

Re: Is continuum completely filled up?

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ooo wrote:

I am biginer in English and mathrmatics.
If real line is filled with points and each point is distinguished,then each point has difference from every other points.
Therefore real line has void.

Thanks for advance.

First, I would advise you to use something considerable in the place of nickname. "ooo" looks quite odd! Change it, please.

I tell you, when I started to read mathematics of the real line, such questions came into my mind; and I used that time to think about the possible meanings of "next number". Why there is no gaps in real line ruffled my mind. But as it has made the whole scenario clear, step by step, through myriads of misconceptions and corrections, I am sure that you also will understand what is meant by "gaps" and why completeness is contrary to gaps.

I advise you to nurse your questions in mind; and ask others, as you did, and if not satisfied with their answers, keep on reading....to realize what the real line looks like shall need years; many properties of it, topological, measure theoretical, set theoretical ...are there, without knowing which you can not possibly afford to a clear picture of the real line.

I recommend a book : Hobson's book, "The thory of functions of a real variable and the theory of Fourier's series". After you have had a priliminary understanding of the structure of \mathbb{R} , you should read this book.

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