

Re: abundance of irrationals!

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"Randy Poe" <poespanm-trap@yahoo.com> wrote in message

> >

> > > *1/9 is not on the list.*

> >

> > *Of course it is not. But it is not on the diagonal either.*

>

> *Actually, it is. 1/9 is a number which has a 1 in every*

> *position n, for n=1,2,3,...*

>

> *Now let's look at the diagonal: It has a 1 in every*

> *position n, for n=1,2,3,...*

>

> *Sounds a lot like 1/9, doesn't it?*

Yes, it does. But for every position n we have a line number with n+13 digits 1. In the competition of having most digits 1 the list numbers NEVER loose. In my construction they win by 13 : 0.

>

> *Now let's look at the elements of the list: The n-th*

> *element has 1's up to position (n+13), but a 0 in*

> *every position after that.*

There is a number with n digits 1 for every n.

>

> > *Are you willing to*

> > *say that the diagonal of a matrix has ore more elements than any line*

> > *or column?*

>

> *No, you just injected that nonsense.*

But you said that the diagonal is different from any number in a line. There we have all numbers with a finite sequence of digits 1. The only possibility for the diagonal to distinguish itself from all such numbers is to have infinitely many digits 1. Is infinitely many not more than any finite number?

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- >
- > *I'm saying that your attempt to construct the diagonal*
- > *as the limit of a sequence proves nothing,*

Why do you think the diagonal cannot be considered the limit of its segments?

- > *Try to follow. I'll show you the parallel logic:*
- >
- > *Every element in the sequence $\{1/n, n=1,2,3,\dots\}$*
- > *is nonzero. The limit of the sequence is 0. 0 is not*
- > *in the list.*

And the corresponding limit is not on the diagonal.

- >
- > *Every element in your sequence is different from 1/9.*
- > *The limit of the sequence is 1/9. 1/9 is not in your*
- > *list.*

And it is not on the diagonal.

Regards, WM