

Re: Galileo's Paradox

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- *From:* Tony Orlow <tony@xxxxxxxxxxxxxx>
 - *Date:* Sun, 10 Dec 2006 09:00:26 -0500
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David Marcus wrote:

Tony Orlow wrote:

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Tony Orlow wrote:

Why do you have a problem with the mere suggestion of an infinite value?

I don't have a problem with infinite values. However, you have to do more than merely say "positive infinite n". Assuming your positive infinite things aren't the same as something that we already know about (in which case, you should just say so), you either need to give a construction of these positive infinite things or you need to specify their properties. You haven't done either. For example, how many of these things are there? How do they relate to each other? How do they interact with the natural numbers? Are the operations of addition and multiplication defined for them?

Well, I have been through much of that regarding such specific language approaches as the T-riffic digital numbers, but that's not necessary for this purpose. It suffices to say that, if a statement is proved true for all n greater than some finite k, that that also includes any postulated infinite values of n, since they are greater than any finite k. I don't need to construct these numbers. Consider them axiomatically declared.

Then list the axioms for them.

(sigh)

$\text{infinite}(x) \leftrightarrow \exists y \in \mathbb{R} \ x > y$

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