ScaleToIndex

ScaleToIndex(*wave*, *coordValue*, *dim*)

The ScaleToIndex function returns the number of the element in the requested dimension whose scaled index value is closest to *coordValue*.

The ScaleToIndex function was added in Igor Pro 7.00.

Parameters

dim is a dimension number: 0 for rows, 1 for columns, 2 for layers, 3 for chunks.

coordValue is a scaled index in that dimension.

Details

The ScaleToIndex function returns the value of the expression:

```
round((coordValue - DimOffset(wave,dim)) / DimDelta(wave,dim))
```

With *dim*=0, ScaleToIndex is equivalent to **x2pnt**.

If *coordValue* is NaN or +/-INF, ScaleToIndex returns NaN. Otherwise, the result is computed based on the **DimOffset** and **DimDelta** of the specified dimension of the wave. The result is not clipped to a valid element number for the wave dimension.

See Also

IndexToScale, **x2pnt**, **DimDelta**, **DimOffset**

Waveform Model of Data on page II-62 for an explanation of wave scaling.

ScreenResolution

ScreenResolution

The ScreenResolution function returns the logical resolution of your video display screen in dots per inch (dpi). On Macintosh this is always 72. On Windows it is usually 96 (small fonts) or 120 (large fonts).

Examples

```
// 72 is the number of points in an inch which is constant.
Variable pixels = numPoints * (ScreenResolution/72)   // Convert points to pixels
Variable points = numPixels * (72/ScreenResolution)   // Convert pixels to points
```

See Also

PanelResolution

sec

sec(*angle*)

The sec function returns the secant of *angle* which is in radians:

$$\sec(x) = \frac{1}{\cos(x)}.$$

In complex expressions, *angle* is complex, and sec(*angle*) returns a complex value.

See Also

sin, **cos**, **tan**, **csc**, **cot**

sech

sech(*x*)

The sech function returns the hyperbolic secant of *x*.

$$\operatorname{csch}(x) = \frac{1}{\cosh(x)} = \frac{2}{e^{x} + e^{-x}}.$$