND word context`

DESCRIPTION:

Bind words to a context; returns rebound words.
`BIND` is a native! value.

ARGUMENTS:

| | |
|----------------------|--|
| <code>word</code> | <code>[block! any-word!]</code> |
| <code>context</code> | <code>[any-word! any-object! function!]</code> |

REFINEMENTS:

`/copy` => Deep copy blocks before binding.

RETURNS:

`[block! any-word!]`

break

USAGE:

`BREAK`

DESCRIPTION:

Breaks out of a loop, while, until, repeat, foreach, etc.
`BREAK` is a native! value.

REFINEMENTS:

| | |
|----------------------|--|
| <code>/return</code> | => Forces the loop function to return a value. |
| <code>value</code> | <code>[any-type!]</code> |

browse

USAGE:

`BROWSE url`

DESCRIPTION:

Open web browser to a URL or file manager to a local file.
`BROWSE` is a native! value.

ARGUMENTS:

| | |
|------------------|---------------------------|
| <code>url</code> | <code>[url! file!]</code> |
|------------------|---------------------------|

call

USAGE:

CALL cmd

DESCRIPTION:

Executes a shell command to run another process.

CALL is a native! value.

ARGUMENTS:

cmd [string! file!] "A shell command or an executable file."

REFINEMENTS:

/wait => Runs command and waits for exit.

/show => Force the display of system's shell window (Windows only).

/console => Runs command with I/O redirected to console (CLI console only at present).

/shell => Forces command to be run from shell.

/input =>

in [string! file! binary!] "Redirects in to stdin."

/output =>

out [string! file! binary!] "Redirects stdout to out."

/error =>

err [string! file! binary!] "Redirects stderr to err."

RETURNS:

0 if success, -1 if error, or a process ID.

[integer!]

case

USAGE:

CASE cases

DESCRIPTION:

Evaluates the block following the first truthy condition.

CASE is a native! value.

ARGUMENTS:

cases [block!] "Block of condition-block pairs."

REFINEMENTS:

/all => Test all conditions, evaluating the block following each truthy condition.

catch

USAGE:

CATCH block

DESCRIPTION:

Catches a throw from a block and returns its value.

CATCH is a native! value.

ARGUMENTS:

block [block!] "Block to evaluate."

REFINEMENTS:

/name => Catches a named throw.

word [word! block!] "One or more names."

checksum

USAGE:

CHECKSUM data method

DESCRIPTION:

Computes a checksum, CRC, hash, or HMAC.

CHECKSUM is a native! value.

ARGUMENTS:

data [binary! string! file!]

method [word!] {MD5 SHA1 SHA256 SHA384 SHA512 CRC32 TCP ADLER32 hash.}

REFINEMENTS:

/with => Extra value for HMAC key or hash table size; not compatible with TCP/CRC32/ADLER32 methods.

spec [any-string! binary! integer!] {String or binary for MD5/SHA* HMAC key, integer for hash table size.}

RETURNS:

[integer! binary!]

compliment?

USAGE:

COMPLEMENT? bits

DESCRIPTION:

Returns TRUE if the bitset is complemented.

COMPLEMENT? is a native! value.

ARGUMENTS:

bits [bitset!]

compose

USAGE:

COMPOSE value

DESCRIPTION:

Returns a copy of a block, evaluating only parens.

COMPOSE is a native! value.

ARGUMENTS:

value [block!]

REFINEMENTS:

/deep => Compose nested blocks.
/only => Compose nested blocks as blocks containing their values.
/into => Put results in out block, instead of creating a new block.
 out [any-block!] "Target block for results, when /into is used."

compress

USAGE:

COMPRESS data

DESCRIPTION:

compresses data. return GZIP format (RFC 1952) by default.

COMPRESS is a native! value.

ARGUMENTS:

data [any-string! binary!]

REFINEMENTS:

/zlib => Return ZLIB format (RFC 1950).
/deflate => Return DEFLATE format (RFC 1951).

construct

USAGE:

CONSTRUCT block

DESCRIPTION:

Makes a new object from an unevaluated spec; standard logic words are evaluated.
CONSTRUCT is a native! value.

ARGUMENTS:

block [block!]

REFINEMENTS:

/with => Use a prototype object.
 object [object!] "Prototype object."
/only => Don't evaluate standard logic words.

context?

USAGE:

CONTEXT? word

DESCRIPTION:

Returns the context to which a word is bound.
CONTEXT? is a native! value.

ARGUMENTS:

word [any-word!] "Word to check."

RETURNS:

[object! function! none!]

continue

USAGE:

CONTINUE

DESCRIPTION:

Throws control back to top of loop.
CONTINUE is a native! value.

cosine

USAGE:

`COSINE angle`

DESCRIPTION:

Returns the trigonometric cosine.

`COSINE` is a native! value.

ARGUMENTS:

`angle` `[number!]`

REFINEMENTS:

`/radians` => Angle is specified in radians.

RETURNS:

`[float!]`

debase

USAGE:

`DEBASE value`

DESCRIPTION:

Decodes binary-coded string (BASE-64 default) to binary value.

`DEBASE` is a native! value.

ARGUMENTS:

`value` `[string!]` "The string to decode."

REFINEMENTS:

`/base` => Binary base to use.

`base-value` `[integer!]` "The base to convert from: 64, 58, 16, or 2."

decompress

USAGE:

DECOMPRESS data

DESCRIPTION:

Decompresses data. Data in GZIP format (RFC 1952) by default.
DECOMPRESS is a native! value.

ARGUMENTS:

data [binary!]

REFINEMENTS:

/zlib => Data in ZLIB format (RFC 1950).
size [integer!] "Uncompressed data size. Use 0 if don't know."
/deflate => Data in DEFLATE format (RFC 1951).
size [integer!] "Uncompressed data size. Use 0 if don't know."

dehex

USAGE:

DEHEX value

DESCRIPTION:

Converts URL-style hex encoded (%xx) strings.
DEHEX is a native! value.

ARGUMENTS:

value [any-string!]

RETURNS:

Always return a string.
[string!]

difference

USAGE:

```
DIFFERENCE set1 set2
```

DESCRIPTION:

Returns the special difference of two data sets.
DIFFERENCE is a native! value.

ARGUMENTS:

| | |
|------|---|
| set1 | [block! hash! string! bitset! typeset! date!] |
| set2 | [block! hash! string! bitset! typeset! date!] |

REFINEMENTS:

| | |
|-------|--|
| /case | => Use case-sensitive comparison. |
| /skip | => Treat the series as fixed size records. |
| size | [integer!] |

RETURNS:

```
[block! hash! string! bitset! typeset! time!]
```

do

USAGE:

```
DO value
```

DESCRIPTION:

Evaluates a value, returning the last evaluation result.
DO is a native! value.

ARGUMENTS:

| | |
|-------|-------------|
| value | [any-type!] |
|-------|-------------|

REFINEMENTS:

| | |
|----------|--|
| /expand | => Expand directives before evaluation. |
| /args | => If value is a script, this will set its system/script/args. |
| arg | "Args passed to a script (normally a string)." |
| /next | => Do next expression only, return it, update block word. |
| position | [word!] "Word updated with new block position." |

does

USAGE:

DOES body

DESCRIPTION:

Defines a function with no arguments or local variables.

DOES is a native! value.

ARGUMENTS:

body [block!]

either

USAGE:

EITHER cond true-blk false-blk

DESCRIPTION:

If conditional expression is truthy, evaluate the first branch; else evaluate the alternative.

EITHER is a native! value.

ARGUMENTS:

cond [any-type!]

true-blk [block!]

false-blk [block!]

enbase

USAGE:

ENBASE value

DESCRIPTION:

Encodes a string into a binary-coded string (BASE-64 default).

ENBASE is a native! value.

ARGUMENTS:

value [binary! string!] "If string, will be UTF8 encoded."

REFINEMENTS:

/base => Binary base to use.

base-value [integer!] "The base to convert from: 64, 58, 16, or 2."

enhex

USAGE:

ENHEX value

DESCRIPTION:

Encode URL-style hex encoded (%xx) strings.

ENHEX is a native! value.

ARGUMENTS:

value [any-string!]

RETURNS:

Always return a string.

[string!]

equal?

USAGE:

EQUAL? value1 value2

DESCRIPTION:

Returns TRUE if two values are equal.

EQUAL? is a native! value.

ARGUMENTS:

value1 [any-type!]

value2 [any-type!]

exclude

USAGE:

EXCLUDE set1 set2

DESCRIPTION:

Returns the first data set less the second data set.

EXCLUDE is a native! value.

ARGUMENTS:

set1 [block! hash! string! bitset! typeset!]

set2 [block! hash! string! bitset! typeset!]

REFINEMENTS:

/case => Use case-sensitive comparison.

/skip => Treat the series as fixed size records.

size [integer!]

RETURNS:

[block! hash! string! bitset! typeset!]

exit

USAGE:

EXIT

DESCRIPTION:

Exits a function, returning no value.

EXIT is a native! value.

exp

USAGE:

EXP value

DESCRIPTION:

Raises E (the base of natural logarithm) to the power specified.

EXP is a native! value.

ARGUMENTS:

value [number!]

RETURNS:

[float!]

extend

USAGE:

```
EXTEND obj spec
```

DESCRIPTION:

Extend an object or map value with list of key and value pairs.
EXTEND is a native! value.

ARGUMENTS:

| | |
|------|---------------------|
| obj | [object! map!] |
| spec | [block! hash! map!] |

REFINEMENTS:

| | |
|-------|-----------------------------------|
| /case | => Use case-sensitive comparison. |
|-------|-----------------------------------|

forall

USAGE:

```
FORALL 'word body
```

DESCRIPTION:

Evaluates body for all values in a series.
FORALL is a native! value.

ARGUMENTS:

| | |
|-------|---|
| 'word | [word!] "Word referring to series to iterate over." |
| body | [block!] |

foreach

USAGE:

```
FOREACH 'word series body
```

DESCRIPTION:

Evaluates body for each value in a series.
FOREACH is a native! value.

ARGUMENTS:

| | |
|--------|--|
| 'word | [word! block!] "Word, or words, to set on each iteration." |
| series | [series! map!] |
| body | [block!] |

forever

USAGE:

FOREVER body

DESCRIPTION:

Evaluates body repeatedly forever.
FOREVER is a native! value.

ARGUMENTS:

body [block!]

func

USAGE:

FUNC spec body

DESCRIPTION:

Defines a function with a given spec and body.
FUNC is a native! value.

ARGUMENTS:

spec [block!]
body [block!]

function

USAGE:

FUNCTION spec body

DESCRIPTION:

Defines a function, making all set-words found in body, local.
FUNCTION is a native! value.

ARGUMENTS:

spec [block!]
body [block!]

REFINEMENTS:

/extern => Exclude words that follow this refinement.

get

USAGE:

GET word

DESCRIPTION:

Returns the value a word refers to.

GET is a native! value.

ARGUMENTS:

word [any-word! any-path! object!]

REFINEMENTS:

/any => If word has no value, return UNSET rather than causing an error.

/case => Use case-sensitive comparison (path only).

RETURNS:

[any-type!]

get-env

USAGE:

GET-ENV var

DESCRIPTION:

Returns the value of an OS environment variable (for current process).

GET-ENV is a native! value.

ARGUMENTS:

var [any-string! any-word!] "Variable to get."

RETURNS:

[string! none!]

greater-or-equal?

USAGE:

GREATER-OR-EQUAL? value1 value2

DESCRIPTION:

Returns TRUE if the first value is greater than or equal to the second.

GREATER-OR-EQUAL? is a native! value.

ARGUMENTS:

value1 [any-type!]

value2 [any-type!]

greater

USAGE:

```
GREATER? value1 value2
```

DESCRIPTION:

Returns TRUE if the first value is greater than the second.

GREATER? is a native! value.

ARGUMENTS:

| | |
|--------|-------------|
| value1 | [any-type!] |
|--------|-------------|

| | |
|--------|-------------|
| value2 | [any-type!] |
|--------|-------------|

has

USAGE:

```
HAS vars body
```

DESCRIPTION:

Defines a function with local variables, but no arguments.

HAS is a native! value.

ARGUMENTS:

| | |
|------|----------|
| vars | [block!] |
|------|----------|

| | |
|------|----------|
| body | [block!] |
|------|----------|

if

USAGE:

```
IF cond then-blk
```

DESCRIPTION:

If conditional expression is truthy, evaluate block; else return NONE.

IF is a native! value.

ARGUMENTS:

| | |
|------|-------------|
| cond | [any-type!] |
|------|-------------|

| | |
|----------|----------|
| then-blk | [block!] |
|----------|----------|

in

USAGE:

IN object word

DESCRIPTION:

Returns the given word bound to the object's context.
IN is a native! value.

ARGUMENTS:

| | |
|--------|---------------|
| object | [any-object!] |
| word | [any-word!] |

intersect

USAGE:

INTERSECT set1 set2

DESCRIPTION:

Returns the intersection of two data sets.
INTERSECT is a native! value.

ARGUMENTS:

| | |
|------|---|
| set1 | [block! hash! string! bitset! typeset!] |
| set2 | [block! hash! string! bitset! typeset!] |

REFINEMENTS:

| | |
|-------|--|
| /case | => Use case-sensitive comparison. |
| /skip | => Treat the series as fixed size records. |
| size | [integer!] |

RETURNS:

[block! hash! string! bitset! typeset!]

lesser-or-equal?

USAGE:

LESSER-OR-EQUAL? value1 value2

DESCRIPTION:

Returns TRUE if the first value is less than or equal to the second.
LESSER-OR-EQUAL? is a native! value.

ARGUMENTS:

| | |
|--------|-------------|
| value1 | [any-type!] |
| value2 | [any-type!] |

lesser?

USAGE:

LESSER? value1 value2

DESCRIPTION:

Returns TRUE if the first value is less than the second.

LESSER? is a native! value.

ARGUMENTS:

value1 [any-type!]

value2 [any-type!]

list-env

USAGE:

LIST-ENV

DESCRIPTION:

Returns a map of OS environment variables (for current process).

LIST-ENV is a native! value.

RETURNS:

[map!]

log-10

USAGE:

LOG-10 value

DESCRIPTION:

Returns the base-10 logarithm.

LOG-10 is a native! value.

ARGUMENTS:

value [number!]

RETURNS:

[float!]

log-2

USAGE:

LOG-2 value

DESCRIPTION:

Return the base-2 logarithm.

LOG-2 is a native! value.

ARGUMENTS:

value [number!]

RETURNS:

[float!]

log-e

USAGE:

LOG-E value

DESCRIPTION:

Returns the natural (base-E) logarithm of the given value.

LOG-E is a native! value.

ARGUMENTS:

value [number!]

RETURNS:

[float!]

loop

USAGE:

LOOP count body

DESCRIPTION:

Evaluates body a number of times.

LOOP is a native! value.

ARGUMENTS:

count [integer! float!]

body [block!]

lowercase

USAGE:

LOWERCASE string

DESCRIPTION:

Converts string of characters to lowercase.
LOWERCASE is a native! value.

ARGUMENTS:

string [any-string! char!] "Value to convert (modified when series)."

REFINEMENTS:

/part => Limits to a given length or position.
limit [number! any-string!]

RETURNS:

[any-string! char!]

max

USAGE:

MAX value1 value2

DESCRIPTION:

Returns the greater of the two values.
MAX is a native! value.

ARGUMENTS:

value1 [scalar! series!]
value2 [scalar! series!]

min

USAGE:

MIN value1 value2

DESCRIPTION:

Returns the lesser of the two values.
MIN is a native! value.

ARGUMENTS:

value1 [scalar! series!]
value2 [scalar! series!]

NaN?

USAGE:

NAN? value

DESCRIPTION:

Returns TRUE if the number is Not-a-Number.

NAN? is a native! value.

ARGUMENTS:

value [number!]

RETURNS:

[logic!]

negative?

USAGE:

NEGATIVE? number

DESCRIPTION:

Returns TRUE if the number is negative.

NEGATIVE? is a native! value.

ARGUMENTS:

number [number! money! time!]

RETURNS:

[logic!]

new-line

USAGE:

NEW-LINE position value

DESCRIPTION:

Sets or clears the new-line marker within a list series.

NEW-LINE is a native! value.

ARGUMENTS:

| | |
|----------|---|
| position | [any-list!] "Position to change marker (modified)." |
| value | [logic!] "Set TRUE for newline." |

REFINEMENTS:

| | |
|-------|--|
| /all | => Set/clear marker to end of series. |
| /skip | => Set/clear marker periodically to the end of the series. |
| size | [integer!] |

RETURNS:

[any-list!]

new-line?

USAGE:

NEW-LINE? position

DESCRIPTION:

Returns the state of the new-line marker within a list series.

NEW-LINE? is a native! value.

ARGUMENTS:

| | |
|----------|--|
| position | [any-list!] "Position to change marker." |
|----------|--|

RETURNS:

[any-list!]

not

USAGE:

NOT value

DESCRIPTION:

Returns the logical complement of a value (truthy or falsy).

NOT is a native! value.

ARGUMENTS:

| | |
|-------|-------------|
| value | [any-type!] |
|-------|-------------|

not-equal?

USAGE:

NOT-EQUAL? value1 value2

DESCRIPTION:

Returns TRUE if two values are not equal.

NOT-EQUAL? is a native! value.

ARGUMENTS:

value1 [any-type!]

value2 [any-type!]

now

USAGE:

NOW

DESCRIPTION:

Returns date and time.

NOW is a native! value.

REFINEMENTS:

/year => Returns year only.

/month => Returns month only.

/day => Returns day of the month only.

/time => Returns time only.

/zone => Returns time zone offset from UTC (GMT) only.

/date => Returns date only.

/weekday => Returns day of the week as integer (Monday is day 1).

/yearday => Returns day of the year (Julian).

/precise => High precision time.

/utc => Universal time (no zone).

RETURNS:

[date! time! integer!]

parse

USAGE:

PARSE input rules

DESCRIPTION:

Process a series using dialected grammar rules.
PARSE is a native! value.

ARGUMENTS:

| | |
|-------|----------------------------------|
| input | [binary! any-block! any-string!] |
| rules | [block!] |

REFINEMENTS:

| | |
|----------|---|
| /case | => Uses case-sensitive comparison. |
| /part | => Limit to a length or position. |
| length | [number! series!] |
| /trace | => |
| callback | [function! [event [word!] match? [logic!] rule [block!] input [series!] stack [block!] return: [logic!]]] |

RETURNS:

[logic! block!]

positive?

USAGE:

POSITIVE? number

DESCRIPTION:

Returns TRUE if the number is positive.
POSITIVE? is a native! value.

ARGUMENTS:

| | |
|--------|------------------------|
| number | [number! money! time!] |
|--------|------------------------|

RETURNS:

[logic!]

prin

USAGE:

PRIN value

DESCRIPTION:

Outputs a value.

PRIN is a native! value.

ARGUMENTS:

value [any-type!]

print

USAGE:

PRINT value

DESCRIPTION:

Outputs a value followed by a newline.

PRINT is a native! value.

ARGUMENTS:

value [any-type!]

recycle

USAGE:

RECYCLE

DESCRIPTION:

Recycles unused memory.

RECYCLE is a native! value.

REFINEMENTS:

/on => Turns on garbage collector.

/off => Turns off garbage collector.

reduce

USAGE:

REDUCE value

DESCRIPTION:

Returns a copy of a block, evaluating all expressions.

REDUCE is a native! value.

ARGUMENTS:

value [any-type!]

REFINEMENTS:

| | |
|-------|---|
| /into | => Put results in out block, instead of creating a new block. |
| out | [any-block!] "Target block for results, when /into is used." |

remove-each

USAGE:

REMOVE-EACH 'word data body

DESCRIPTION:

Removes values for each block that returns truthy value.

REMOVE-EACH is a native! value.

ARGUMENTS:

| | |
|-------|---|
| 'word | [word! block!] "Word or block of words to set each time." |
| data | [series!] "The series to traverse (modified)." |
| body | [block!] {Block to evaluate (return truthy value to remove).} |

repeat

USAGE:

REPEAT 'word value body

DESCRIPTION:

Evaluates body a number of times, tracking iteration count.

REPEAT is a native! value.

ARGUMENTS:

| | |
|-------|---|
| 'word | [word!] "Iteration counter; not local to loop." |
| value | [integer! float!] "Number of times to evaluate body." |
| body | [block!] |

return

USAGE:

RETURN value

DESCRIPTION:

Returns a value from a function.

RETURN is a native! value.

ARGUMENTS:

value [any-type!]

same?

USAGE:

SAME? value1 value2

DESCRIPTION:

Returns TRUE if two values have the same identity.

SAME? is a native! value.

ARGUMENTS:

value1 [any-type!]

value2 [any-type!]

set

USAGE:

SET word value

DESCRIPTION:

Sets the value(s) one or more words refer to.

SET is a native! value.

ARGUMENTS:

word [any-word! block! object! any-path!] "Word, object, map path or block of words to set."

value [any-type!] "Value or block of values to assign to words."

REFINEMENTS:

/any => Allow UNSET as a value rather than causing an error.

/case => Use case-sensitive comparison (path only).

/only => Block or object value argument is set as a single value.

/some => None values in a block or object value argument, are not set.

RETURNS:

[any-type!]

set-env

USAGE:

SET-ENV var value

DESCRIPTION:

Sets the value of an operating system environment variable (for current process).
SET-ENV is a native! value.

ARGUMENTS:

| | |
|-------|--|
| var | [any-string! any-word!] "Variable to set." |
| value | [string! none!] "Value to set, or NONE to unset it." |

shift

USAGE:

SHIFT data bits

DESCRIPTION:

Perform a bit shift operation. Right shift (decreasing) by default.
SHIFT is a native! value.

ARGUMENTS:

| | |
|------|------------|
| data | [integer!] |
| bits | [integer!] |

REFINEMENTS:

| | |
|----------|--|
| /left | => Shift bits to the left (increasing). |
| /logical | => Use logical shift (unsigned, fill with zero). |

RETURNS:

[integer!]

sign?

USAGE:

SIGN? number

DESCRIPTION:

Returns sign of N as 1, 0, or -1 (to use as a multiplier).
SIGN? is a native! value.

ARGUMENTS:

number [number! money! time!]

RETURNS:

[integer!]

sine

USAGE:

SINE angle

DESCRIPTION:

Returns the trigonometric sine.
SINE is a native! value.

ARGUMENTS:

angle [number!]

REFINEMENTS:

/radians => Angle is specified in radians.

RETURNS:

[float!]

size?

USAGE:

SIZE? file

DESCRIPTION:

Returns the size of a file content.
SIZE? is a native! value.

ARGUMENTS:

file [file!]

RETURNS:

[integer! none!]

square-root

USAGE:

SQUARE-ROOT value

DESCRIPTION:

Returns the square root of a number.
SQUARE-ROOT is a native! value.

ARGUMENTS:

value [number!]

RETURNS:

[float!]

stats

USAGE:

STATS

DESCRIPTION:

Returns interpreter statistics.
STATS is a native! value.

REFINEMENTS:

/show => TBD:.
/info => Output formatted results.

RETURNS:

[integer! block!]

strict-equal?

USAGE:

STRICT-EQUAL? value1 value2

DESCRIPTION:

Returns TRUE if two values are equal, and also the same datatype.
STRICT-EQUAL? is a native! value.

ARGUMENTS:

value1 [any-type!]
value2 [any-type!]

switch

USAGE:

SWITCH value cases

DESCRIPTION:

Evaluates the first block following the value found in cases.
SWITCH is a native! value.

ARGUMENTS:

| | |
|-------|-----------------------------------|
| value | [any-type!] "The value to match." |
| cases | [block!] |

REFINEMENTS:

| | |
|----------|---|
| /default | => Specify a default block, if value is not found in cases. |
| case | [block!] "Default block to evaluate." |

tangent

USAGE:

TANGENT angle

DESCRIPTION:

Returns the trigonometric tangent.
TANGENT is a native! value.

ARGUMENTS:

| | |
|-------|-----------|
| angle | [number!] |
|-------|-----------|

REFINEMENTS:

| | |
|----------|-----------------------------------|
| /radians | => Angle is specified in radians. |
|----------|-----------------------------------|

RETURNS:

[float!]

throw

USAGE:

THROW value

DESCRIPTION:

Throws control back to a previous catch.

THROW is a native! value.

ARGUMENTS:

value [any-type!] "Value returned from catch."

REFINEMENTS:

/name => Throws to a named catch.

word [word!]

to-hex

USAGE:

TO-HEX value

DESCRIPTION:

Converts numeric value to a hex issue! datatype (with leading # and 0's).

TO-HEX is a native! value.

ARGUMENTS:

value [integer!]

REFINEMENTS:

/size => Specify number of hex digits in result.

length [integer!]

RETURNS:

[issue!]

to-local-file

USAGE:

TO-LOCAL-FILE path

DESCRIPTION:

Converts a Red file path to the local system file path.

TO-LOCAL-FILE is a native! value.

ARGUMENTS:

path [file! string!]

REFINEMENTS:

/full => Prepends current dir for full path (for relative paths only).

RETURNS:

[string!]

transcode

USAGE:

TRANSCODE src

DESCRIPTION:

Translates UTF-8 binary source to values. Returns one or several values in a block.

TRANSCODE is a native! value.

ARGUMENTS:

src [binary! string!] {UTF-8 input buffer; string argument will be UTF-8 encoded.}

REFINEMENTS:

/next => Translate next complete value (blocks as single value).

/one => Translate next complete value, returns the value only.

/prescan => Prescans only, do not load values. Returns guessed type.

/scan => Scans only, do not load values. Returns recognized type.

/part => Translates only part of the input buffer.

length [integer! binary!] "Length in bytes or tail position."

/into => Optionally provides an output block.

dst [block!]

/trace =>

callback [function! [event [word!] input [binary! string!] type [word! datatype!] line [integer!] token return: [logic!]]]

RETURNS:

[block!]

try

USAGE:

TRY block

DESCRIPTION:

Tries to DO a block and returns its value or an error.

TRY is a native! value.

ARGUMENTS:

block [block!]

REFINEMENTS:

/all => Catch also BREAK, CONTINUE, RETURN, EXIT and THROW exceptions.

type?

USAGE:

TYPE? value

DESCRIPTION:

Returns the datatype of a value.

TYPE? is a native! value.

ARGUMENTS:

value [any-type!]

REFINEMENTS:

/word => Return a word value, rather than a datatype value.

union

USAGE:

```
UNION set1 set2
```

DESCRIPTION:

Returns the union of two data sets.

UNION is a native! value.

ARGUMENTS:

set1 [block! hash! string! bitset! typeset!]

set2 [block! hash! string! bitset! typeset!]

REFINEMENTS:

/case => Use case-sensitive comparison.

/skip => Treat the series as fixed size records.

size [integer!]

RETURNS:

[block! hash! string! bitset! typeset!]

unique

USAGE:

```
UNIQUE set
```

DESCRIPTION:

Returns the data set with duplicates removed.

UNIQUE is a native! value.

ARGUMENTS:

set [block! hash! string!]

REFINEMENTS:

/case => Use case-sensitive comparison.

/skip => Treat the series as fixed size records.

size [integer!]

RETURNS:

[block! hash! string!]

unless

USAGE:

UNLESS cond then-blk

DESCRIPTION:

If conditional expression is falsy, evaluate block; else return NONE.
UNLESS is a native! value.

ARGUMENTS:

| | |
|----------|-------------|
| cond | [any-type!] |
| then-blk | [block!] |

unset

USAGE:

UNSET word

DESCRIPTION:

Unsets the value of a word in its current context.
UNSET is a native! value.

ARGUMENTS:

| | |
|------|--|
| word | [word! block!] "Word or block of words." |
|------|--|

until

USAGE:

UNTIL body

DESCRIPTION:

Evaluates body until it is truthy.
UNTIL is a native! value.

ARGUMENTS:

| | |
|------|----------|
| body | [block!] |
|------|----------|

uppercase

USAGE:

UPPERCASE string

DESCRIPTION:

Converts string of characters to uppercase.
UPPERCASE is a native! value.

ARGUMENTS:

string [any-string! char!] "Value to convert (modified when series)."

REFINEMENTS:

/part => Limits to a given length or position.
limit [number! any-string!]

RETURNS:

[any-string! char!]

value?

USAGE:

VALUE? value

DESCRIPTION:

Returns TRUE if the word has a value.
VALUE? is a native! value.

ARGUMENTS:

value

RETURNS:

[logic!]

wait

USAGE:

WAIT value

DESCRIPTION:

Waits for a duration in seconds or specified time.

WAIT is a native! value.

ARGUMENTS:

value [number! time! block! none!]

REFINEMENTS:

/all => Returns all events in a block.

while

USAGE:

WHILE cond body

DESCRIPTION:

Evaluates body as long as condition block evaluates to truthy value.

WHILE is a native! value.

ARGUMENTS:

cond [block!] "Condition block to evaluate on each iteration."
body [block!] "Block to evaluate on each iteration."

while

USAGE:

WHILE cond body

DESCRIPTION:

Evaluates body as long as condition block evaluates to truthy value.

WHILE is a native! value.

ARGUMENTS:

cond [block!] "Condition block to evaluate on each iteration."
body [block!] "Block to evaluate on each iteration."

zero?

USAGE:

ZERO? value

DESCRIPTION:

Returns TRUE if the value is zero.

ZERO? is a native! value.

ARGUMENTS:

value [number! money! pair! time! char! tuple!]

RETURNS:

[logic!]