

Re: Ultimate debunking of Cantor's Theory

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- *From:* Calvin <crice5@xxxxxxxxxxxxxxxx>
 - *Date:* Thu, 12 Jul 2007 21:56:45 -0700
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On Jul 13, 12:27 am, Proginoskes <CCHeck...@xxxxxxxx> wrote:

On Jul 12, 8:44 am, Calvin <cri...@xxxxxxxxxxxxxxxx> wrote:

A variation of that which I subjectively like is making it a list of binary expansions instead of decimal. Then it is only necessary to 'flip' the diagonal, changing all ones to zeros and all zeros to ones.

No, this doesn't work. In fact, it fails spectacularly:

a(1) = .011111...
a(2) = .011111...
a(3) = .011111...
...

Your "new" binary decimal turns out to be .100000..., which is equal to .01111...; so you don't get a new number after all!

I have no idea what you are talking about. Your a(1), a(2), and a(3) above do not suggest a hypothetical list of the binary representations of the real numbers between 0 and 1, which is what I was talking about.

I'll take a wild guess at what you mean. Maybe you are saying that there could be a hypothetical countable list of the reals between 0 and 1 such that for the nth element of the list (n>1), the binary expansion is .0 followed by all 1's out to the diagonal position, and whatever else beyond the diagonal position.

But you can't make the list that way, because many (infinitely many, actually) of the reals between 0 and 1 would be missing from such a list.

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Similarly you couldn't make a list of the rational numbers between 0 and 1 that way. It's absurd.

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