

## Re: Cantor's diagonal proof wrong?

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Curt Welch wrote:

>> *Could you please tell me then which integer corresponds to the real  
>> number 1/9 (or 0.11111111111111111... if you prefer)?*  
>  
>  
> *...111111*  
>  
> *Why is it ok to write 0.111... but not ...11111 ?*

Because the sum  $1/10 + 1/100 + 1/1000 + \dots$  converges, whereas the sum  $1 + 10 + 100 + \dots$  doesn't.

> *My point is that 1/9 is in fact an algorithm for generating a real value.*  
> *It is not the real value itself.*

Then you should define the meaning of "real value". Not that it really matters, of course. What Cantor did was to prove that no bijection exists between the set of all natural numbers and the set of real numbers. Now what you seem to be doing consists (or so it seems) in redefining the concept of real number (or "real value", as you call it) getting something different. But then your concept of "set of real numbers" will be different from Cantor's. So, when you state that there is a bijection between the set of all natural numbers and *your* set of real numbers, there is in fact no contradiction between you and Cantor, since you are talking about different things.

Best regards,

Jose Carlos Santos