

3D Random Walk

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1 Introduction

1.1 Random Number Generator

The random number generator implemented here is a simple Linear Congruential Generator(LCG), which is generally a recursive mapping within a certain integer domain. for a set of parameters (a,c,m):

$$x_{N+1} = (x_N * a + c) \mod m$$
$$\xi: \{1, 2, 3, \dots, m-1\} \rightarrow \{1, 2, 3, \dots, m-1\}$$

1.2 Random Walk

2 Code

2.1 Linear Congruential Generator

2.2 3D Random Walk

2.3 Pólya's Random Walk Constants

3 Results and Analysis

4 Conclusion