Re: A simple question?

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- *From*: "MoeBlee" <jazzmobe@xxxxxxxxxxx>

- *Date*: 3 Nov 2006 12:54:16 −0800

Jules wrote:

> Actually, that quote
>
> > For example, the real numbers are not well
> > ordered, but there is a well−ordering of the real numbers
> > which is not
> > the standard ordering.
>
> came from my post. I meant that such an ordering exists, if one assumes the axiom of choice. I meant to use this simply as an example that a set need not be well ordered, even if a well−ordering of the set exists.

What does it mean for set not to be well ordered even though a well ordering of the set exists?

> A better example is probably the set Z of integers. Z is certainly not well−ordered (it has no minimal element),

The standard ordering is not a well ordering, but that does not entail that the set is not well ordered. Maybe this is just a difference in how we use these phrases, but I say a set is well ordered iff there exists a well ordering of the set. So the fact that the standard ordering is not a well ordering doesn't contradict that the set is nonetheless well ordered.

> but a
> well−ordering of Z can be explicitly described.

Okay.

> I still want to know

> what the "natural" ordering of P(w) is.

My impression is that what is being said in this thread is that there
is no such thing as "the natural ordering ot the power set of omega".

MoeBlee

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