CDFFunc

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CDFFunc is a procedure subtype keyword that identifies a function as being suitable for calling from the **StatsKSTest** operation.

ceil

ceil(*num*)

The ceil function returns the closest integer greater than or equal to *num*.

The result for INF and NAN is undefined.

See Also

The **round**, **floor**, and **trunc** functions.

centerOfMass

centerOfMass(*srcWave* [,*x1*,*x2*])

The centerOfMass function returns the 1D center of mass for *srcWave* X values from x=*x1* to x=x2.

The centerOfMass function was added in Igor Pro 9.00.

Center of mass and center of gravity in a uniform gravity field are different terms for the same calculation. When the masses are of uniform density, the center of mass is also identical to the geometric centroid.

Details

The center of mass is defined as

$$centerMass = \frac{\sum x_i y_i}{\sum y_i},$$

where the summation is over all the points in *srcWave* or over the X range specified by the optional parameters x1 and x2.

Each term in the numerator above can be written as

$$x_i y_i = \left[DimOffset(srcWave,0) + i \cdot DimDelta(srcWave,0) \right] srcWave[i].$$

In this notation, y_i represents an individual mass at $x = x_i$, and the returned value x_c is the X location of the center of the aggregate mass.

See Also

centerOfMassXY, **mean**, **area**, **SumDimension**, **ImageAnalyzeParticles**

centerOfMassXY

centerOfMassXY(waveX, waveY)

The centerOfMassXY function returns the 1D center of mass xc for the pair of waves.

The centerOfMassXY function was added in Igor Pro 9.00.

You can obtain the center of mass in the orthogonal direction (yc) by reversing the order of arguments to the function.

Details

The center of mass is defined as