ExpIntegralE1

ExpIntegralE1(z)

The ExpIntegralE1(*z*) function returns the exponential integral of *z*.

If *z* is real, a real value is returned. If *z* is complex then a complex value is returned.

The ExpIntegralE1 function was added in Igor Pro 7.00.

Details

The exponential integral is defined by

$$E_1(z) = \int_z^\infty \frac{e^{-t}}{t}\,dt, \qquad \left(|\arg(z)| < \pi\right).$$

References

Abramowitz, M., and I.A. Stegun, "Handbook of Mathematical Functions", Dover, New York, 1972. Chapter 5.

See Also

expInt, **CosIntegral**, **SinIntegral**, **hyperGPFQ**

expNoise

expNoise(*b*)

The expNoise function returns a pseudo-random value from an exponential distribution whose average and standard deviation are *b* and the probability distribution function is

$$f(x) = \frac{1}{b}\exp\left(-\frac{x}{b}\right).$$

The random number generator initializes using the system clock when Igor Pro starts. This almost guarantees that you will never repeat a sequence. For repeatable "random" numbers, use **SetRandomSeed**. The algorithm uses the Mersenne Twister random number generator.

See Also

The **SetRandomSeed** operation.

Noise Functions on page III-390.

Chapter III-12, **Statistics** for a function and operation overview.

ExportGizmo

ExportGizmo [*flags*] *keyword* [*=value*]

The ExportGizmo operation is obsolete but is still partially supported for partial backward compatibility.

You can export Gizmo graphics using File→Save Graphics which generates a **SavePICT** command. The ExportGizmo operation is only partially supported. It can export to the clipboard or to an Igor wave and it can print but it can no longer export to a file. Use SavePICT instead.

Documentation for the ExportGizmo operation is available in the Igor online help files only. In Igor, execute:

```
DisplayHelpTopic "ExportGizmo"
```

Extract

Extract [*type flags*][**/INDX/O**] *srcWave*, *destWave*, *LogicalExpression*

The Extract operation finds data in *srcWave* wherever *LogicalExpression* evaluates to TRUE and stores the matching data sequentially in *destWave*, which will be created if it does not already exist.

Parameters

srcWave is the name of a wave.

destWave is the name of a new or existing wave that will contain the result.