
Subject: Re: RANDOMN function

Posted by [Craig Markwardt](#) on Thu, 14 Nov 2013 15:47:29 GMT

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On Thursday, November 14, 2013 10:15:54 AM UTC-5, fd_...@mail.com wrote:

>> You will get better statistics the larger the set:

...

>

> Well, I don't see what you mean to be honest.

According to probability theory, the *expectation* mean value is zero.

However, you are dealing with statistical theory as well, not just probability, because you are sampling a random variable. Do you expect flipping 1000 coins to always produce *exactly* 500 heads and 500 tails? No. There will be some variation.

The average of N random variables is also a random variable. You will get a different answer if you take an average of new random samples.

According to statistics theory, the *sample* mean value will tend to zero, but only as the number of samples becomes very large. The expected standard deviation of the mean value of N gaussians with unit variance is $1.0/\text{SQRT}(N)$.

Based on the value you reported, I'm going to guess you were averaging about 1000 gaussians, right?

Craig
