

# Binary Math

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digital electronics

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## Decimal Number Range

The range of decimal numbers that can be represented in binary is dependent on whether it's signed or unsigned. The range of decimal numbers for unsigned binary is from 0 to  $2^n - 1$ . For signed binary, it would be from  $-(-2^{n-1} + 1)$  to  $(-2^{n-1} + 1)$ .

- Using 2's complement, an additional Negative value can be represented with any given number of bits.