$$Ci(z) = \gamma + \ln(z) + \int_0^z \frac{\cos(t) - 1}{t}\, dt, \qquad \left(\left|\arg(z)\right| < \pi\right)$$

where γ is the Euler-Mascheroni constant 0.57721566490153328606065.

IGOR computes the CosIntegral using the expression:

$$Ci(z) = -\frac{Z^2}{4}\, {}_2F_3\left(1,1;2,2,\frac{3}{2};-\frac{z^2}{4}\right) + \ln(z) + \gamma,$$

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

See Also
SinIntegral, **ExpIntegralE1**, **hyperGPFQ**

cot

`cot(angle)`
The cot function returns the cotangent of *angle* which is in radians.

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

See Also
sin, **cos**, **tan**, **sec**, **csc**

coth

`coth(num)`
The coth function returns the hyperbolic cotangent of *num*:

$$\coth(x) = \frac{e^x + e^{-x}}{e^x - e^{-x}}.$$

In complex expressions, *num* is complex, and coth(*num*) returns a complex value.

See Also
sinh, **cosh**, **tanh**

CountObjects

`CountObjects(sourceFolderStr, objectType)`
The CountObjects function returns the number of objects of the specified type in the data folder specified by the string expression.

CountObjectsDFR is preferred.

Parameters
sourceFolderStr can be either `":"` or `""` to specify the current data folder. You can also use a full or partial data folder path. *objectType* should be one of the following values:

1   Waves

2   Numeric variables

3   String variables

4   Data folders