selector	Field Compared
1	Wave data
2	Wave data type
4	Wave scaling
8	Data units
16	Dimension units
32	Dimension labels
64	Wave note
128	Wave lock state
256	Data full scale
512	Dimension sizes

If you use the selectors for wave data, wave scaling, dimension units, dimension labels or dimension sizes, EqualWaves will return zero if the waves have unequal dimension sizes. The other selectors do not require equal dimension sizes.

Details

If you are testing for equality of wave data and if the *tolerance* is specified, it must be a positive number. The function returns 1 for equality if the data satisfies:

$$\sum_i \left(waveA[i] - waveB[i]\right)^2 < tolerance.$$

If *tolerance* is not specified, it defaults to 10^{-8}.

If *tolerance* is set to zero and *selector* is set to 1 then the data in the two waves undergo a binary comparison (byte-by-byte).

If *tolerance* is non-zero then the presence of NaNs at a given point in both waves does not contribute to the sum shown in the equation above when both waves contain NaNs at the same point. A NaN entry that is present in only one of the waves is sufficient to flag inequality. Similarly, INF entries are excluded from the tolerance calculation when they appear in both waves at the same position and have the same signs.

If you are comparing wave data (selector =1) and both waves contain zero points, the function returns 1.

The EqualWaves() function comparison of all text fields is case-sensitive.

See Also

The **MatrixOp** operation equal keyword.

erf

erf(*num* [, *accuracy*])

The erf function returns the error function of *num*.

$$erf(x) = \frac{2}{\sqrt{\pi}} \int_0^x e^{-t^2}\, dt.$$