

Re: Cantor's diagonal proof wrong?

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From: Curt Welch (curt_at_kcwc.com)

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David C. Ullrich <ullrich@math.okstate.edu> wrote:

> On 21 Nov 2004 00:10:09 GMT, curt@kcwc.com (Curt Welch) wrote:

>

> > stephen@nomail.com wrote:

> > > Curt Welch <curt@kcwc.com> wrote:

> > > : But, I can specify one special mapping function that works like

> > > : this. Fill the first row with any combination of 1's and 0's you

> > > : like. Then, fill every following row, with a copy of the row above

> > > : it, with the diagonal digit inverted.

> > >

> > > So your list possibly looks like

> > >

> > > 00000000000000000000000000000000....

> > > 01000000000000000000000000000000....

> > > 01100000000000000000000000000000....

> > > 01110000000000000000000000000000....

> > > 01111000000000000000000000000000....

> > >

> > >

> > > : Now, what I can show about your diagonal value, is that every

> > > : diagonal you construct is in fact in the table, in row $N+1$.

> > >

> > > No, it is not. I am only going to construct a single diagonal value,

> > > which will be

> > > 1000000000.....

> > > which is obviously nowhere in your list.

> > >

> > > Once again you have shown you do not understand what you are talking

> > > about.

> >

> > I shake my head in disbelief that you would actually write that.

>

> Fine. But you're ignoring the simple proof he gave that what you

> say happens simply doesn't happen. (Which just by coincidence is

> exactly the same as the explanation I just gave before seeing

> his post.)

sci.math: Re: Cantor's diagonal proof wrong?

Yeah, it's hard to keep up with all the posts and not get behind in the comments. It's kinda like trying to have a conversation with 10 people at once. :)

The point of my "shake my head comment", is that his counter argument missed the point of what I was trying to show. I was arguing apples and he started to talk about oranges.

I was NOT trying to show a one to one mapping of the natural numbers to the reals, or that there was a one to one mapping from the natural numbers to all strings of 1s and 0s. I was only trying to demonstrate how (in my universe where everything is a procedure) that the diagonal argument is not a valid proof – that it proves nothing one way or the other about the mapping.

And both of you misunderstood what table I was talking about – but I'll clear that up in another post in a minute.

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