Definition of function and glossary

**Logarithm [1]:**

In mathematics, the logarithm is the ***inverse function*** [2] to ***exponentiation*** [3]**.** That means the logarithm of a given number *x* is the [exponent](https://en.wikipedia.org/wiki/Exponent) to which another fixed number, the ***base*** [4] *b*, must be raised, to produce that number *x*. In the simplest case, the logarithm counts the number of occurrences of the same factor in repeated multiplication

The logarithm of *x* to *base* *b* is denoted as log*b*(*x*), for any two positive ***real numbers*** [5] *b* and *x*, where *b* is not equal to 1, is always a unique real number *y*.

**Glossary**

**Inverse function:**

a function that "reverses" another function: if the function *f* applied to an input *x* gives a result of *y*, then applying its inverse function *g* to *y* gives the result *x*, i.e., *g*(*y*) = *x* if and only if *f*(*x*) = *y*.[[](https://en.wikipedia.org/wiki/Inverse_function#cite_note-Keisler-2)

**Exponentiation:**

a mathematical operation, written as bn, involving two numbers, the base b and the exponent or power n, and pronounced as "b raised to the power of n". When n is a positive integer, exponentiation corresponds to repeated multiplication of the base: that is, bn is the product of multiplying n bases.

**Base:**

the **base** is the number *b* in an expression of the form *bn*.

**Real numbers:**

Real numbers can be defined as the union of both the rational and irrational numbers. They can be both positive or negative and are denoted by the symbol “R”. All the natural numbers, decimals and fractions come under this category.

**Figure [1]:**

Chart

Description automatically generated

**Reference**

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