

Less likely to get half, more likely to get near half

“Near” in terms of percentages, not absolute differences.

<https://www.johndcook.com/blog/2016/09/12/less-likely-to-get-half-more-likely-to-get-near-half/>



Nassim Nicholas Taleb ✓
@nntaleb

...

In[]:=

Simply, the average converges to $\frac{1}{2}$, with a variance prop to $1/n^2$. But the exact probability of getting $\frac{1}{2}$ decreases, as the PDF of the binomial $\text{dist}[n,p], p=\frac{1}{2}$, n even decreases with n .

Out[]:=



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In[]:= **DiscretePlot**[2^{-n} **Binomial**[n , $1/2$], { n , 2, 20, 2}, **PlotRange** → All, **PlotStyle** → Red]

Out[]:=

