

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

Source: <http://sci.tech-archive.net/Archive/sci.logic/2007-05/msg00166.html>

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 - *Date:* Tue, 08 May 2007 10:46:48 +0200
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On 8 May 2007 01:11:57 -0700, "R. Srinivasan" <sradhkr@xxxxxxxxxx> wrote:

Classically the position you take may not be tenable. Existence of infinite sets will have to be "prior" to axioms. I doubt if your colleagues in this NG will agree with your stand.

Of course, most of us will agree.*) Claiming that "existence of infinite sets will have to be 'prior' to axioms" seems to embrace a "realistic" (→mathematical Platonism) point of view, imho. While George formulated a "formalistic" (or "fictionalistic") position. This means, (from this point of view) we can justly claim that there is an empty set in ZFC BECAUSE we can derive the statement

$\exists x \forall y (y \in x \rightarrow \text{false})$

in this theory, but NOT because there "really" is an empty set.

On the other hand, there ARE Platonists out there, especially concerning set theory. (Famous example: Gödel.)

»On foundations we believe in the reality of mathematics, but of course when philosophers attack us with their paradoxes we rush to hide behind formalism and say "Mathematics is just a combination of meaningless symbols," and then we bring out Chapters 1 and 2 on set theory. Finally we are left in peace to go back to our mathematics and do it as we have always done, with the feeling each mathematician has that he is working with something real. This sensation is probably an illusion, but is very convenient. That is Bourbaki's attitude toward foundations.«

(Jean Dieudonné)

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»The working mathematician is a Platonist on weekdays, a formalist on weekends. On weekdays, when doing mathematics, he's a Platonist, convinced he's dealing with an objective reality whose properties he's trying to determine. On weekends, if challenged to give