

Re: Contradiction-free mathematics (The new nonstandard analysis)

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> >A decimal is known by its digits. Therefore, it exists or is known or
> >well-defined if every
> >digit is known or computable. Being computable means there is an algorithm
> >or rule or
> >scheme for computing each digit or determining it uniquely from the basic
> >integers 0, 1, . . . , 9. Since computation is a finite process, the set of
> >such algorithms is finite.
>
> This is clearly false. For each positive integer n there is a
> completely explicit, concrete algorithm for producing the decimal
> expansion of the square root of n. Thus there are infinitely many
> ``decimals'' (which is your word for decimal expansions of real
> numbers) and infinitely many ``such algorithms.''
>
> Note that this does not depend on classical logic in any way. Both
> Bishop and Brouwer would agree that the set of algorithms which produce
> decimal expansions is infinite.

It is even false for the set of natural numbers, as there is an
algorithm for each natural and more than any finite number of naturals.

If you write down those rules you will find them finite.

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