zapNaNs	Deletes elements whose value is NaN. This is relevant for 1D single-precision and double-precision floating point waves only and does nothing for other types of 1D waves. It is not suitable for multidimensional waves and returns an error if *srcWave* is multidimensional. Use **MatrixOp** `replaceNaNs` for multidimensional waves.
zapZeros	Deletes wave elements whose value is zero. zapZeros works only with 1D 8-bit, 16-bit, and 32-bit integer waves and returns an error if srcWave is multidimensional or another data type. zapZeros was added in Igor Pro 9.00.

Flags

/D	If present, angles in wave data are interpreted as in degrees. Otherwise they are interpreted as in radians.
/O	Overwrites input wave.
/P={*param1…*}	Specifies parameters as appropriate for the keyword that you are using. The number of parameters and their order depends on the keyword.

/R=[*startRow,endRow*][*startCol,endCol*][*startLayer,endLayer*][*startChunk,endChunk*]

> Specifies the range of elements to set for the setConstant keyword.
>
> You can omit parameters for dimensions that don't exist in *srcWave*. For example, if *srcWave* is 1D, specify just /R=[*startRow,endRow*].
>
> /R was added in Igor Pro 7.00.

/V=*value*	Specifies the value to use for the setConstant keyword. /V was added in Igor Pro 7.00.

Examples

```
// Produce output values in the range [-1,1]:
WaveTransform /P={(pi)} phase complexWave

// Faster than myWave=myWave>1 ? 1 : myWave
WaveTransform /P={1}/O min myWave
```

See Also

The **Rotate** operation.

References

Shmueli, U. (Ed.), International Tables for Crystallography, Volume B: 3.3, Kluwer Academic Publishers, Dordrecht, The Netherlands, 1996.

WaveType

WaveType(*waveName* [,*selector*])

The WaveType function returns the type of data stored in the wave.

If *selector* = 1, WaveType returns 0 for a null wave, 1 if numeric, 2 if text, 3 if the wave holds data folder references or 4 if the wave holds wave references.

If *selector* = 2, WaveType returns 0 for a null wave, 1 for a normal global wave or 2 for a free wave or a wave that is stored in a free data folder.

If selector = 3, WaveType returns 0 for a null wave reference or a global wave, 1 for a free wave (a wave that is not stored in any data folder) or 2 for a local wave (a wave that is stored in a free data folder hierarchy).

If *selector* is omitted or zero, the returned value for numeric waves is a combination of bit values shown in the following table:

Type	Bit Number	Decimal Value	Hexadecimal Value
complex	0	1	1
32-bit float	1	2	2
64-bit float	2	4	4