How can I perform a bitwise right shift operation in Excel?

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A bitwise right shift operation in Excel is a mathematical function that allows you to shift the binary representation of a number to the right by a specified number of bits. This operation can be performed by using the "RIGHTSHIFT" function, which takes two arguments: the number to be shifted and the number of bits to shift by. The result of this operation will be a new number with the binary representation shifted to the right, effectively dividing the original number by 2 for each bit shift. This operation is commonly used in data analysis and can help in manipulating and analyzing binary data in Excel.

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

Description

Returns a number shifted right by the specified number of bits.

Syntax

BITRSHIFT(number, shift_amount)

The BITRSHIFT function syntax has the following arguments.

Number Required. Must be an integer greater than or equal to 0.

Shift_amount Required. Must be an integer.

Remarks

Shifting a number right is equivalent to removing digits from the rightmost side of the binary representation of the number. For example, a 2-bit shift to the right on the decimal value 13 converts its binary value (1101) to 11, or 3 in decimal.

If either argument is outside its constraints, BITRSHIFT returns the #NUM! error value.

If Number is greater than (2^48)-1, BITRSHIFT returns the #NUM! error value.

If the absolute value of Shift_amount is greater than 53, BITRSHIFT returns the #NUM! error value.

If either argument is a non-numeric value, BITRSHIFT returns the #VALUE! error value.

A negative number used as the Shift_amount argument shifts the number of bits to the left.

A negative number used as the Shift_amount argument returns the same result as a positive Shift_amount argument for the BITLSHIFT function.