Subject: Re: RANDOMN function
Posted by Russell Ryan on Thu, 14 Nov 2013 15:12:55 GMT
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There are lies, damned lies, and statistics.

On Thursday, November 14, 2013 9:46:01 AM UTC-5, Mats Löfdahl wrote:
> Den torsdagen den 14:e november 2013 kl. 14:59:11 UTC+1 skrev fd_...@mail.com:
>
>> Hi
>
>>
>
>> I used the RANDOMN function to add Gaussian noise to my data like this:
>
>>
>
>> noise=RANDOMN(seed,N)
>
>>
>
>> When I print, the mean values of RANDOMN(seed,N) I didn't get zero but something around 0.0337187.
>
>>
>
>> I expect to get something very very close to zero since the RANDOMN function returns normally-distributed, floating-points with a mean of zero. Is my assumption wrong? It's correct that the median is not zero?
>
>
>
> You will get better statistics the larger the set:
>
>
>
> IDL> for e=1,9 do print,e,10d^e,mean(randomn(seed,10d^e))
>
> 1 10.000000 0.0489258
>
> 2 100.00000 0.0172675
>
> 3 1000.0000 -0.0336368
>
> 4 10000.000 -0.00799687

>
>   5   100000.00   0.00208867
>
>   6   1000000.0 -0.00101986
>
>   7   10000000. -0.000105310
>
>   8   1.0000000e+08 0.000104068
>
>   9   1.0000000e+09 2.46072e-05
