

Re: Cantor and the binary tree

Source: <http://sci.tech-archive.net/Archive/sci.math/2005-05/msg04753.html>

- *From:* Tony Orlow (aeo6) <aeo6@xxxxxxxxxxxx>
 - *Date:* Wed, 25 May 2005 14:29:19 -0400
-

Virgil said:

> In article <1117019416.558035.49530@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>,
> mueckenh@xxxxxxxxxxxxxxxxxxxx wrote:
>
> A number
>> 0.333... is always equal to a rational with a denominator that is a
>> power of ten. It is simply impossible to assume that this number
>> becomes 1/3. Or is there any occult advantage of the decimal system
>> over the binary system?
>
> That "number" does not have to BECOME 1/3, it already is 1/3.
>
> If one regards 0.333... not as a number but only as a sequence of
> partial sums, it is true that none of those partial sums is exactly 1/3,
> but the mathematical standard for interpreting a repeating decimal, like
> 0.333..., is that it represents that NUMBER which is the limit of that
> sequence of partial sums. And that number, by every reasonable analysis,
> is exactly and precisely 1/3.
>
> WM must be off his meds again.
>

But, Virgil, how do you know that, when you can never get to infinity? Don't you have to perform all your partial sums? Isn't a limit something that never gets there? Can you just "jump" to infinity, and declare that infinite set of partial sums equal to some fraction? It almost sounds like you're coming to your senses! It's about time!

—
Smiles,

Tony
.

- *Follow-Ups:*
 - ◆ ***Re: Cantor and the binary tree***
 ◇ *From:* Dik T. Winter
 - ◆ ***Re: Cantor and the binary tree***
 ◇ *From:* Virgil

- **References:**

- ◆ **Cantor and the binary tree**
 - ◇ *From:* mueckenh
- ◆ **Re: Cantor and the binary tree**
 - ◇ *From:* Dik T. Winter
- ◆ **Re: Cantor and the binary tree**
 - ◇ *From:* mueckenh
- ◆ **Re: Cantor and the binary tree**
 - ◇ *From:* Virgil

- Prev by Date: **Re: Between a Ph. D. and a Professorship**
- Next by Date: **Re: Cantor and the binary tree**
- Previous by thread: **Re: Cantor and the binary tree**
- Next by thread: **Re: Cantor and the binary tree**
- Index(es):
 - ◆ **Date**
 - ◆ **Thread**