

## Re: Peano's space-filling curve

**Source:** <http://sci.tech-archive.net/Archive/sci.fractals/2004-06/0107.html>

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**Date:** 06/10/04

Date: Thu, 10 Jun 2004 11:40:32 +0200

Michael Stemper <mstemper@siemens-emis.com> wrote in message  
news:200406091749.i59Hn1C42456@mickey.empros.com...

> *In article <2ie15fFmb6g6U3@uni-berlin.de>, John Morgan writes:*

>

> *Thanks for the kind words. One misunderstanding that I should correct, however, is that I \*am\* a layperson. I do software project management for a living.*

Aha. That explains why you were very sensitive to my predicament

> *Actually, Wikipedia already has an entry:*  
> <http://en.wikipedia.org/wiki/Cardinality>

I'll have a read and see how well I think they've done

> >> *In other words, it is impossible to find a function  $f:[0,1] \rightarrow [0,1]^2$  which is one-to-one, onto \*and\* continuous.*

> > *Is this true for all functions? If not, for what class of function(s) has it been proved?*

> *for any function at all, it's true*  
> *that the function doesn't have \*all\* of those properties.*

I never knew that, or if I did it hadn't registered. Is the corollary true? If a transformation of  $I \rightarrow I^2$  is discovered that is 1to1, onto and continuous then it cannot be called a function.

<snip>

The rest I have now got sorted in my mind, I think. Luckily there's no exam on the way – of my maths knowledge, that is ;-).

sci.fractals: Re: Peano's space-filling curve

Cheers

John