zcsr

zcsr(*cursorName* [, *graphNameStr*])

The zcsr function returns a Z value when the specified cursor is on a contour, image, or waterfall plot. Otherwise, it returns NaN.

Parameters

cursorName identifies the cursor, which can be cursor A through J.

graphNameStr specifies the graph window or subwindow.

When identifying a subwindow with *graphNameStr*, see **Subwindow Syntax** on page III-92 for details on forming the window hierarchy.

Examples

```
Print zcsr(A)              // not zcsr("A")
Print zcsr(A,"Graph0")     // specifies the graph
```

See Also

The **hcsr**, **pcsr**, **qcsr**, **vcsr**, and **xcsr** functions.

Programming With Cursors on page II-321.

zeta

zeta(*a*, *b* [, *terms*])

The zeta function returns the Hurwitz Zeta function for real or complex arguments *a* and *b*

$$\zeta(a,b) = \sum_{k=0}^{\infty} \frac{1}{(k+b)^a},$$

$$\Re(a) > 1,$$

$$b \neq 0,-1,-2,...$$

The Riemann zeta function is the special case:

$$\zeta(a) = \zeta(a,1).$$

The zeta function was added in Igor Pro 7.00.

Parameters

The *terms* parameter defaults to 40. In practice evaluation may terminate before the specified number of terms when convergence is achieved.

References

Olver, Frank W. J.; Lozier, Daniel W.; Boisvert, Ronald F.; Clark, Charles W., eds., "NIST Handbook of Mathematical Functions", 607 pp., Cambridge University Press, 2010.

See Also

Dilogarithm

ZernikeR

ZernikeR(*n*,*m*,*r*)

The ZernikeR function returns the Zernike radial polynomials of degree *n* that contains no power of *r* that is less than *m*. Here *m* is even or odd according to whether *n* is even or odd, and *r* is in the range 0 to 1.

Note that the full circle polynomials are complex. For any angle *t* (theta), they are given by: `ZernikeR(`*n*`,`*m*`,`*r*`)*exp(i`*mt*`)`.