Programming a random walk

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In the exercise:

http://gtribello.github.io/mathNET/gamblers-ruin-exercise.html

you learnt how to write a program to generate a simple random walk in one dimension with adsorbing boundary conditions. Now write a python notebook that allows you to perform a simple random walk in one dimension with adsorbing boundary conditions. By running the program in your python notebook multiple times calculate estimates for the following:

1. The probability that the walk finishes at $X = 0$ together with error bars at the 90 % confidence limit on this estimate.

2. The probability mass function for the number of steps in the walk prior to absorbtion.

Now replace the absorbing boundary condition at $X = 0$ with a reflecting boundary condition at $X = 0$. Calculate the probability mass function for the number of steps in the walk prior to absorbtion for this modified chain.