

Windows

C:Documents and Settings:<user>:Application Data:WaveMetrics:Igor Pro X:Packages:

where <user> is the name of the current user and "X" is the major version number..

Example

For an example using SpecialDirPath, see **Saving Package Preferences** on page IV-251.

sphericalBessJ

sphericalBessJ(n, x [, accuracy])

The sphericalBessJ function returns the spherical Bessel function of the first kind and order n .

$$j_n(x) = \sqrt{\frac{\pi}{2x}} J_{n+1/2}(x).$$

For example:

$$j_0(x) = \frac{\sin(x)}{x}$$

$$j_1(x) = \frac{\sin(x)}{x^2} - \frac{\cos(x)}{x}$$

$$j_2(x) = \left(\frac{3}{x^3} - \frac{1}{x} \right) \sin(x) - \frac{3}{x^2} \cos(x).$$

Details

See the **bessI** function for details on accuracy and speed of execution.

See Also

The **sphericalBessJD** and **sphericalBessY** functions.

References

Abramowitz, M., and I.A. Stegun, *Handbook of Mathematical Functions*, 446 pp., Dover, New York, 1972.

sphericalBessJD

sphericalBessJD(n, x [, accuracy])

The sphericalBessJD function returns the derivative of the spherical Bessel function of the first kind and order n .

Details

See the **bessI** function for details on accuracy and speed of execution.

See Also

The **sphericalBessJ** and **sphericalBessY** functions.

sphericalBessY

sphericalBessY(n, x [, accuracy])

The sphericalBessY function returns the spherical Bessel function of the second kind and order n .

$$y_n(x) = \sqrt{\frac{\pi}{2x}} Y_{n+1/2}(x).$$