



Revision Guides

Exponents Rules

Part - 5



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Introduction

When we start working with the Exponents... and we need to perform operations with exponents, we need to follow some rules in order to simplify these mathematical expression.

The laws of exponents are more just "tricks" or short cuts that help us work with exponents.

In this tutorial we are looking at

Rule - 6

Negative Exponent Rule

Negative Exponent Rule

This rule says that negative exponents in the numerator get moved to the denominator and become positive exponents.

Negative exponents in the denominator get moved to the numerator and become positive exponents. Only move the negative exponents.

A negative exponent means how many times to divide by the number.

$$b^{-n} = \frac{1}{b^n} \quad \text{or} \quad \frac{1}{b^{-n}} = b^n$$

Example

In this example -

$$2^{-3}$$

The base 2 has a negative exponent of -3

This can be fixed by moving it to the denominator and switching the sign of the exponent to positive using the negative rule of exponent.

$$2^{-3} = 1/2^3 = 1/(2 \times 2 \times 2) = 1/8 = 0.125$$

This was easy, isn't it...

Tips

So, with negative exponents,
remember that you perform the
opposite or inverse of multiplication,
which is...

Division

**(because division is the inverse
operation of multiplication)**

**Rewrite the Value with Negative
Exponent as a Fraction
Trash the Negative Sign and Move
the Value to the Denominator
At last, the final step is to simplify
rewriting.**



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