

Re: Inconsistency of the usual axioms of set theory

Source: <http://sci.tech-archive.net/Archive/sci.math/2009-03/msg02544.html>

- *From:* lwalke3@xxxxxxxxx
 - *Date:* Thu, 19 Mar 2009 22:39:58 -0700 (PDT)
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On Feb 22, 7:55 pm, Tim Little <t...@xxxxxxxxxxxxxxxxxxxx> wrote:

On 2009-02-22, amy666 <tommy1...@xxxxxxxxxxxx> wrote:

 davids definition is not wrong. but it leads to N.
 so im not "babbling".

Can you prove from ZF without the axiom of infinity, that "there exists a Dedekind-infinite set" implies the existence of N?
Or are you just babbling?

OK, I was away from sci.math back in late February, thus I haven't keep up with this thread.

In another thread, Aatu proved that in the theory ZF-Infinity, one can prove that "there exists an infinite set" implies "omega exists." MoeBlee confirmed the correctness of the proof, which depends on the axioms of Powerset and Replacement Schema.

Then I pointed out that even with Aatu's proof, someone would eventually question whether the existence of any infinite set implies the existence of omega. And sure enough, this is exactly what Little has done.

Therefore tommy1729 was not babbling. Aatu has proved in ZF-Infinity that if an infinite set exists --- and we don't even need it to be a Dedekind infinite set as Ullrich has given, but even under the weaker assumption that a Tarski infinite set exists --- then one can prove that omega exists.

I know that the OP, Hosseiny, was attempting to prove that ZFC is inconsistent. Since Hosseiny's attempted proof centered around the Axiom of Infinity, it might be accurate to call him a finitist. And many finitists are often considered to be "cranks," especially if they try

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to prove that ZFC is inconsistent.

Recently I've been part of a heated debate with Little about what exactly makes a "crank," what makes a "standard analyst" (or set theorist), and so on. So I can't be sure whether Little would consider either the finitist Hosseiny or the mereologist tommy1729 to be so-called "cranks" at all.

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