Re: Ultimate debunking of Cantor's Theory

Source: http://sci.tech−archive.net/Archive/sci.math/2007−07/msg01988.html

- *From*: Calvin <crice5@xxxxxxxxxxxxx>
- *Date*: Fri, 13 Jul 2007 08:20:35 −0700

On Jul 13, 10:48 am, "Peter Webb" wrote:

> I said this last time, I will say it again now.
> He is not arguing that you can construct a list
> of all Reals in base 2.

I was being sloppy in my desperation, when I suggested
earlier that he was arguing that.

> He was correcting somebody who said the Cantor
> diagonal proof was easy in base 2,

That would be me.

> which it isn't, which is interesting because base 2
> is the only base where the Cantor construction can't
> be used (in its simplest form).

Yes, that is interesting, and I'm not doubting you.
What I'm still doubting is the original poster's
contrived list.

> The problem is that if you just flip bits, you could
> end up with a number which is already on the list,

Fine, and I would like to see a demonstration of that,
not that I doubt it in principle.

> because (in the example given) the procedure
> creates 0.100.. when 0.0111.. is already on the list.

That's where you lose me. Yes, 0.100.. is the same
as 0.0111.. which is already on the *contrived* list.

> Now, you only need to show one example where
> the Cantor construction fails
> to produce a number not on the list, and you can
> no longer claim that the number produced by the
> Cantor construction is always a number not on the
> list. So it is possible it is already on the list.

Yes, I understand that, but I still want to understand
that any such example is valid.

> Its easy to get around this problem that (for example)
> 0.5 = 0.4999... in
> other base other than base 2, and if you have a look
> at the Cantor construction the problem doesn't exist
> in base 10 or any other base (except 2).
>
> The standard workaround in base 2 is to consider pairs
> of digits, which is equivalent to using base 4. Not
> that this is needed; if the Reals aren't equinumerous
> with the integers in base 10, then they aren't in any
> base.

I have no problem believing any of that, and again I
clearly understand that 0.0111... is the same as
0.111...

I wont ask you to repeat anything yet again. I'll just
meditate on what looks to me like an obviously bogus
example given by the original poster, which you defend.

I don't know whether the original poster is an idiot
or not, but you obviously are not, and you defend his
example, so I must be missing something. Let me just
think about it for a while, and if the light ever dawns
I will say so.

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