The CVODE package was derived in part from the VODE package. The parts used in Igor are described in this paper:

Brown, P.N., G. D. Byrne, and A. C. Hindmarsh, VODE, a Variable-Coefficient ODE Solver, *SIAM J. Sci. Stat. Comput.*, *10*, 1038-1051, 1989.

interp

interp(*x1*, *xwaveName*, *ywaveName*)

The interp function returns a linearly interpolated value at the location x = *x1* of a curve whose X components come from the Y values of *xwaveName* and whose y components come from the Y values of *ywaveName*.
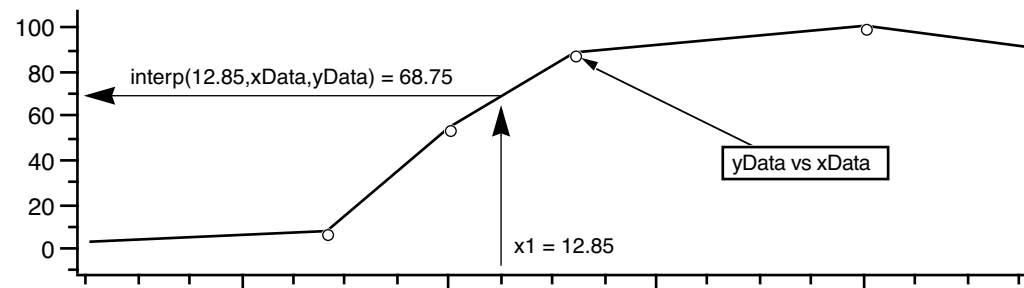
Details

interp returns nonsense if the waves are complex or if *xwaveName* is not monotonic or if either wave contains NaNs.

The interp function is not multidimensional aware. See **Analysis on Multidimensional Waves** on page II-95 for details.

Examples

Examples

See Also
Interpolate2

The **Loess**, **ImageInterpolate**, **Interpolate3D**, and **Interp3DPath** operations.

The **Interp2D**, **Interp3D** and **ContourZ** functions.

Interp2D

Interp2D(*srcWaveName*, *xV*, *y*)

The Interp2D function returns a double precision number as the bilinear interpolation value at the specified coordinates of the source wave. It returns NaN if the point is outside the source wave domain or if the source wave is complex.

Parameters

srcWaveName is the name of a 2D wave which wave must be real.

x is the X location of the interpolated point.

y is the Y location of the interpolated point.

See Also

The **ImageInterpolate** operation. **Interpolation** on page III-114.

Interp3D

Interp3D(*srcWave*, *x*, *y*, *z* [, *triangulationWave*])

The Interp3D function returns an interpolated value for location P=(*x*, *y*, *z*) in a 3D scalar distribution *srcWave*.

If *srcWave* is a 3D wave containing a scalar distribution sampled on a regular lattice, the function returns a linearly interpolated value for any P=(*x*, *y*, *z*) location within the domain of *srcWave*. If P is outside the domain, the function returns NaN.