#9: HOT

Problem and Answer

Outline

1. Single Number I, II, III

2. Majority Number I, II, III

3. Best Time to Buy and Sale Stock I, II, II

4. Subarray I, II, III, IV

5. 2-Sum, 3-Sum, 4-Sum, k-Sum, 3-Sum Closest

6. Quick Questions

7. Partition Array

Best Time to Buy and Sell Stock IV

k transcations

state: f[i][j]表示前i天进行j次交易，能够获得的最大收益

function: f[i][j] = max{f[x][j-1] + profit(x+1, i)}

answer: f[n][k]

intialize: f[i][0] = 0, f[0][i] = -MAXINT (i>0)

Quick Questions

● Power(x, n)

○ x^n = (x^(n/2))^2 快速幂 →O(logn)

● Sqrt(x)

○ Magic Number 0x5f3759df

● Trailing Number of zeros in n!

● O(1) Check Power of 2

○ (x-1) & x == 0 → x是2的某次幂