

Re: Peano's space-filling curve

Source: <http://sci.tech-archive.net/Archive/sci.math/2004-06/1256.html>

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Date: 06/07/04

Date: Mon, 07 Jun 2004 18:52:38 +0100

John Morgan wrote:

>
>
> *I don't recall I said anything about "this fact" either*
> *way. Actually, I have only just registered the fact that*
> *there are bijections both ways due to being "told"*
> *previously that there was a surjection from $[1,0]$ to*
> *$[1,0]^2$. And before you say "yes that's true" I had*
> *initially assumed that the fact I was being offered a*
> *surjection implied that there was no bijection. Please, all*
> *of you, try to get your act together. This might help me*
> *arrange mine likewise.*

Here are the facts:

- (i) there is a bijection $f : [0,1] \rightarrow [0,1]^2$,
- (ii) there is a continuous surjection $g : [0,1] \rightarrow [0,1]^2$,
- (iii) there is no continuous bijection $h : [0,1] \rightarrow [0,1]^2$.

> *John*

Any relation to Piers?

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Robin Chapman, www.maths.ex.ac.uk/~rjc/rjc.html

"Lacan, Jacques, 79, 91-92; mistakes his penis for a square root, 88-9"

Francis Wheen, [_How Mumbo-Jumbo Conquered the World_](#)