

How can I use the BESSELI function in Excel to calculate the modified Bessel function?

Authored by
stats writer

June 28, 2024

RECOMMENDED CITATION

stats writer (2024). *How can I use the BESSELI function in Excel to calculate the modified Bessel function?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=156869>

The BESSELI function in Excel is a built-in mathematical function that allows users to calculate the modified Bessel function, which is a special type of mathematical function commonly used in physics and engineering. By inputting the desired parameters, the BESSELI function can accurately compute the value of the modified Bessel function, making it a useful tool for data analysis and problem-solving. This function can be accessed through the "Insert Function" feature in Excel and is compatible with both Windows and Mac versions. By utilizing the BESSELI function, users can efficiently perform calculations involving the modified Bessel function without needing to manually input complex equations.

This article describes the formula syntax and usage of the **BESSELI** function in Microsoft Excel.

Description

Returns the modified Bessel function, which is equivalent to the Bessel function evaluated for purely imaginary arguments.

Syntax

BESSELI(X, N)

The BESSELI function syntax has the following arguments:

X Required. The value at which to evaluate the function.

N Required. The order of the Bessel function. If n is not an integer, it is truncated.

Remarks

If x is nonnumeric, BESSELI returns the #VALUE! error value.

If n is nonnumeric, BESSELI returns the #VALUE! error value.

If n < 0, BESSELI returns the #NUM! error value.

The n-th order modified Bessel function of the variable x is:

$$I_n(x) = (i)^{-n} J_n(ix)$$