Re: Cantor Confusion

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- *From*: Tony Orlow <tony@xxxxxxxxxxxx>
- *Date*: Sun, 10 Dec 2006 08:57:32 −0500

David Marcus wrote:

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> > > > > Tony Orlow wrote:
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> > > > > > Now, sequences may be said to derive from ordered sets, but sets are said to be determined solely by membership, with order unimportant. So, the notion of a sequence derives really from an inductive definition such as Peano's, and not from the one primitive in set theory,

> > membership,
> > alone. The
> > notion of
> > order is not
> > captured by
> > "is an
> > element of".
> > Do you
> > disagree?
>
> Of course I don't agree. You
> seem to be saying that
> infinite sequences can't be
> handled in ZFC. Since ZFC
> has no trouble modeling the
> natural numbers and
> defining functions, it clearly
> has no trouble acting as a
> foundation for all of
> calculus and analysis.

> Is there not a single primitive in set theory,
> namely, e (element of)?

Sure. But that just says that there is only one relation that is built into the language of ZFC. We are perfectly free to define new stuff, just as we do in any math class or book.