

Re: Cantor's circular "proof" that evens = integers

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- *From:* george <greeneg@xxxxxxxxxxx>
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On May 24, 9:50 am, Aatu Koskensilta <aatu.koskensi...@xxxxxxxxxxx> wrote:

It is also important to note that that a consistent theory might prove false statements is a mathematical observation no more problematic than, say, the existence of non-Archimedean fields or non-Abelian groups.

That is completely incoherent.

Nobody claims that non-Archimedean fields are NOT fields or that non-Abelian groups are NOT groups.

But non-standard models of PA really do have things in them that are NOT natural numbers.

"that a consistent theory might prove false statements"
SIMPLY NEVER HAPPENS.

YOU cannot even make sense of it.

Those of US who make sense of it know that making sense of it REQUIRES PRIVILEGING an interpretation in which an axiom IS FALSE, which is COMPLETELY perverse: THE WHOLE PURPOSE of defining axioms is TO FOCUS attention on interpretations where the axioms ARE TRUE! Every *model* is by definition a model OF some AXIOMS!

In order to EVEN ASCRIBE a truth-value to anything, YOU MUST RETREAT *from* the theory to SOME PROPER subset of its interpretations. Things that are proved by the theory are true, and things that are disproved by it are false, IN ALL the relevant interpretations! So NOTHING EVER "proves a false theorem" and in the case of things that are proved or disproved, they ARE MORE than merely true and MORE than merely false: they are MODALLY, NECESSARILY true or false, IF YOU TAKE YOUR AXIOMS *as* AXIOMS*!!

Which, of course, you have NO CHOICE BUT to do ---
"axioms ARE axioms" IS analytic, for crying out loud.

AK is about to get very abusive regarding what the community

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does, and I am about to get equally contemptuous reactively
about how the community could stand to do a FEW things
DIFFERENTLY.