PHYS165lab02

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1. Random Walk of 1000 steps

Look at Random Walk.gif

地图的截图

描述已自动生成

These are 4 trajectories of random walk. At every step, there’re equal probabilities to go left ot right, as well as up or down.

1. Distribution of end points

手机屏幕截图

描述已自动生成These are distributions of 1000 different end points after 1000 steps random walk.

I guess the distribution of distance looks like a gaussian. The log(R) distribution looks like a gaussian too, so my guess is wrong.

The mean\_square\_distance changes each time but approximately, for 1000 random walks of 1000 steps, mean square distance is 2051.672 and for 4000 random walks of 1000 steps, mean square distance is 1982.902.