

Re: are Real Numbers evil? The answer(?).

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- *From:* "Claudio Grondi" <claudio.grondi@xxxxxxxxxx>
 - *Date:* Sat, 4 Jun 2005 02:34:11 -0000
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> There is another possible approach that you might be interested in.

I have taken a look at <http://www.math.psu.edu/simpson/sosoa/chapter1.pdf> .
Even if it seems to be very close to what I am interested in,
it's not easy to read for me. So I need probably at least
more time until I can say how it fits to what I am looking for.

Claudio

<tchow@xxxxxxxxxxxxxxxx> schrieb im Newsbeitrag
[news:42a07210\\$0\\$573\\$b45e6eb0@xx](mailto:news:42a07210$0$573$b45e6eb0@xx)
> In article <3gab9rFatcpjU1@xxxxxxxxxxxxxxxx>,
> Claudio Grondi <claudio.grondi@xxxxxxxxxx> wrote:
> >I an finite model there is no place for $-\infty$ and $+\infty$ and limits. Just
> >any distance, any direction any angle can be given by one value
> >out of the finite values making the model limited to a set where each
> >element can be explicitly specified. No need for limit values.
>
> There is another possible approach that you might be interested in. It
does
> not address your concerns as directly as Fredkin's approach does, because
> some real numbers and limits are admitted. But the rough idea is that
only
> "computable" real numbers are allowed—those that can be described in a
> finite, concrete manner. I am referring to doing mathematics in the
system
> known as RCA_0. See <http://www.math.psu.edu/simpson/sosoa> and in
particular
> the "front matter and chapter one":
>
> <http://www.math.psu.edu/simpson/sosoa/chapter1.pdf>
>
> The advantage of this approach is that you can carry over a lot of
> standard mathematics unchanged, rather than having to reinvent everything
> from scratch. At the same time you eliminate many of the vague worries
> that many people have about all those intangible and seeming unphysical
> real numbers floating around.

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> Tim Chow tchow-at-alum-dot-mit-dot-edu

> The range of our projectiles---even ... the artillery---however great,
will

> never exceed four of those miles of which as many thousand separate us
from

> the center of the earth. ---Galileo, Dialogues Concerning Two New
Sciences

• **References:**

◆ **[Re: are Real Numbers evil? The answer\(?\)](#)**

◇ From: Claudio Grondi

◆ **[Re: are Real Numbers evil? The answer\(?\)](#)**

◇ From: Navin Kumar

◆ **[Re: are Real Numbers evil? The answer\(?\)](#)**

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◇ From: tchow

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