

How can I use the **SERIESSUM** function in Google Sheets to calculate the sum of a power series?

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The SERIESSUM function in Google Sheets is a mathematical tool that allows users to calculate the sum of a power series. This function takes in three arguments: the initial value, the step value, and the number of terms in the series. It then uses this information to compute the sum of the series using the formula for a geometric series. This can be useful for various applications such as calculating compound interest or determining the total value of an investment over time. By using the SERIESSUM function, users can easily and accurately calculate the sum of a power series in their Google Sheets spreadsheet.

SERIESSUM

Given parameters x , n , m , and a , returns the power series sum $a_1x^n + a_2x^{n+m} + \dots + a_ix^{n+(i-1)m}$, where i is the number of entries in range a .

Sample Usage

```
SERIESSUM(1,0,1,{FACT(0),FACT(1),FACT(2),FACT(3),FACT(4)})
```

```
SERIESSUM(A2,0,2,B2:B10)
```

Syntax

```
SERIESSUM(x, n, m, a)
```

x - The input to the power series. Varies depending on the type of approximation, may be angle, exponent, or some other value.

n - The initial power to which to raise x in the power series.

m - The additive increment by which to increase x .

a - The array or range containing the coefficients of the power series.

Notes

Power series may be used to approximate various constants and functions, including e (Euler's number), logarithms, integrals, trigonometric functions, etc. However, this function is usually used for custom user-defined models.

See Also

SUMSQ: Returns the sum of the squares of a series of numbers and/or cells.

SUMIF: Returns a conditional sum across a range.

SUM: Returns the sum of a series of numbers and/or cells.

QUOTIENT: Returns one number divided by another, without the remainder.

PRODUCT: Returns the result of multiplying a series of numbers together.

MULTIPLY: Returns the product of two numbers. Equivalent to the `*` operator.

MINUS: Returns the difference of two numbers. Equivalent to the `-` operator.

DIVIDE: Returns one number divided by another. Equivalent to the `/` operator.

ADD: Returns the sum of two numbers. Equivalent to the `+` operator.

Examples