

# Re: Logarithm of transfinite numbers

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- *From:* Tony Orlow <[aeo6@xxxxxxxxxxxx](mailto:aeo6@xxxxxxxxxxxx)>
  - *Date:* Tue, 14 Mar 2006 15:45:04 -0500
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Virgil said:

In article <MPG.1e80bc50bd90201a98aad1@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>, Tony Orlow <[aeo6@xxxxxxxxxxxx](mailto:aeo6@xxxxxxxxxxxx)> wrote:

The  
 $2^{\aleph_0}$   
and  $\aleph_0$   
is finite. Is  
it  $\aleph_0$ ?

Yes.

Not if that makes  $2^{\aleph_0}$  strings.

No. You don't need ALL of the length  $\aleph_0$  strings to make the natural numbers. Just some of them.

Ahem! How many is "some"? (sigh) That's not very mathematically precise.

Actually, to make the naturals, you don't need any infinite strings.

That's because it's not an infinite set.  $N=S^L$  is only infinite if either S is infinite (it's 2) or L is infinite (it's finite for every n in N).

Is zero precise enough for you, TO?

Zero bits is sufficient to denote every element in a singleton set, period. That's because  $2^0=1$ .

Re: Logarithm of transfinite numbers

You just need that there is no finite bound on lengths.

Well, so maybe the set doesn't need to be infinite, but just to have no finite bound on its size. how is that different?

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Smiles,

Tony

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