Re: .99999... still=/= 1

Source: http://sci.tech−archive.net/Archive/sci.math/2004−12/7899.html

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From: tinyurl.com/uh3t (*rem642b_at_Yahoo.Com*)
Date: 12/15/04

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Date: Tue, 14 Dec 2004 18:22:01 −0800
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> From: smart1234@aol.com (S. Enterprize Company)
> I am using a non−standard approach to something that seems to
> exist between the cracks of real numbers. Like for example,
> .999... < X < 1

But if you intend .999... to be a real number, where it's the only limit point of the *set* of partial sums, or it's the limit of the *sequence* of partial sums, or it's the intersection of the nested intervals generated by the sequence of digits, then that real number is exactly 1, which is not less than 1, it's equal to 1, and there's nothing between 1 and 1. If you intend .999... to be some *other* real number, you need to say exactly what real number you intend.

> The fact is there is no numbers between .999... and 1, but they are
> right next to each other.

That's utter nonsense. Either they are exactly the same number, or there are other numbers between them. There's no such thing as real numbers which are different but next to each other. Until you tell us what real number you intend by your use of the notation .999..., everything you say about that number is complete nonsense.

Do you prefer dedekind cuts, or cauchy sequences, or what, as the construction of real numbers from rationals?

> the more time you spend approaching 1, the closer you get to 1.

That refers to the individual partial sums in a series, or the individual items in a sequence. It has nothing to do with any single real number, such as you claim .999... represents but won't tell us which real number you intend.

> ... the cracks of space between real numbers

There is no such thing. You are talking total nonsense. Between any two real numbers there are as many additional real numbers as all the real numbers together. A simple arctangent in one direction, a simple tangent in the reverse direction, proves this 1−to−1 correspondence.