

Re: Cantor Confusion

Source: <http://sci.tech-archive.net/Archive/sci.math/2006-11/msg03074.html>

- *From:* Virgil <virgil@xxxxxxxxxxx>
 - *Date:* Fri, 10 Nov 2006 16:39:01 -0700
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In article <1163180489.172687.88040@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>, mueckenh@xxxxxxxxxxxxxxxxxxx wrote:

Virgil schrieb:

Conclusion: The diagonal is longer than every finite line.

To argue otherwise is to ignore the facts.

Which "facts" do you allude to? Do you mistake the arbitrary assumption of actual infinity for a "fact"?

I am assuming a function, f , from \mathbb{N} , the set of all finite naturals, to S the set of all finite strings (over some finite alphabet, A , of at least two characters).

The value of that function at any natural, n , designated by $f(n)$, is a string of length n . These strings are what WM calls lines.

I am also assuming a function $d:\mathbb{N} \rightarrow A$, called the diagonal of f , in which $d(n)$ is to be determined by the last character of $f(n)$ by some rule whose details are of no importance in what follows.

I declare that the characters of the diagonal when strung together form an endless string, which is in every reasonable sense, longer than any finite string by at least one character, and therefore longer than every $f(n)$.

In WM's terminology "The diagonal is longer than every finite line."

If I have the

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choice either to accept the axiom of infinity with the condition that a diagonal can be longer than every line, or to drop both notions, then I choose the second.

A stupid choice, but each person has the right to go to hell in his own way.

You have no balls at noon.

WM has no balls at all.

You have Tristram Shandy complete his diary.

Not quite. I have him complete every day's worth of his diary for which he has managed to live long enough to complete. If WM claims that there is some day for which the diary is not completed, he has but to name it and we can discuss his claim.

You have a diagonal longer than every line.

While it is, it is not because I made it so.

You can make two balls of one.

Nonsense. I have heard of a way of making two balls out of one though.

You have a countable model of an uncountable theory.

WM has unaccountable models of almost everything.

I am very proud that you call my position stupid.

Okay. Be as proud as you like, and I will help you all I can.

Regards, WM

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