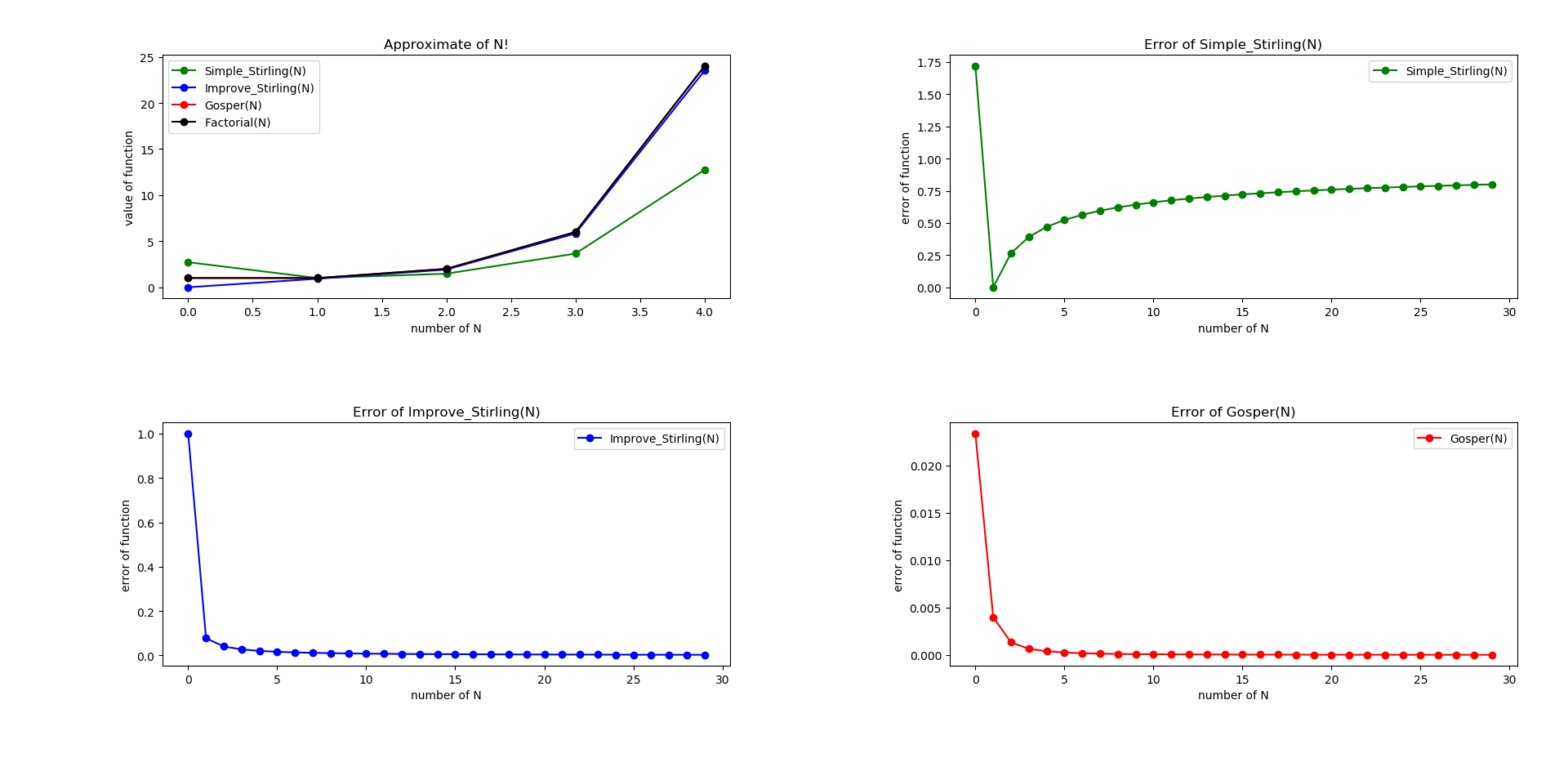
HW2

第九組

謝愷昀、鄭琮寶、石苯源

Problem 1



上述四張圖可以看出

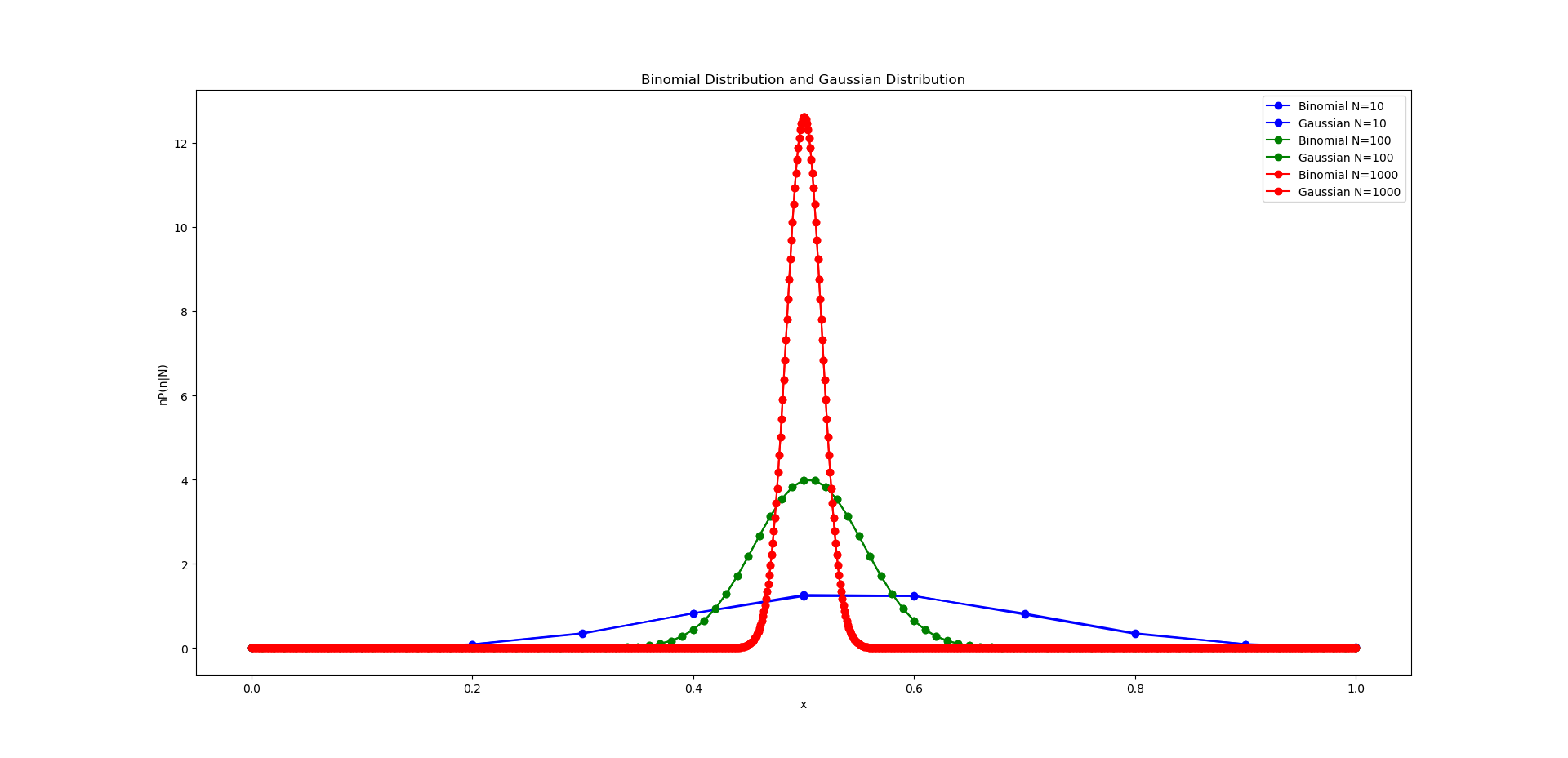
Simple\_Stirling : 隨N變大誤差會上升到一個定值

Improve\_Stirling : 隨N變大誤差會持續下降

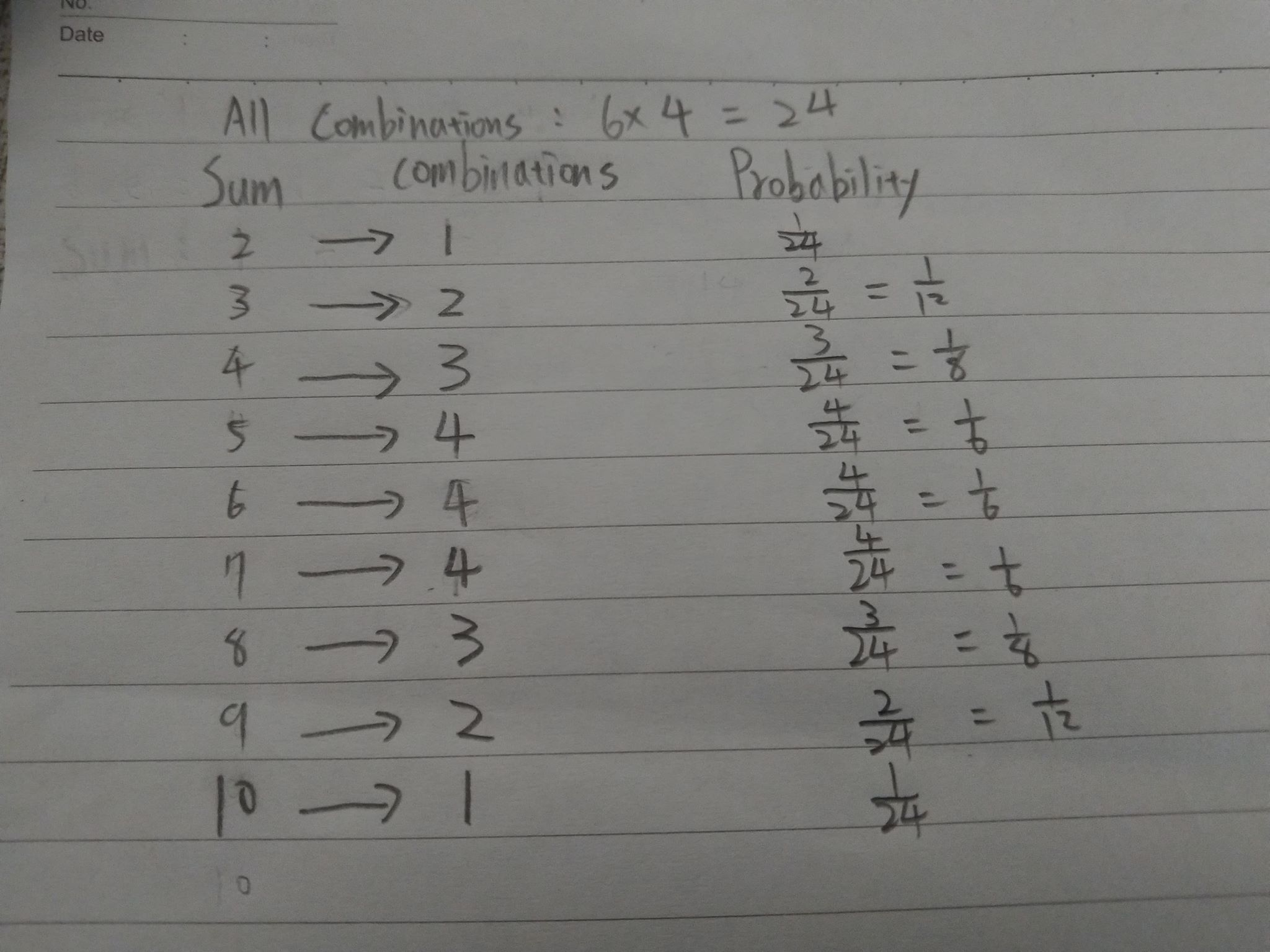
Gosper: 隨N變大誤差會持續下降

( )

Problem 2

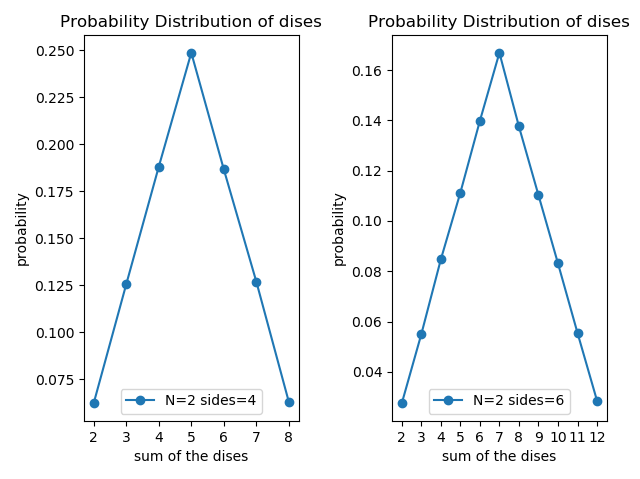


Problem 3

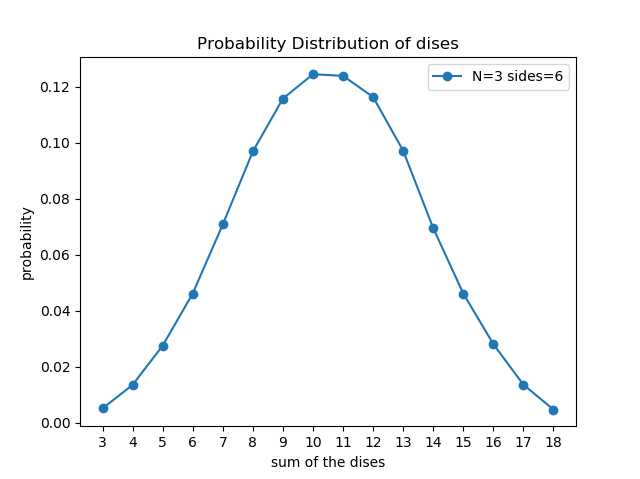


Problem 4

Question1:



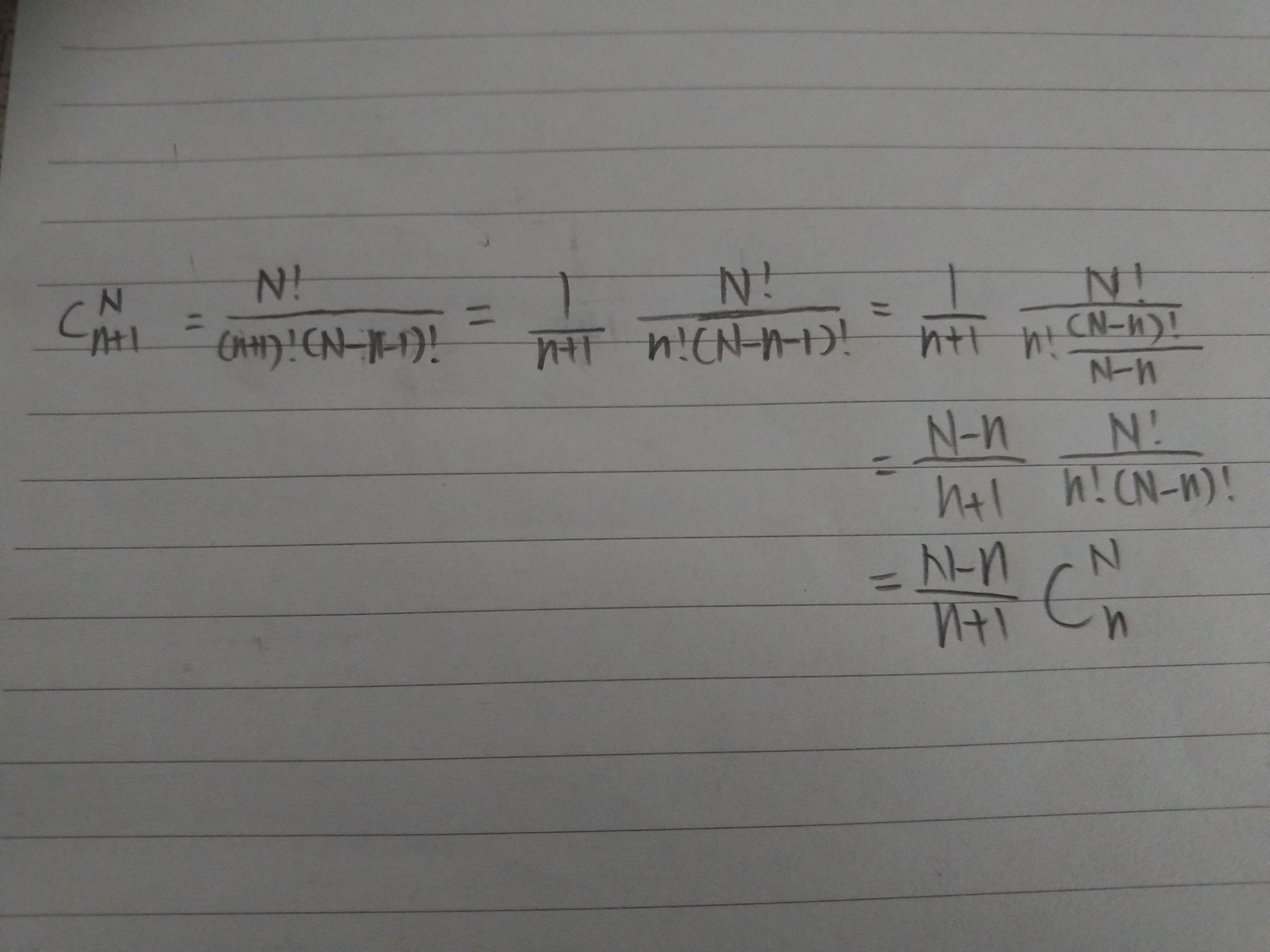
Question2:



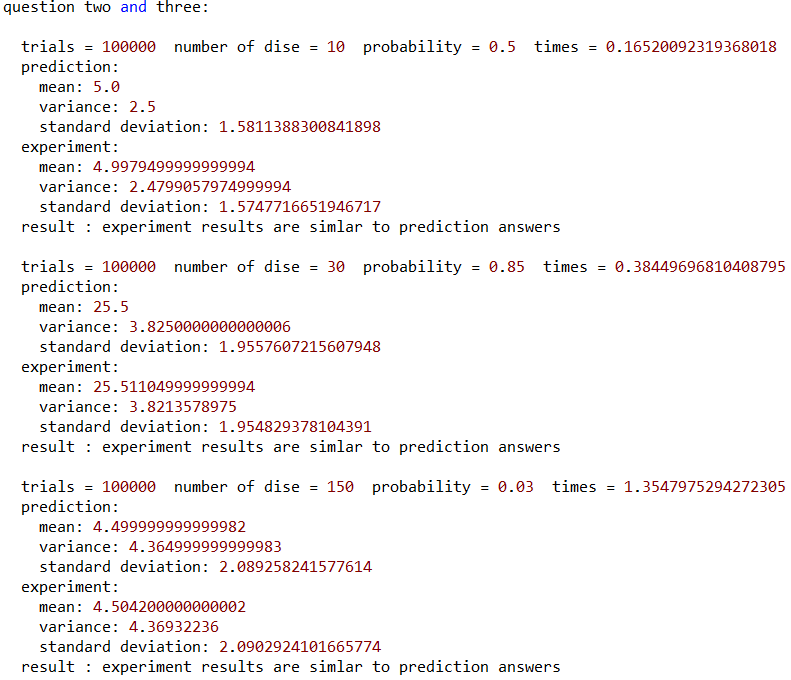
比第一題較接近常態分布

Problem 5

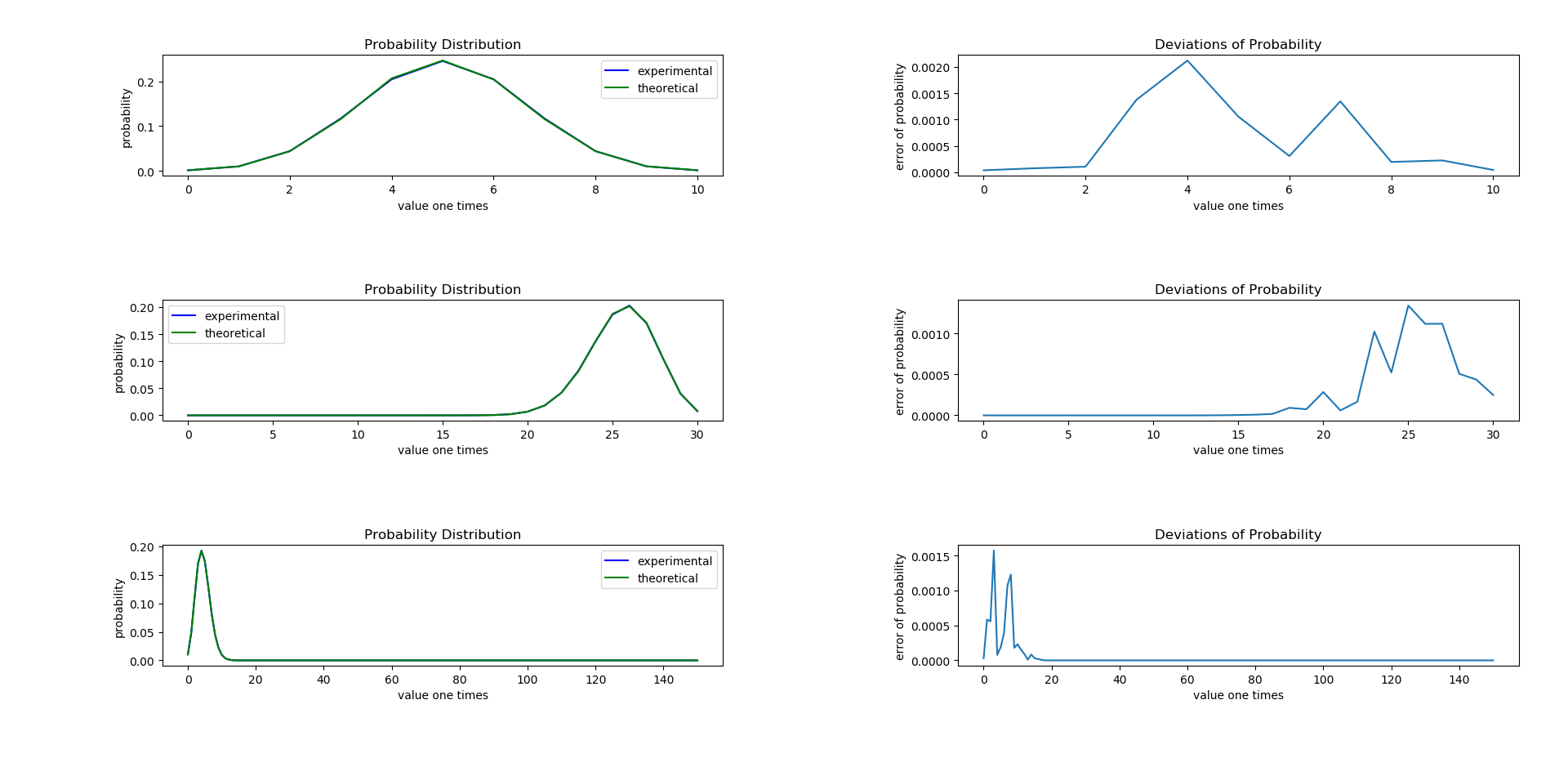
Question1:



Question2:



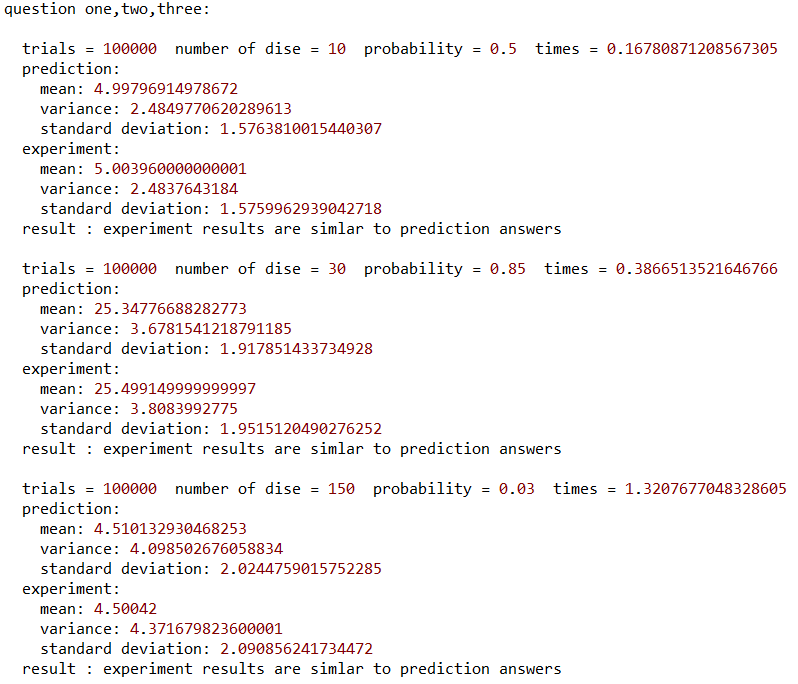
Question3:



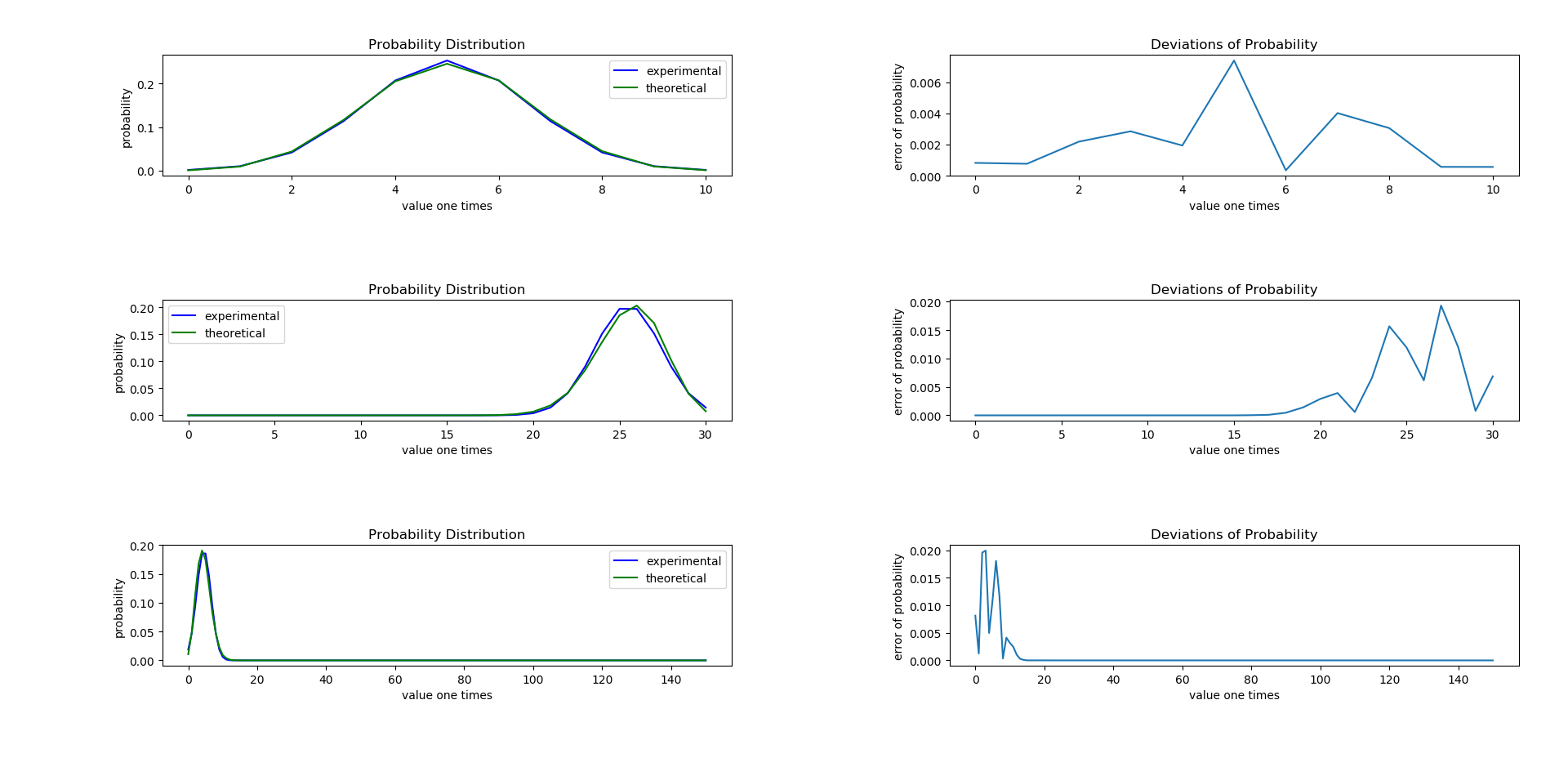
上圖為題目數據圖，左為機率分布，右為誤差分布

Problem 6

Question 1 and 2:

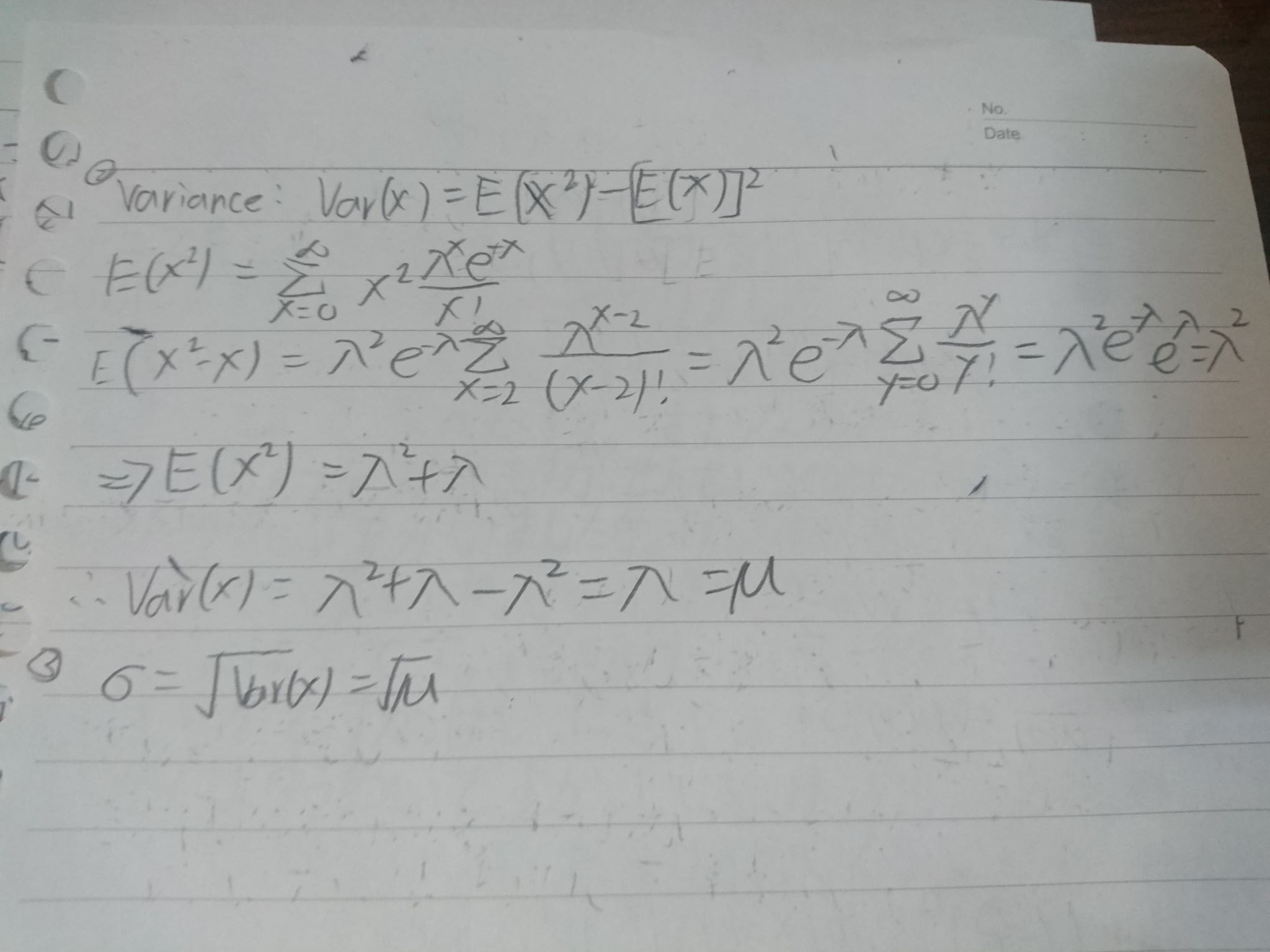
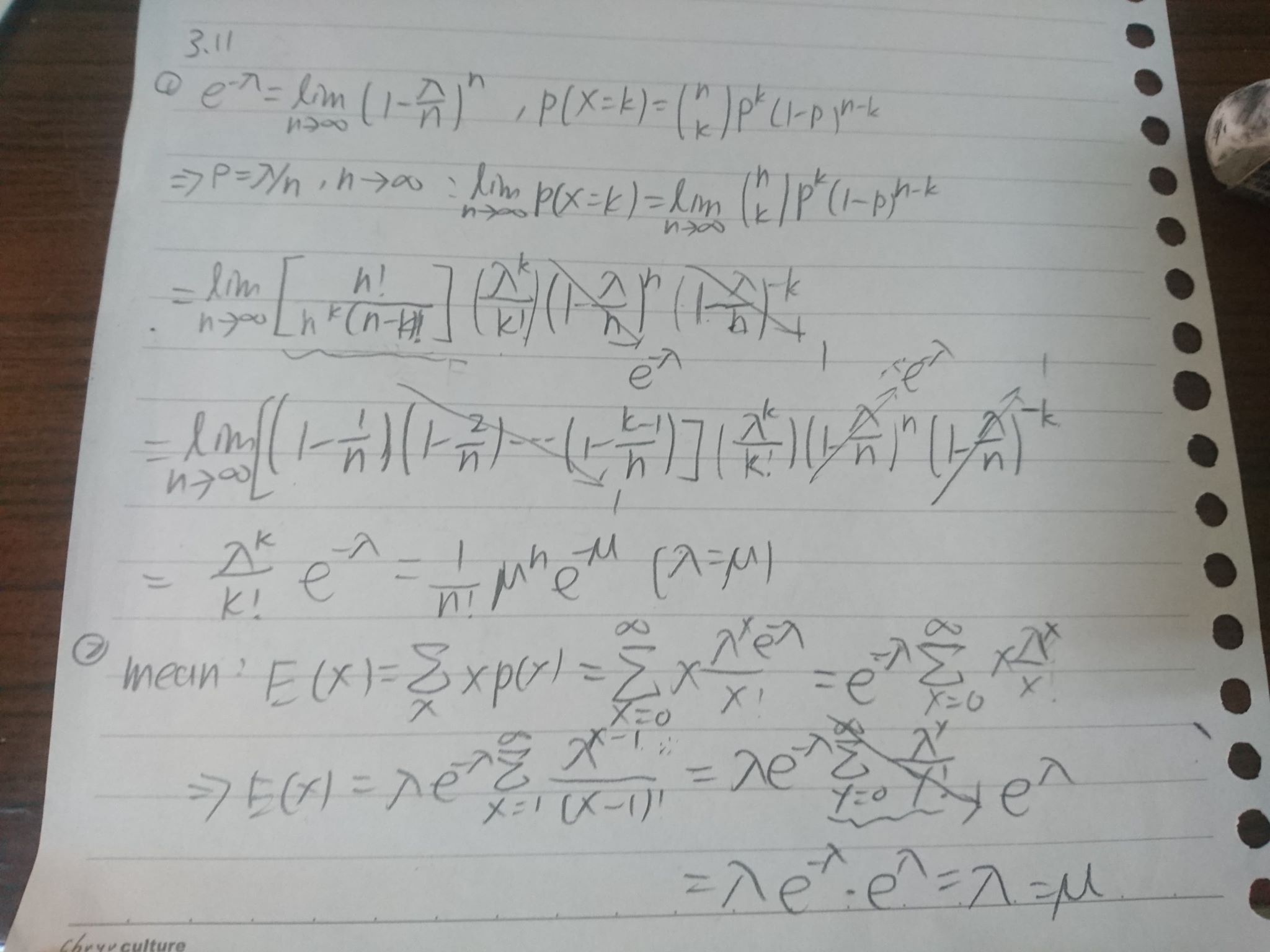


Question3:



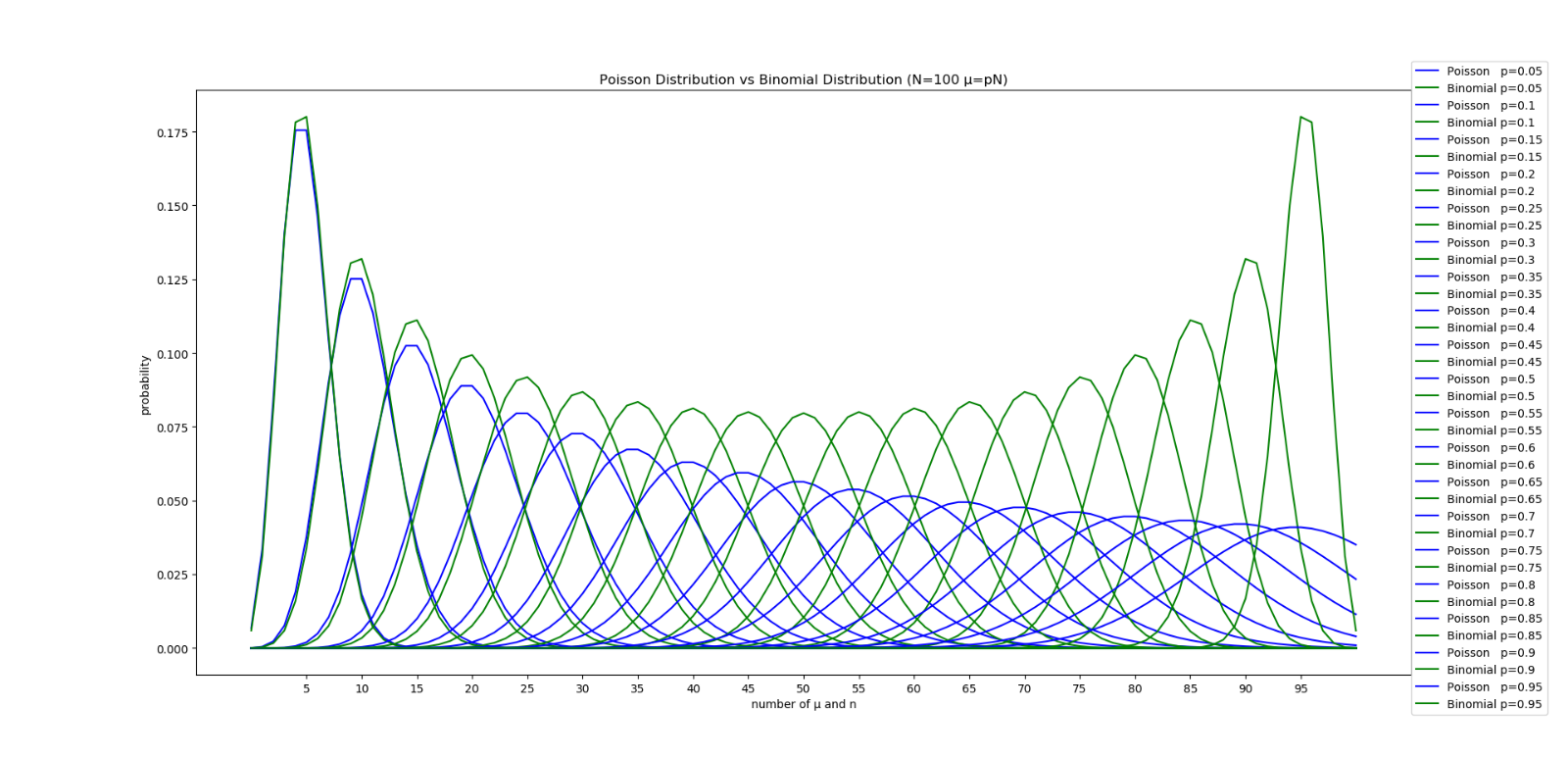
上圖為題目數據圖，左為機率分布，右為誤差分布

Problem 7



Problem 8

Question1:



從上圖可以知道p越小Binomial和 Poisson的分布會越相似

Question2:

從第一題的圖可以知道當µ=5，當N=100 Binomial和 Poisson會相似

Ps

Problem n對應程式檔為 homework2\_n.py