How can I convert a hexadecimal number to an octal number in Google Sheets?

Authored by

stats writer

June 29, 2024

This question refers to the process of converting a hexadecimal number, which is a number system with base 16, to an octal number, which is a number system with base 8, in Google Sheets. This conversion can be achieved by using certain formulas and functions in Google Sheets. It involves breaking down the hexadecimal number into its corresponding binary digits, and then grouping them to form octal digits. The resulting octal number will have a different numerical value, but will represent the same numerical value as the original hexadecimal number.

HEX2OCT

The HEX2OCT function converts a signed hexadecimal number to signed octal format.

Sample Usage

`HEX2OCT("f3",8)`

`HEX2OCT(A2)`

Syntax

`HEX2OCT(signed_hexadecimal_number, )`

`signed_hexadecimal_number` - The signed 40-bit hexadecimal value to be converted to signed octal, provided as a string.

The most significant bit of `signed_hexadecimal_number` is the sign bit; that is, negative numbers are represented in two's complement format.

For this function, this value has a maximum of 1FFFFFFF if positive, and a minimum of FFE0000000 if negative.

If `signed_hexadecimal_number` is provided as a valid hexadecimal number, it will automatically be converted to the appropriate string input. For example, `HEX2OCT(199)` and `HEX2OCT("199")` yield the same result: `631`.

`significant_digits` - The number of significant digits to ensure in the result.

If this is greater than the number of significant digits in the result, the result is left-padded with zeros until the total number of digits reaches `significant_digits`.

This value is ignored if the most significant bit of `signed_hexadecimal_number` is `1`; that is, if the expressed `signed_hexadecimal_number` is greater than or equal to 8000000000.

Notes

As with any hexadecimal value, only the digits `0-9` and the letters `A-F` are valid. Digits other than these will cause `HEX2OCT` to return a `#NUM!` error.

Hexadecimal digits are not case-sensitive; `a-f` and `A-F` are equivalent.

If the number of digits required is greater than the specified `significant_digits`, the `#NUM!` error is returned.

Ensure that any calculations using the result of HEX2OCT take into account that it is in octal. Results will be silently converted by Google Sheets; thus if cell `A2` contains `111`, the octal equivalent of hexadecimal `49`, and `B2` contains a formula such as `=A2+9`, the result will be `120`, which is incorrect in octal calculation.

See Also

`OCT2HEX`: The OCT2HEX function converts a signed octal number to signed hexadecimal format.

`OCT2DEC`: The OCT2DEC function converts a signed octal number to decimal format.

`OCT2BIN`: The OCT2BIN function converts a signed octal number to signed binary format.

`HEX2DEC`: The HEX2DEC function converts a signed hexadecimal number to decimal format.

`HEX2BIN`: The HEX2BIN function converts a signed hexadecimal number to signed binary format.

`DEC2OCT`: The DEC2OCT function converts a decimal number to signed octal format.

`DEC2HEX`: The DEC2HEX function converts a decimal number to signed hexadecimal format.

`DEC2BIN`: The DEC2BIN function converts a decimal number to signed binary format.

`BIN2OCT`: The BIN2OCT function converts a signed binary number to signed octal format.

`BIN2HEX`: The BIN2HEX function converts a signed binary number to signed hexadecimal format.

`BIN2DEC`: The BIN2DEC function converts a signed binary number to decimal format.

Examples

Converts a hexadecimal number to its octal value.