

## Phys 129L Coin Toss Simulation

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In general, the coin toss simulation is divided into three parts: a starting function, a histogram plot, and a graph of the Gaussian distribution. Specifically, the function will simulate 100 coin tosses and return the number of heads thrown. Later, the histogram will display the result of calling the function 1000 times. Finally, the Gaussian distribution, with the same mean and standard deviation as the binomial distribution, will be shown on the plot (The Gaussian Normal Distribution formula is provided below).

$$G(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-(x-\mu)^2/2\sigma^2}$$

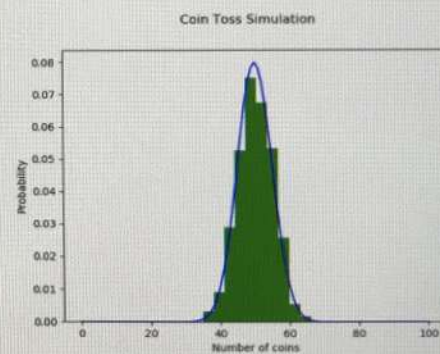


Figure 1: