The Law of Large Numbers: Hints

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A Markovian Variable Use the bound to express what the cumulative distribution

$$F(x) \;=\; \int_0^x f(u)\,du$$

must look like for such a variable. Then differentiate that cumulative distribution in order to find the corresponding probability density function.

Coin-Flipping Chebyshev What is the variance of a single coin flip? How large can that number be, at the very most? After you've answered those questions, use Markov's inequality on the squared deviation from the mean.

Coin-Flipping Statistics Everything is a matter of solving the equation $1/4t\varepsilon^2 = \alpha$ for different variables.