

Re: Normally Distributed Random Number Generator from Excel

Source: <http://sci.tech-archive.net/Archive/sci.math/2008-03/msg03882.html>

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On Mar 27, 9:06 pm, "2.7182818284590..." <tangent1...@xxxxxxxxxx> wrote:

How do I create a normally distributed number with mean = 10, standard deviation = 3, and the tools that I have are:

1. =RANDBETWEEN(X, Y) – returns a uniformly-distributed number between X to Y
2. =NORMINV(Number; Mean; STDEV)
Number represents the probability value used to determine the inverse normal distribution.
Mean represents the mean value in the normal distribution.
STDEV represents the standard deviation of the normal distribution.
For example: =NORMDIST(70; 63; 5; 0) returns 0.03.

I would think it would be :=NORMINV(RANDBETWEEN(-2,2), 10, 3)

No! Probabilities must lie between 0 and 1, so "number" must also be between 0 and 1.

You should be warned that several reviews have indicated the dangers of using EXCEL for statistical computations: its algorithms are not always good, and it may not be reliable. It sometimes delivers wrong answers. It would be unwise to use the random number generator without thorough testing. Microsoft has made some attempts to improve the random number generator, but I don't think it comes up to standard yet. I do believe that Microsoft's assurances are somewhat overstated.

A lot depends on which version of EXCEL you are using. Some of the problems with the statistical packages have been improved in newer versions, while others have been, apparently, made worse. See, eg., <http://www.stat.uiowa.edu/~jcryer/JSMTalk2001.pdf>
<http://www.coventry.ac.uk/ec/~nhunt/pottel.pdf>

You can read the abstract of a paper on this topic at <http://portal.acm.org/citation.cfm?id=635309.635312>

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even if you don't have access to the full paper. Just the abstract alone is revealing. (I can send you the file of the full paper if you send me your e-mail address.)

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NOTE: This is only for my interests. I'm not a student!

My goal is to create a process-simulator using MS Excel.