

Re: This Month's Thought on Fermat's Last Theorem: 1

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From: Randy Poe (*poespam-trap_at_yahoo.com*)

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Keckman <keckman@welho.com> wrote in message news:<opsfbwg5e03uk9lu@cs81133.pp.htv.fi>...

> *Take any 6 natural numbers you want and put them to set.*

> *What must be the biggest natural number in that set?*

There is no limit on what the biggest natural number in that set must be, since you let me pick any 6.

If you choose $\{n_1, n_2, n_3, n_4, n_5, n_6\}$, I can always find a different set $\{2*n_1, 2*n_2, 2*n_3, 2*n_4, 2*n_5, 2*n_6\}$ which has a larger maximal element.

> *Naturals are not like queue that's items goes smaller and smaller. "They*

> *all takes us much place".*

>

> $n+1 - n = 1$

>

> *If that's queue's length is supposed to be oo then there is item oo.*

OK, I sort of see what you're trying to say. The problem is that there is a language barrier both with your English (which I admire you for writing in) and your mathematics (which is frustrating both of us). It's hard to tell sometimes whether it is the language or the mathematics you are confusing.

Anyway, this statement:

> *If that's queue's length is supposed to be oo then there is item oo.*

is simply wrong. You keep saying it, but it's not true.

That's what you're trying to PROVE, and you "prove" it by saying it over and over.

You reason thus:

If I have a list $\{1, \dots, 100\}$ of length 100, the maximal element is 100. I've got 100 different natural numbers,

the largest must be at least 100.

If I have a list $\{1, \dots, n\}$ of length n , the maximal element is n . If I have n different natural numbers, the largest must be at least n .

If I have a list $\{1, \dots\}$ of "length ∞ ", the maximal element is ∞ . If I have ∞ different natural numbers, the largest must be at least ∞ .

That third does not follow "by induction" from the first two. The problem is that the list of all natural number, $\{1, \dots\}$ doesn't have a maximal element. It is true that if there was one, M with the property that M was greater than or equal to any natural number, then M would have to be infinite.

But there isn't such an M in the natural numbers.

There is no requirement that all sets have to have a largest element. That's what's throwing you. You think " \mathbb{N} is a set, it has a largest element, that element must be ∞ , so ∞ is in \mathbb{N} ." The second phrase "it has a largest element" is just not true. No such axiom.

– Randy