

Re: *** TRY THESE SCI.MATH *******

Source: <http://sci.tech-archive.net/Archive/sci.logic/2005-01/1695.html>

rupertmccallum_at_yahoo.com

Date: 01/20/05

Date: 19 Jan 2005 21:27:21 -0800

|—|erc wrote:

> *Take any reasonable interpretation of the terms you can to get an answer where possible.*

> *If there is ambiguity, state all possible interpretations and answer each.*

>

>

>

> *"A random real number will be on a computables list to an infinite number of digits" True / False / Other*

> _____

>

I'm assuming your probability space is $[0,1]$ with Lebesgue measure.

There is probability 0 that a random real from that space will be computable.

>

> *"All finite subsequences of a random real number will be on a computables list" True / False / Other*

> _____

>

True, every finite decimal is computable.

>

> *"All digits of a random real number are covered in all finite subsequences of that number" True / False / Other*

> _____

>

Don't really know what this means. It's true that the finite segments of a real number determine what that real number is.

>

> *"If you have the list of computables, a random real number can be on*

it to an infinite number

> *of digits, and yet not be on the list" True / False / Other*

> _____

>

A real number r can be such that for each natural number k, there is a member of the list of computables such that r agrees with it to k digits, yet r is not on the list.

>

> *How many digits of a random sequence have the prefix up to that digit*

> *occur on a member of any complete computable number list?*

>

> *Random Sequence =*

>

<593738.....>

> |<--- How many of these digits satisfy the question? --->|

>

Every finite segment of a real will appear on the list of computables.

> *UTM(row, col) mod 10*

> *1 <23424.....>*

> *2 <54434.....>*

> *3 <59373.....>*

> ...

>

> _____

>

> ** remember : how many digits (of the random sequence), not how many digits (fit on each row of UTM).*

>

> *Herc*

> --

> *Have you now or have you ever been a member of the antidisestablishmentarianism party?*