


Logarithms

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In mathematics, a **logarithm** is the **inverse operation of exponentiation**. It is defined as the power to which the base number must be raised to get the given number.

Logarithms serve as mathematical tools that help simplify complex calculations involving exponential relationships.



You invest £1,000 in a savings account where money doubles every 4 years.

How many years will it take for your investment to grow to £16,000?

< || > 1 / 3

If you know that $b^x = y$ (where b is the base, x is the exponent, and y is the result), it means that you have to raise "**b**" to the power "**x**" to obtain the result "**y**", then by using logarithm we can say that the **log of "y" to the base "b"** is "**x**".

This can be written as: $\log_b(y) = x$. And it is read as **logarithm of "y" to the base "b"**.

- If $5^1 = 5$ then, $\log_5(5) = 1$

Also, logarithm of 1 in any base is always 0 as $a^0 = 1$ or $\log_a 1 = 0$ (for $a > 0$).

Note : If the number is same as the base then the its log value will always be equal to one.

Logarithm For Beginners

This section introduces the basics of logarithms, their rules, properties, formulas, and how to use log and antilog tables.

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