

0 dark thirty meaning

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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...

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 ...

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.

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 $0^0 = 0$ is questionable, so this convention could be unwise when x is not a positive real.

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

The argument seems to hinge on whether one is to define $0^0=1$ and economize several definitions and theorems from algebra, combinatorics, and analysis, at the expense of one caveat for a single

function, OR to leave 0^0 undefined, have several caveats so as to preserve the continuity on the domain of definition of a single function, namely x^y .

Justifying why $0/0$ is indeterminate and $1/0$ is undefined

$0 \cdot 0 = x \cdot 0 \cdot 0 = x \cdot 0x = 0 \cdot 0 \cdot x = 0 \cdot x \cdot x$ can be any value, therefore $0 \cdot 0 \cdot 0 \cdot 0$ can be any value, and is indeterminate. $1 \cdot 0 = x \cdot 1 \cdot 0 = x \cdot 0x = 1 \cdot 0 \cdot x = 1$ There is no such $x \cdot x$ that satisfies the above, therefore $1 \cdot 0 \cdot 1 \cdot 0$ is undefined. Is this a reasonable or naive thought process? It seems too simple to be true.

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

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

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

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

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

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