# How do I convert a hexadecimal value into binary in Google Sheets?

Authored by

**stats writer**

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To convert a hexadecimal value into binary in Google Sheets, follow these steps:
1. In a cell, enter the hexadecimal value you want to convert.
2. In another cell, use the formula "=HEX2BIN(cell reference)" where "cell reference" is the cell containing the hexadecimal value.
3. The result will be displayed in binary format in the cell where the formula was entered.
4. You can also use the "DEC2BIN" function to convert the hexadecimal value to binary, by first converting it to decimal using the "HEX2DEC" function.
5. Repeat the process for other hexadecimal values as needed.
This method allows for quick and accurate conversion of hexadecimal values into binary in Google Sheets.

## HEX2BIN

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

### Sample Usage

```
HEX2BIN("f3",8)
```

```
HEX2BIN(A2)
```

### Syntax

```
HEX2BIN(signed_hexadecimal_number, )
```

`signed_hexadecimal_number` - The signed 40-bit hexadecimal value to be converted to signed binary, 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 1FF if positive, and a minimum of FFFFFFFE00 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, `HEX2BIN(199)` and `HEX2BIN("199")` yield the same result: `110011001`.

`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 `HEX2BIN` 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 HEX2BIN take into account that it is in binary. Results will be silently converted by Google Sheets; thus if cell `A2` contains `11111`, the binary equivalent of hexadecimal `1F`, and `B2` contains a formula such as `=A2+9`, the result will be `11120`, which is incorrect in binary 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.

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

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