

Re: abundance of irrationals!)

Source: <http://sci.tech-archive.net/Archive/sci.math/2005-05/msg01896.html>

- *From:* Tony Orlow (aeo6) <aeo6@xxxxxxxxxxxx>
 - *Date:* Tue, 10 May 2005 17:14:31 -0400
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Russell said:

> aeo6 Tony Orlow wrote:

>> Russell said:

>>> aeo6 Tony Orlow wrote:

>>>> Russell said:

>>>>> aeo6 Tony Orlow wrote:

>>>>>>

>>>>>> [snip]

>>>>>>

>>>>>> Excuse me, but the nodes of an infinitely deep binary tree
> can

>>>>>> obviously be

>>>>>> enumerated in a linear manner, corresponding to binary

> integers

>>> and

>>>>> thus to the

>>>>>> naturals.

>>>>>>

>>>>>> Yes.

>>>>>>

>>>>>> If you want to complain that it would require infinite digits

> for

>>>>>> most values,

>>>>>>

>>>>>> Huh? What does that even mean? What values are you

>>>>>> talking about? And digits of what?

>>>>>> Duh. The digits of the binary number that represent each node on

> the

>>> tree,

>>>

>>> Ok; if that's what you mean, then each node on the tree

>>> is represented by a **finite** sequence of digits.

>> The tree has infinitely long branches, so no, you're wrong.

>

> Well, this is the essence of our disagreement, and if

> we can't get this basic thing cleared up then there's no

> point in my going further with the discussion.

Did you say it was an infinitely deep binary tree or not? What did that mean?

Is 2^{∞} finite? Come on.

Re: abundance of irrationals!)

>
> Now, I haven't been following this thread, so I don't
> know what your position is on the following question: Do
> you believe there is some natural number with infinitely
> many digits? If you don't, then there is some hope, but
> otherwise, i.e. if you do, I think I will bow out as there
> cannot be anything for me to add to the discussion that has
> not already been said.

You are new. I have proven that you cannot have an infinite set of natural numbers which are all finite, based on infinite series ($1+1+1+\dots=\infty$) and based on information science (S^L is the number of strings of length L made of S different symbols, one of which must be infinite for infinite sets of representations). It is patently impossible to squeeze an infinite number of numbers with a finite difference between the values of each pair of them, into a finite range of values. Therefore, if the set of naturals is infinite, then it must clearly contain infinite values, which must be infinite strings of digits, given the definition of the digital number system.

You probably don't have anything to add, if that's what you think is the case.

>
> [snip]
>
>

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Smiles,

Tony
.

• **References:**

- ◆ **Re: abundance of irrationals!**
◇ From: Randy Poe
- ◆ **Re: abundance of irrationals!**
◇ From: mueckenh
- ◆ **Re: abundance of irrationals!**
◇ From: Virgil
- ◆ **Re: abundance of irrationals!**
◇ From: mueckenh
- ◆ **Re: abundance of irrationals!**
◇ From: Randy Poe
- ◆ **Re: abundance of irrationals!**
◇ From: mueckenh
- ◆ **Re: abundance of irrationals!**
◇ From: Randy Poe
- ◆ **Re: abundance of irrationals!**
◇ From: aeo6
- ◆ **Re: abundance of irrationals!**
◇ From: Russell

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◆ **Re: abundance of irrationals!)**

◇ From: ae06

◆ **Re: abundance of irrationals!)**

◇ From: Russell

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◇ From: ae06

◆ **Re: abundance of irrationals!)**

◇ From: Russell

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