

Re: Ultimate debunking of Cantor's Theory

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- *From:* WM <mueckenh@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* Fri, 13 Jul 2007 10:14:40 -0700
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On 13 Jul., 18:08, "Peter Webb" <webbfam...@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

"Calvin" <cri...@xxxxxxxxxxxxxxxx> wrote in message

news:1184340486.718968.306970@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

On Jul 13, 11:20 am, Calvin <cri...@xxxxxxxxxxxxxxxx> wrote:

... again I
clearly understand that 0.0111... is the same as
0.111...

Another unfortunate typo.

0.0111... is the same as 0.1

As you have been very polite, and spent some time on this, I will give it another go.

When you do the Cantor trick in base 10, you can prove to yourself that it always produces a number not on the list. Even if you have 0.500.. somewhere on the list, you can be certain that you will never get the same number in a different form, such as 0.49999.. as a result of the construction.

If you could find a single example where the Cantor construction failed to produce a different number – if for example it generated 0.4999.. when 0.5 was on the list – then you can no longer claim that the Cantor construction ALWAYS produces a new number.

Such an example is easy to find. Consider the list
0.0

Re: Ultimate debunking of Cantor's Theory

0.1

0.11

0.111

....

and switch 0 to 1 on the diagonal. Then you have at the diagonal the number 0.111..., but only if this number (with one digit less) is also in the list.

Regards, WM

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