

1. Flowchart

a = 5, b = 15, c = 10:

5 15 10

测试随机的值:

a = 4, b = 7, c = 10

result: -23

a = 6, b = 11, c = 13

result: -36

a = 15, b = 7, c = 20

result: -35

2. Continuous ceiling function

[1, 2, 3, 4, 5, 6]

[1, 5, 7, 13, 15, 17]

3. Dice rolling

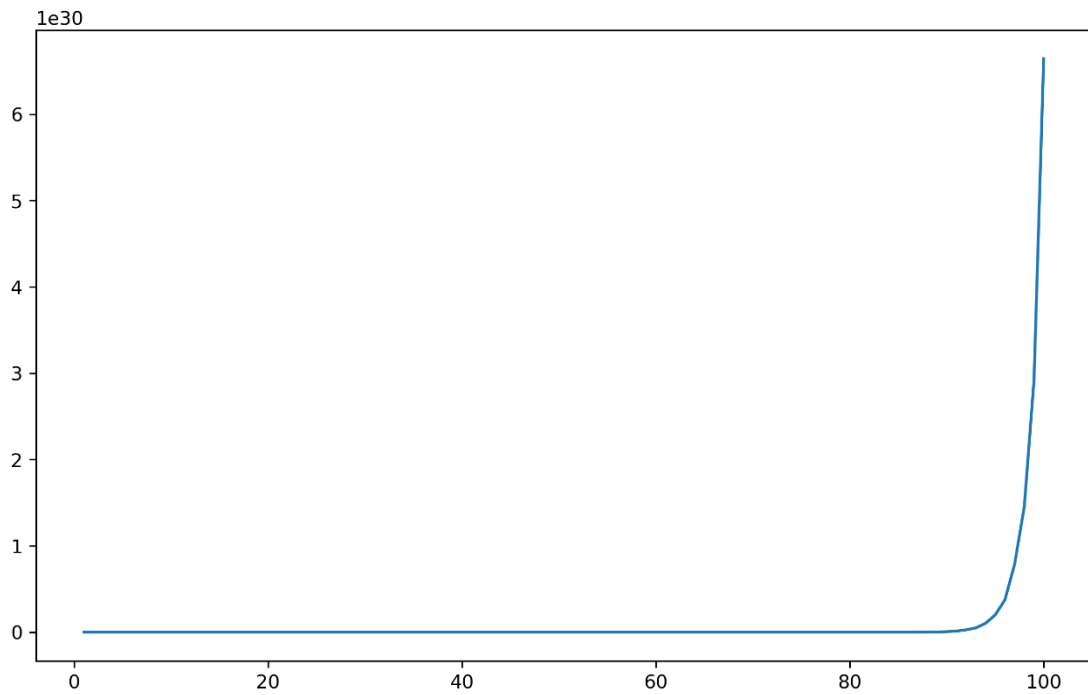
Number_of_ways = [1, 10, 55, 220, 715, 2002, 4995, 11340, 23760, 46420, 85228, 147940, 243925, 383470, 576565, 831204, 1151370, 1535040, 1972630, 2446300, 2930455, 3393610, 3801535, 4121260, 4325310, 4395456, 4325310, 4121260, 3801535, 3393610, 2930455, 2446300, 1972630, 1535040, 1151370, 831204, 576565, 383470, 243925, 147940, 85228, 46420, 23760, 11340, 4995, 2002, 715, 220, 55, 10, 1]

Maximum number of ways = 4395456 occurs at x = 35

4. Dynamic programming

Array: [1, 2, 3]

Sum of averages: 14.0



描述：随着 N 的增大，所有子集的平均值之和呈指数级增长。

5. Path counting

测试的 8x10 矩阵：

[1, 1, 0, 1, 1, 0, 1, 1, 1, 1]

[0, 1, 1, 0, 0, 1, 0, 1, 0, 1]

[1, 0, 1, 1, 0, 1, 1, 0, 0, 1]

[1, 1, 1, 1, 0, 1, 1, 1, 1, 0]

[0, 0, 0, 1, 0, 1, 1, 0, 1, 0]

[1, 1, 1, 1, 1, 0, 1, 0, 0, 1]

[1, 1, 1, 1, 1, 0, 1, 0, 0, 0]

[0, 0, 1, 1, 0, 1, 1, 0, 1, 1]

这个 8x10 矩阵的路径数：0

1000 次实验的平均路径数：0.24