

Re: Cantor Confusion

Source: <http://sci.tech--archive.net/Archive/sci.math/2006-12/msg04693.html>

- *From:* Virgil <virgil@xxxxxxxxxxxx>
 - *Date:* Thu, 14 Dec 2006 16:51:47 -0700
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In article <1166093612.342256.123940@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>, mueckenh@xxxxxxxxxxxxxxxx wrote:

Virgil schrieb:

In article <457ece72@xxxxxxxxxxxxxxxxxxxxxxxx>, Tony Orlow <tony@xxxxxxxxxxxx> wrote:

Dik T. Winter wrote:

In article
<457d8cc0\$1@xxxxxxxxxxxxxxxxxxxxxxxx>
Tony Orlow
<tony@xxxxxxxxxxxx>
writes:
> Dik T. Winter wrote:
>> In article
<1165761763.908889.34550@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
>> Han.deBruijn@xxxxxxxxxxxx writes:
>> ...
>>> Let $P(a)$ be the probability that an
arbitrary natural is
>>> divisible
>>> by
>>> a fixed natural a . Then $P(a) = 1/a$.
Forbidden by set theory.
>>
>> No. Not specifically forbidden by set
theory. Forbidden because
>> there
>> are
>> no appropriate definitions for the words
you are using (they are
>> not
>> used
>> conforming to standard definitions, so

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you better supply
> > definitions).
> > In probability theory (as is commonly
use) you have to define how
> > you
> > *select* your arbitrary natural. You have
not done so, so
> > probability
> > theory does not have an answer.
>
> Why does that matter?

It does matter because if you do not properly
define your problem,
mathematics is not able to give an answer.

It's sufficiently defined if one assumes that there is a uniform
probability distribution.

From which assumption, added to the others, one can deduce that $0 = 1$,
and all sorts of peculiar things.

> This is the same thing as your stupid ball
and
> vase trick. Why do you need to label
anything, or know what you're
> choosing from the infinite set?

Because that is part of the problem setting.
Giving that setten will
allow mathematics to model the question
and give an answer.

That problem has a clear answer with or without the labels:
the sum
diverges as $f(n)=9n$. The labels are confounding, not
clarifying.

What is confounding to TO is clarifying to anyone with the wits to
understand it. The result depends on the labeling. Eliminating the
labeling makes the result impossible to determine.

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For any clear mind the result is completely independent of labelling.

WM mistranslates. What he means is
"For any blank mind the result is completely independent of labelling."