Re: infinity

Source: http://sci.tech−archive.net/Archive/sci.math/2005−09/msg01256.html

- *From*: Tony Orlow (aeo6) <aeo6@xxxxxxxxxxx>
- *Date*: Tue, 6 Sep 2005 13:37:09 −0400

William Hughes said:
>
> Tony Orlow (aeo6) wrote:
> > William Hughes said:
> > >
> > > stephen@xxxxxxxxxx wrote:
> > > > William Hughes <wpihughes@xxxxxxxxxxx> wrote:
> > > > > Tony Orlow (aeo6) wrote:
> > > > >> No, it's really not. This problem is couched as an infinity problem. The
> > > > >> infinite set of natural numbers requires infinite values. Cantorian thought
> > > > >> purports to talk about infinity, but then limits itself to finite numbers so as
> > > > >> to avoid the topic. I said IF you limit yourself to finite numbers, THEN you
> > > > >> could have an empty vase at noon, although this answer still makes no sense
> > > > >> given the constantly increasing sum. This is one of the reasons NOT to limit
> > > > >> the naturals to finite values. There is no well−defined size of this set,
> > > > >> despite the fact that it must be finite, logically.
> > > > >
> > > > > I assumed, wrongly, that you accepted the existence of the
> > > > > finite integers. Your contention that "it [the size of this
> > > > > set] must be finite, logically", is one of your strangest and
> > > > > silliest. Why can't there be an infinite set of finite things?
> > > > > Does the fact that we have an infinite number of ping pong
> > > > > balls mean some of them must be of infinite size?. Yes, assuming
> > > > > that there are a finite number of finite integers leads to a
> > > > > contradiction, as there are clearly an infinite number of them.
> > > > >
> > > > Tony refuses to precisely define what he means by 'infinite'
> > > > or 'finite'. Apparently the set of finite integers is finite,
> > > > or perhaps it is undefined. I think Tony's math allows a set
> > > > to be neither finite or infinite.
> > > >
> > > > Clearly the number of finite integers cannot be a finite
> > > > integer. Let F be the number of finite integers.
> > > > Tony agrees that if F is a finite integer, then F+1 is
> > > > a finite integer. That means that the set {1, 2, 3 ..... F, F+1}
> > > > contains F+1 finite integers, which contradicts the claim
> > > > that there were F finite integers.
> > > >
> > >

> > > This uses the fact that a finite set must have a largest element.
> > > TO (at least implicitely) does not accept this. According
> > > to TO
> > >
> > > −the set of finite integers contains a finite
> > > number of elements
> > >
> > > −there is no largest finite integer
> > >
> > > TO appears bothered by this contradiction, his conclusion is that
> > > the set of finite integers doesn't exist!
> > >
> > > > Perhaps in Tonymatics a set can still be finite even
> > > > if the number of the elements in the set is not finite.
> > > >
> > >
> > > Consistency is not TO's strong suit.
> > >
> > > −William Hughes
> > >
> > >
> > The only contradiction arises from your obsession with a last element, and
> > conflation of it with finiteness for a set. I do not accept that a last element
> > necessarily indicates a finite set, therefore I see no contradiction between
> > the set of finite naturals being finite and not having a last element.
>
> As stated above I realize you believe that there are only a finite
> number of finite integers, and there is no largest finite integer.
> You avoid an explicit contradiction only by refusing to define what
> you mean by infinite. When I said that "TO appears bothered by this
> contradiction" I was refering to your statment "There is no
> well−defined size of this set [the finite integers]
> despite the fact that it must be finite, logically."
>
> −William Hughes
>
>
Why should a poorly defined set size necessarily be infinite? What is the contradiction between saying the size is not well defined, although it is known to be finite? The number of printed words on Earth is also known to be finite, though not a well defined number, and without any upper bound.

When I say a number is infinite, one definition might be to say that counting to it, using a constant finite unit of time per iteration, would take forever. I am not sure how to defined it to your satisfaction, but I think we all know what we are talking about. A finite number is one we could count to, and an infinite number is greater than any finite number. I think we agree that if x and y are finite, then x+y, x*y, x^y are all finite. So, I am not sure what part of my arguments you are missing.
−−
Smiles,

Tony
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- ***Follow−Ups***:
  - ♦ ***Re: infinity***
    - ◊ *From:* William Hughes
  - ♦ ***Re: infinity***
    - ◊ *From:* Virgil

- ***References***:
  - ♦ ***Re: infinity***
    - ◊ *From:* William Hughes

- Prev by Date: ***Re: infinity***
- Next by Date: ***Re: Questions about Cartesian product***
- Previous by thread: ***Re: infinity***
- Next by thread: ***Re: infinity***
- Index(es):
  - ♦ ***Date***
  - ♦ ***Thread***