

# 0.16666 repeating as a fraction

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## factorial - Why does $0! = 1$ ? - Mathematics Stack Exchange

Why does  $0! = 1$ ? All I know of factorial is that  $x!$  is equal to the product of all the numbers that come before it. The product of 0 and anything is 0, and seems like it would be reasonable to assume that  $0! = 0$ . I'm perplexed as to why I have to account for this condition in my factorial function (Trying to learn Haskell ...)

## Is 0 a natural number? - Mathematics Stack Exchange

Is there a consensus in the mathematical community, or some accepted authority, to determine whether zero should be classified as a natural number? It seems as though formerly 0 was considered i...

## complex analysis - What is $0^i$ ? - Mathematics Stack Exchange

$0^i = 0$  is a good choice, and maybe the only choice that makes concrete sense, since it follows the convention  $0^x = 0$  for  $x > 0$ . On the other hand,  $0^{-1} = 0^{-1} = 0$  is clearly false (well, almost —see the discussion on goblin's answer), and  $0^0 = 1$  is questionable, so this convention could be unwise when  $x$  is not a positive real.

## algebra precalculus - Zero to the zero power - is $0^0=1$ ...

Notice that  $0^0$  is a discontinuity of the function  $f(x, y) = x^y$ , because no matter what number you assign to  $0^0$ , you can't make  $f(x, y)$  continuous at  $(0, 0)$ , since the limit along the line  $x = 0$  is 0, and the limit along the line  $y = 0$  is 1.

## What exactly is a 0-form? - Mathematics Stack Exchange

A 0-form on a vector space is just a scalar. A 0-form on a manifold is a function (i.e. it assigns a scalar to each tangent space of the manifold).

## I have learned that $1/0$ is infinity, why isn't it minus infinity?

The other comments are correct:  $1/0$  is undefined. Similarly, the limit of  $1/x$  as  $x$  approaches 0 is also undefined. However, if you take the limit of  $1/x$  as  $x$  approaches zero from the left or from the right, you get negative and positive infinity respectively.

## Why does 0.00 have zero significant figures and why throw

**out the ...**

A value of "0" doesn't tell the reader that we actually do know that the value is  $< 0.1$ . Would we not want to report it as 0.00? And if so, why wouldn't we also say that it has 2 significant figures? In other words, saying something has zero significant figures seems to throw out valuable information. What is the downside of handling 0 as an ...

## **Is zero a prime number? - Mathematics Stack Exchange**

Zero is even, since  $0 = 2 \cdot 0$ , and  $0$  is an integer. If we use "number" in essentially any of the usual senses (integer, real number, complex number), yes, zero is a number.

## **What is the value of $i^0$ ? - Mathematics Stack Exchange**

5 We have  $x^0 := 1$  for every complex number  $x$ . (Notice that this is the only convention which fits into the rules of arithmetic, and there is no need to exclude  $x = 0$ . Think about the binomial theorem, for instance.) By the way, your exercise  $\sum_{n=0}^{1000} x^n$  can be solved with the usual formula for geometric series.

## **definition - Why is $x^0 = 1$ except when $x = 0$ ? - Mathematics Stack ...**

For example,  $0^x = 0$  and  $x^0 = 1$  for all positive  $x$ , and  $0^0$  can't be consistent with both of these. Another way to see that  $0^0$  can't have a reasonable definition is to look at the graph of  $f(x, y) = xy$  which is discontinuous around  $(0, 0)$ . No chosen value for  $0^0$  will avoid this discontinuity.