

Re: Randomness of digits within pi

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- *From:* jonas.thornvall@xxxxxxxxxxx
 - *Date:* Fri, 09 Nov 2007 04:00:31 -0800
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On 9 Nov, 12:53, "George Marsaglia" <g...@xxxxxxxxxxx> wrote:

<jonas.thornv...@xxxxxxxxxxx> wrote in message

news:1194606172.590463.231420@xx

On 9 Nov, 11:53, jankri...@xxxxxxxxxxx wrote:

On 9 Nov, 11:41, jonas.thornv...@xxxxxxxxxxx wrote:

When i was playing around at
"[http://zenwerx.com/pi.phplooking for
occurences of my personalnumber within PI](http://zenwerx.com/pi.phplooking_for_occurences_of_my_personalnumber_within_PI)
i noticed that 333333 and
especially 666666 do not seem to occur as
frequent as
[111111,222222,444444,555555,777777,888888,999999](http://zenwerx.com/pi.phplooking_for_occurences_of_my_personalnumber_within_PI)
or XXXXXX (without
testing all :)

Is this just a fluke result of to small sample
size at the page, could
anyone verify searching in the big file with a
program?

If that really the case that 333333 and
666666 is a lot less frequent
what is the mathematical reason?

Re: Randomness of digits within pi

J

If there are 4 million digits, that's a sample size that is far too small to say anything about the frequency of 111111 and the others.
Each of them should only turn up once in one million digits on average.

J K Haugland <http://home.no.net/zamunda>

Yes i thought the downloadable sample file was bigger but i can see it is same size now.
But what is known about the distribution of larger digits (numberstrings?) within pi, is it really random distributed?

So i try again is six digit numbers randomly distributed within pi, if not why?

J

The pdf article

interstat.statjournals.net/YEAR/2005/articles/0510005.pdf

describes results from a number of tests on the randomness of the digits of pi, as well as e, sqrt(2) and the decimal expansions of various rationals.

A related article,

interstat.statjournals.net/YEAR/2006/articles/0601001.pdf

refutes claims from Physicists at Purdue that the digits of pi are not as random as those from other sources.

George Marsaglia– Dölj citerad text –

– Visa citerad text –

Maybe but for sure it is an interesting fact that two strings of "777777" turns up in just a sample of 4 million and that "666666" only occur one time in 4 million digits.

Of course it does not say anything about the big picture, but i can see while people studying pi historical did find 7 to be a lucky number and 6 not that lucky.

J

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