

1. The attachment shows the evidence of some results of the mean value of d , as d' , which seems equal to \sqrt{n} , where n is the # of steps. Then, we can obtain the equation, $d' = \sqrt{n}$, so $d = l * \sqrt{n}$, where l is the length of each step. In conclusion, $n = (d/l)^2$.
- 2.

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100 steps: 9.460961976153358 over 30 experiments
100 steps: 7.94368905290399 over 30 experiments
100 steps: 8.525146063346266 over 30 experiments
100 steps: 9.90641771381874 over 30 experiments
100 steps: 9.35937559978591 over 30 experiments
100 steps: 8.930453451185448 over 30 experiments
100 steps: 8.87213732623164 over 30 experiments
100 steps: 8.886123389830983 over 30 experiments
100 steps: 9.532915037015831 over 30 experiments
100 steps: 8.813939526033836 over 30 experiments
WangJimmy:hw1 JimmyWang$ java edu.neu.coe.info6205.randomwalk.RandomWalk 10000
10000 steps: 84.21381282793462 over 30 experiments
10000 steps: 87.88010258255595 over 30 experiments
10000 steps: 93.78211613830821 over 30 experiments
10000 steps: 84.37225116461549 over 30 experiments
10000 steps: 85.01217468662507 over 30 experiments
10000 steps: 87.68074371311073 over 30 experiments
10000 steps: 85.65674593805996 over 30 experiments
10000 steps: 90.9219661946044 over 30 experiments
10000 steps: 91.82744173055761 over 30 experiments
10000 steps: 91.31186334375897 over 30 experiments
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