

Q Bag of tokens

power $\rightarrow p$ ✓

score $\rightarrow s$

tokens = [100, 200, 300, 400]

max total score by potentially playing each token in one of the two ways:-

① power \rightarrow token[i], face up \uparrow
lose power \downarrow \uparrow score

② score $\rightarrow 1$, face down \downarrow
gain power \uparrow lose 1 score \downarrow

Eg: [100, 200, 300, 400]
p = 150
s = 0
p = 150 - 50 = 100 + 400 \rightarrow
s = 1 - 1 = 0
p = 50 - 200
s = 0 + 1 ans \rightarrow 2
p = 300 - 300
s = 1 + 1
p = 0
s = 2 ✓✓

face up with smallest value

face down with largest value.

Always try tokens face up until exhaustion then play one token face down & continue.

Q Score after flipping matrix

m x n grid

any more \rightarrow maximise score

→ 0 0 1 1
→ 1 0 1 0
→ 1 1 0 0

→ 0 0 1 1
→ 1 0 1 0
→ 1 1 0 0

Score

1 1 1 1 \rightarrow 15
1 0 0 1 \rightarrow 9
1 1 1 1 \rightarrow 15
15 + 9 + 15 = 39

→ 0 1 0 1 0

maximising the no 1's.

as left as possible

0 1 1 1
→ 7
1

1 0 0 0 \rightarrow 8
1 0 1 0 \rightarrow 2
1 0 0 0 \rightarrow 8

Flip all rows first, whose first column is zero.

→ 0 0 1 1
→ 1 0 1 0
→ 1 1 0 0

1 0 0 1 \rightarrow 1
1 0 1 1 \rightarrow 2
1 0 0 0 \rightarrow 8
1 0 1 0 \rightarrow 2
1 0 0 0 \rightarrow 8

Q Previous permutation in one swap

arr \rightarrow []

lexicographically largest permutation that is smaller than the arr & can be made with exactly one swap.

1 9 6 7 \rightarrow 7 9 6 7
5 4 3 1 \rightarrow 4 5 3 1

sorted ✓

0 7 0

[1 9 5 7 1]
[1 7 5 9 9]

9
7
5
3
1

[2 1 1 3]
[1 3 1 3]

3
1
1
1
3
6

[5 7 3 6]

[5 3 4 6]
[1 1 5]

5
3
2
1
6

(1 1 5)