

Re: .99999... still \neq 1

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On 16 Dec 2004 01:38:18 GMT, smart1234@aol.com (S. Enterprize Company) wrote, in part:

>.999... only approaching 1, it doesn't equal 1.

It would seem that way.

But appearances can be deceiving.

It is certainly possible to use .999... as a symbol for a quantity that only approaches 1 as a limit. But that isn't its normal meaning.

Because if we did that, then .1111.... wouldn't equal 1/9.

Essentially, *_if_* .999... stands for a real number, then it stands for the real number 1. Because any real number that doesn't equal 1 differs from 1 by a **finite** amount.

The distinction between $x=1$ and x approaching 1 as a limit is an important one in mathematics, but numbers written in decimal form are not used to indicate this distinction; they are only used to indicate numbers.

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