



(1 +  
max  
element)  
↓  
4

0	3	2	2
0	1	2	3

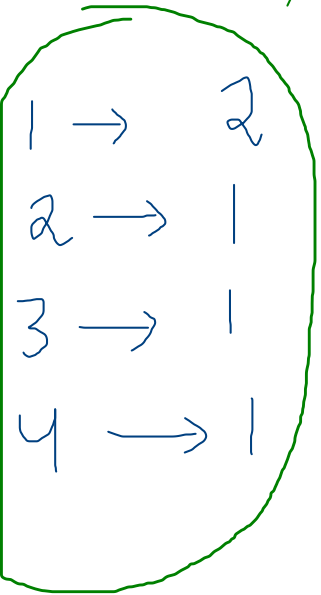
fre

fre[arr[i]]++  
↓  
2

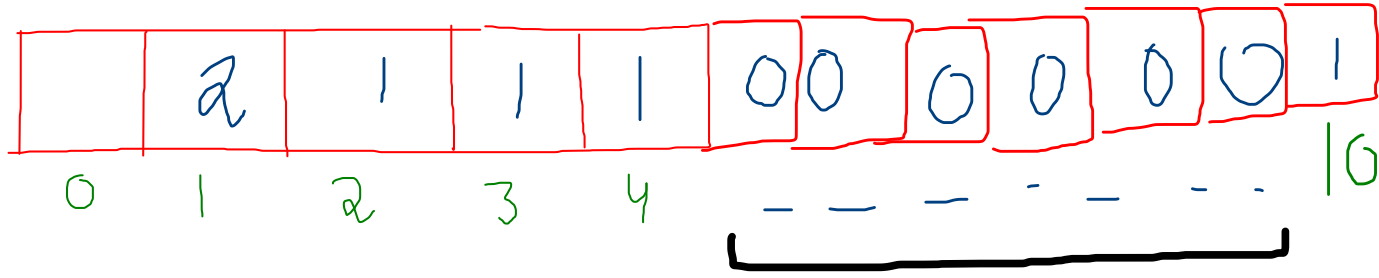
1 → 3  
2 → 2  
3 → 2

fre[2]++

1, 2, 3, 4, 1, 10

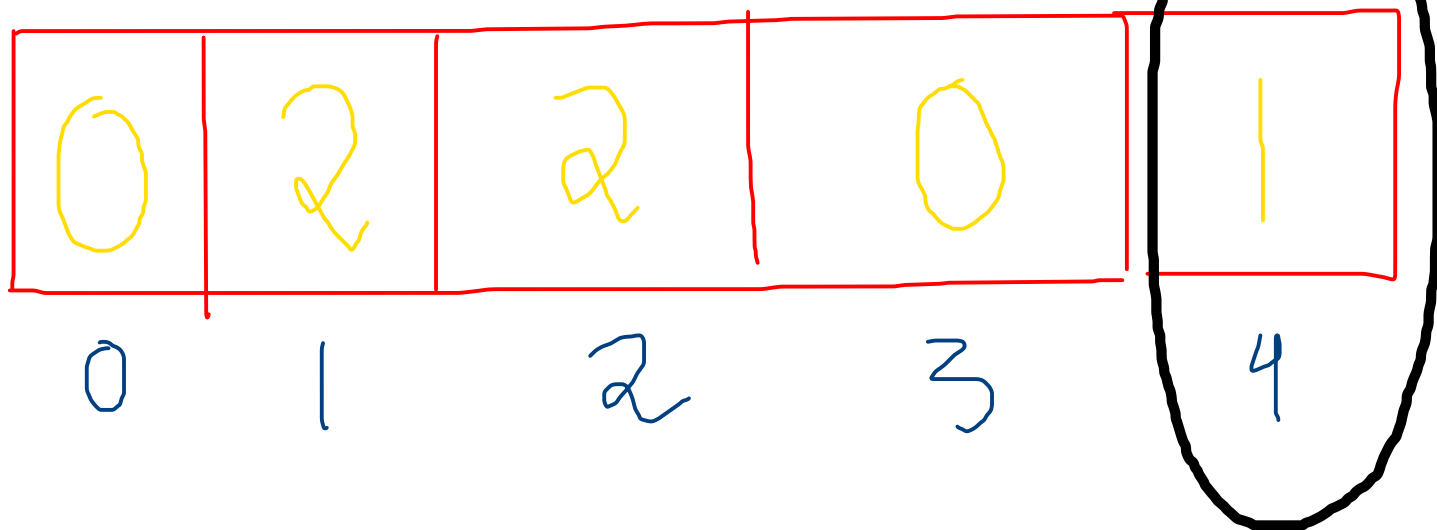


10 → 1



useless  
space

4, 1, 2, 1, 2



Ans  $\rightarrow$  4 //

-5	<u>-30000</u>	-5	-30000	3
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positive

Indexes  $\longleftrightarrow$  elements

$$\underbrace{-5 + 3 \times 10^4}_{\text{red}} \longrightarrow 29995$$

$$-30000 + 3 \times 10^4 \longrightarrow 0$$

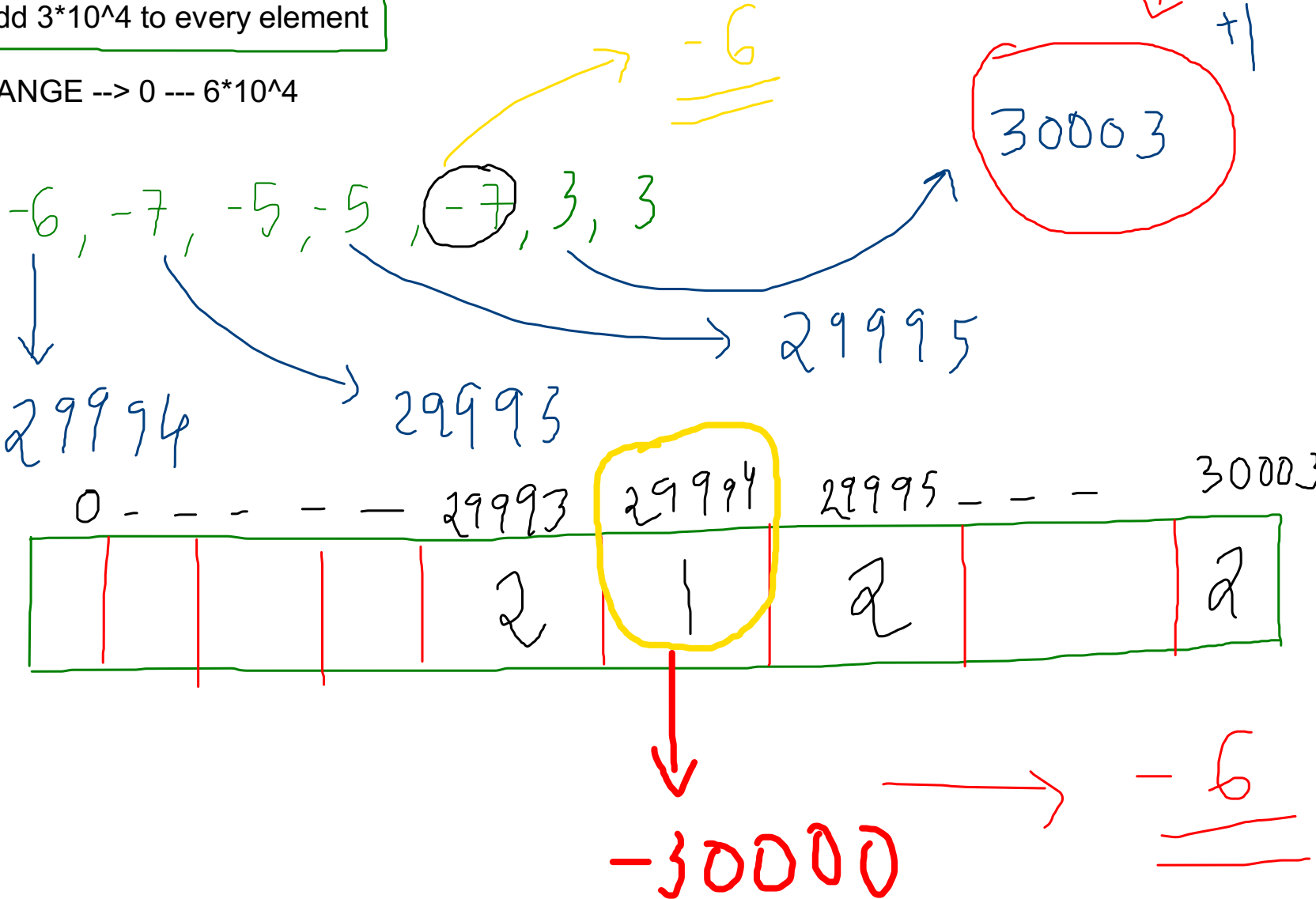
$$3 + 3 \times 10^4 \longrightarrow 30003$$



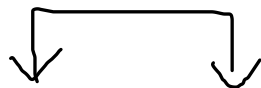
RANGE -->  $-3 \cdot 10^4$  --  $3 \cdot 10^4$

Add  $3 \cdot 10^4$  to every element

RANGE --> 0 ---  $6 \cdot 10^4$



4, 1, 2, 2, 1



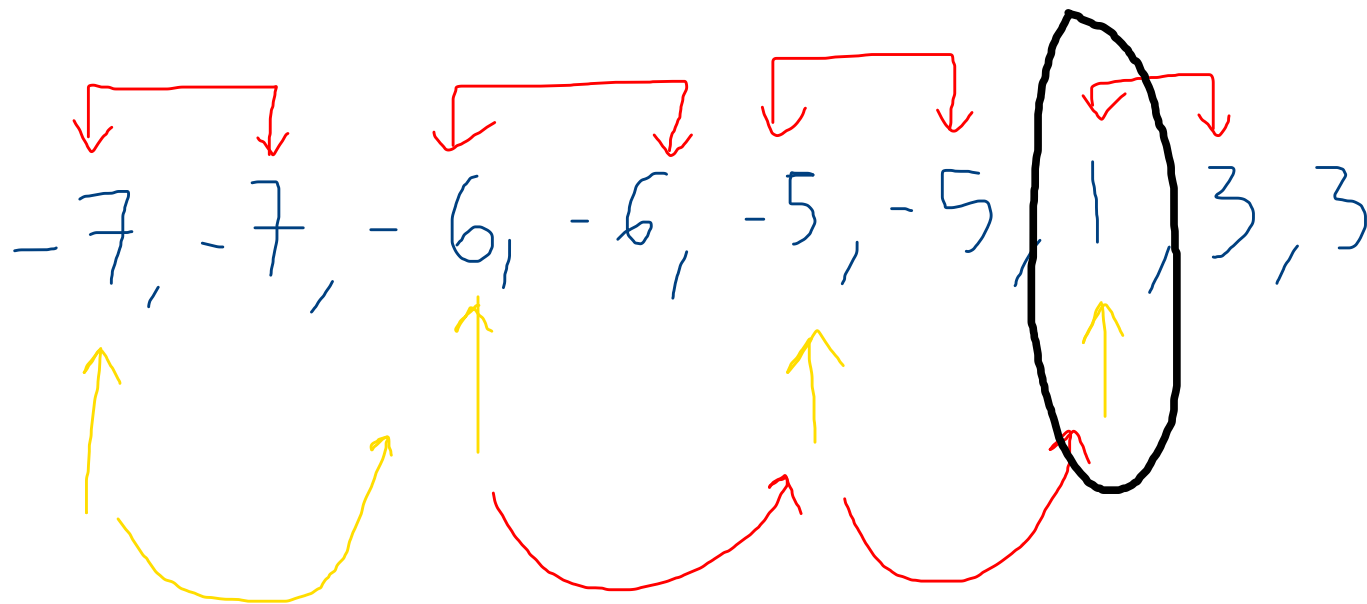
1, 1,

2, 2,

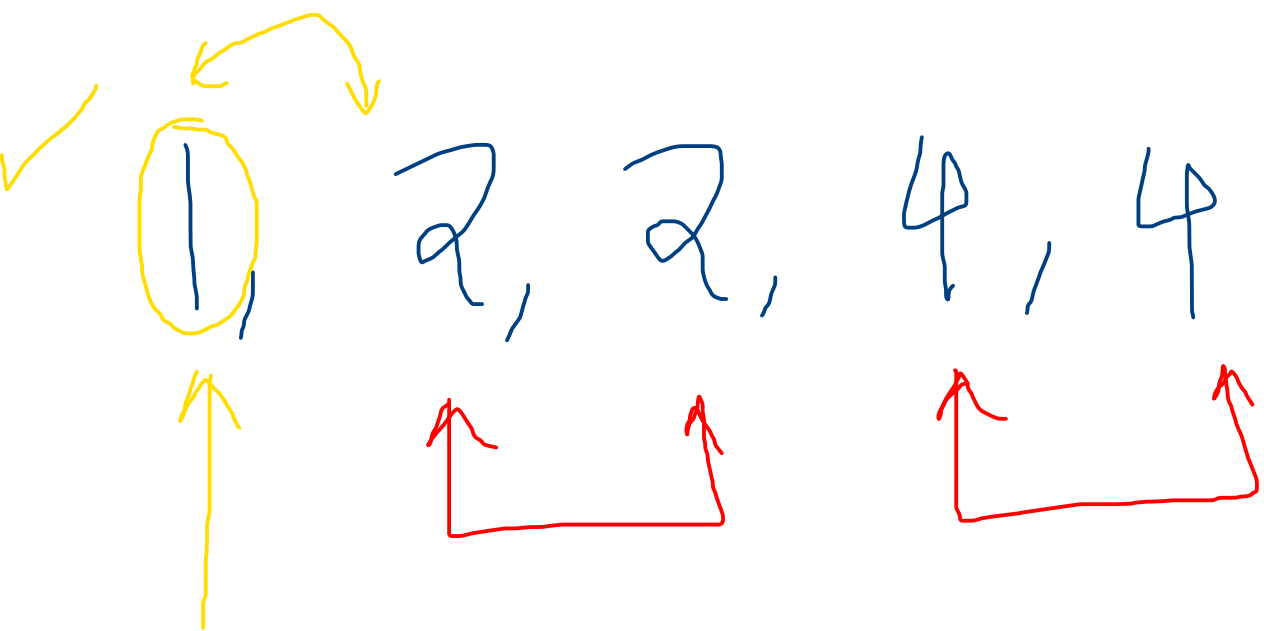
4



3, 1, -5, -5, -6, -7, 3, -7, -6

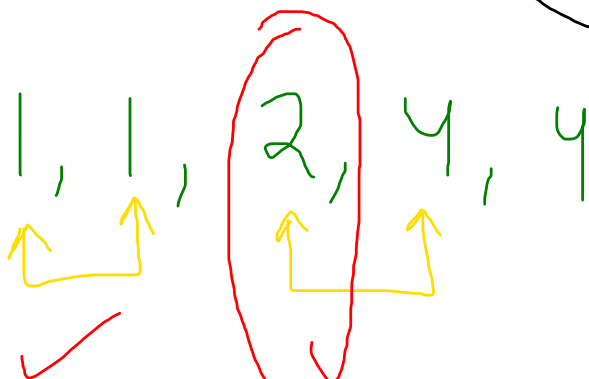
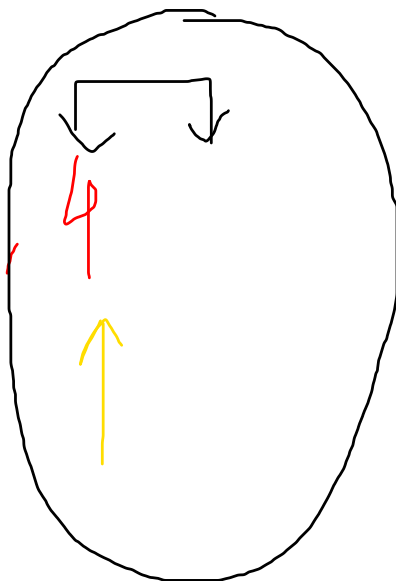
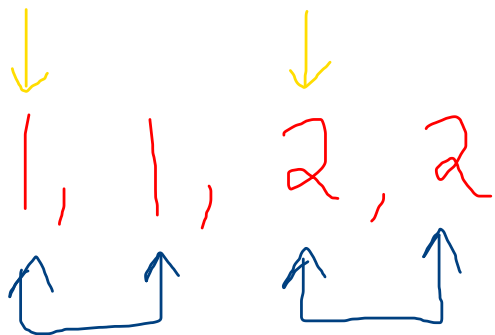


4, 2, 1, 2, 4, 1





4, 1, 2, 1, 2



2

0, 1, 2, 2, 1, 0

0, 1, 2

zero's = 2

one's = 2

two's = 2

0, 0, 1, 1, 2, 2

2, 0, 1, 0, 0, 0, 2

zero's = 4

one's = 1

two's = 2

0	0	0	0	1	2	2
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$2^0, 7^1, 9^2, 10^3$

16  
Target

$i \rightarrow 1$   $j \rightarrow 2$

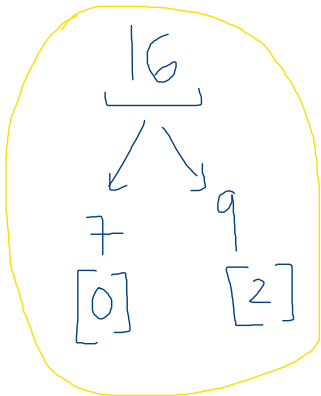
12

Sum  $\uparrow$   $\rightarrow i$   
Sum  $\downarrow$   $\rightarrow j$

16 = 16

7, 2, 9, 16

$2^0, 7^1, 9^2, 16^3$



$2^n$

$T \rightarrow 16$

$[7, 0], [2, 1], [9, 2], [16, 3]$

$[2, 1], [7, 0], [9, 2], [16, 3]$

$i$

$j$

$\rightarrow$

$\leftarrow$

$C \rightarrow 16$

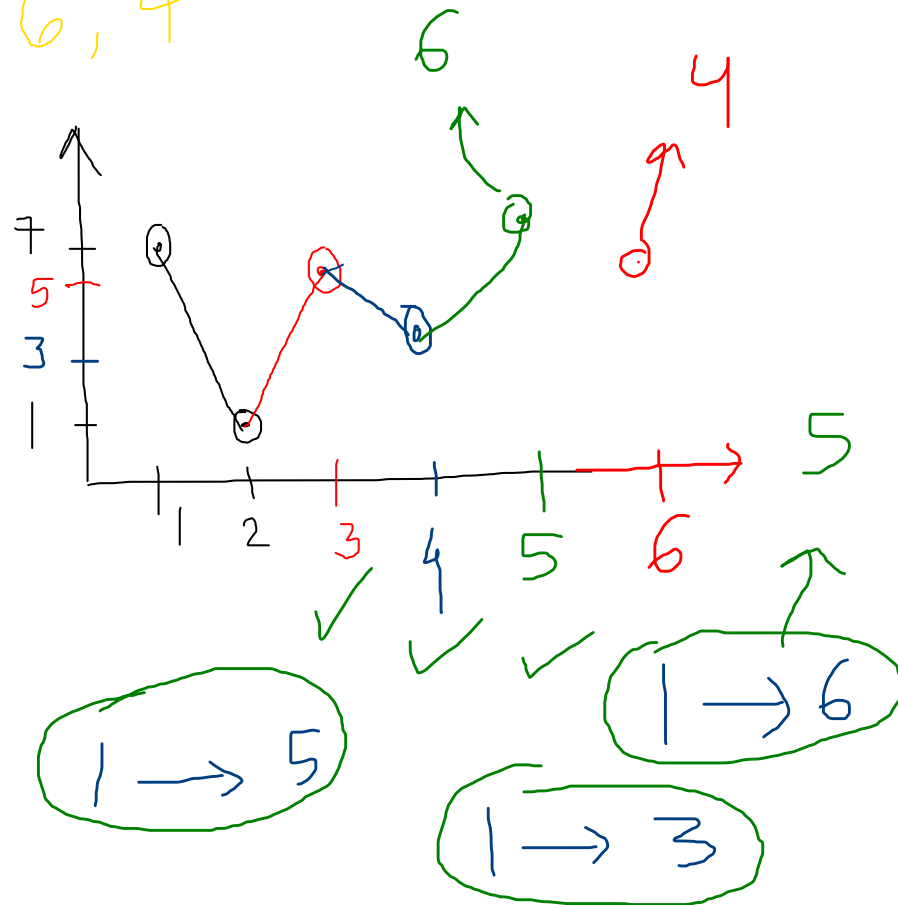
$16 \rightarrow T$

X  
7, 1, 5, 3, 6, 4

buy → ~~7~~ 1

current Profit → 3

max Profit → 5

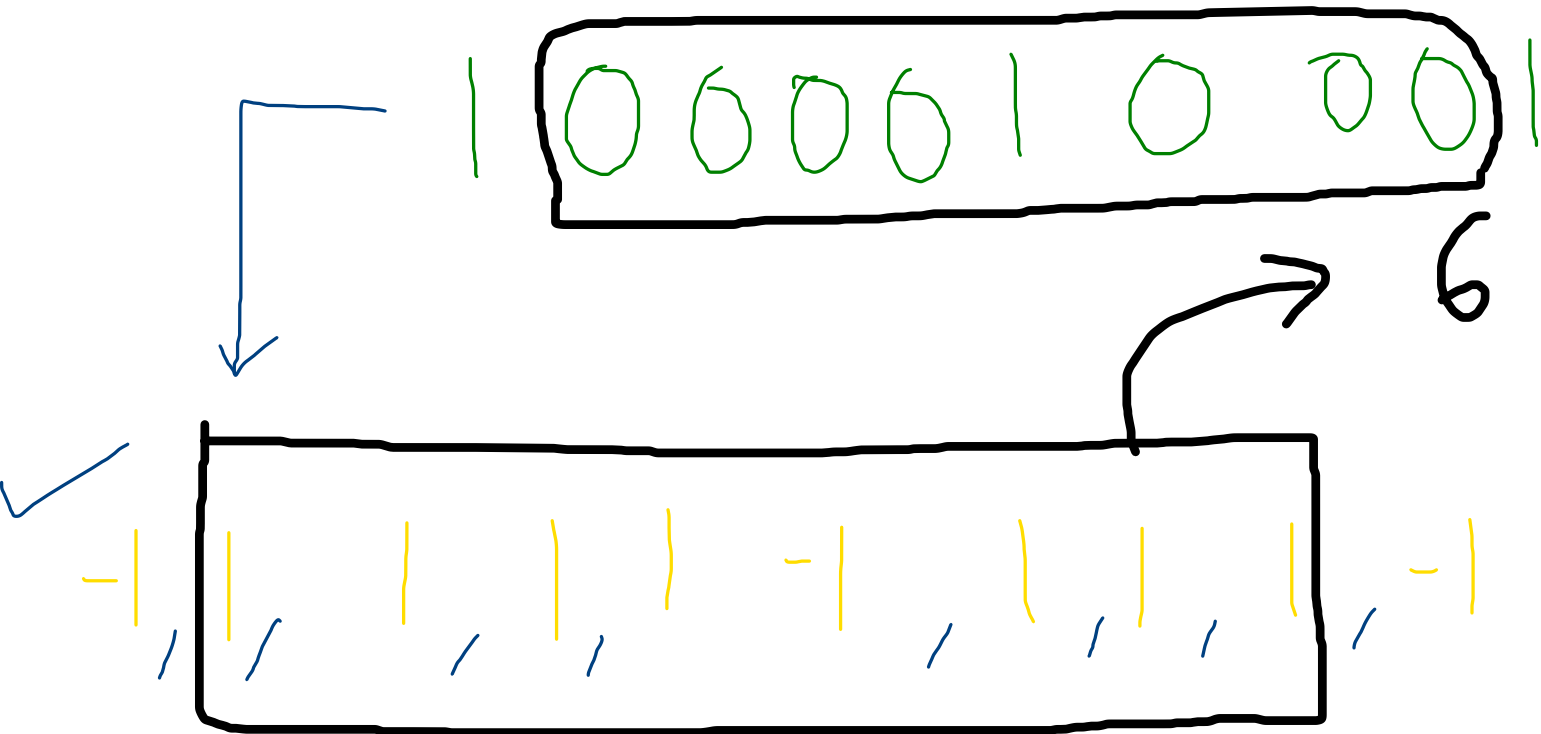


7, 2, 5, 1, 6, 4, 0

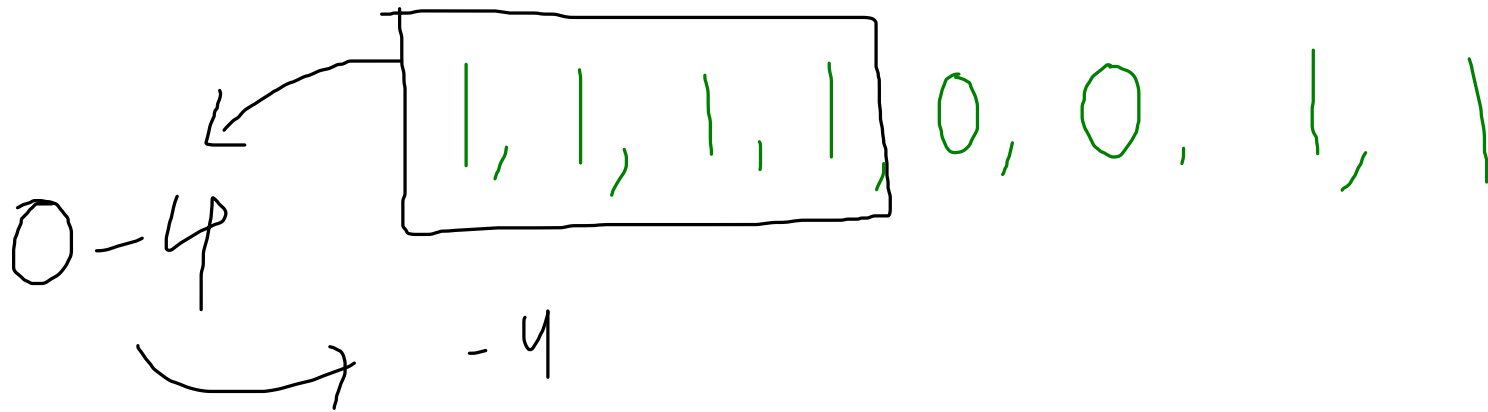
buyValue  $\rightarrow$  ~~7~~ ~~2~~ ~~1~~ 0

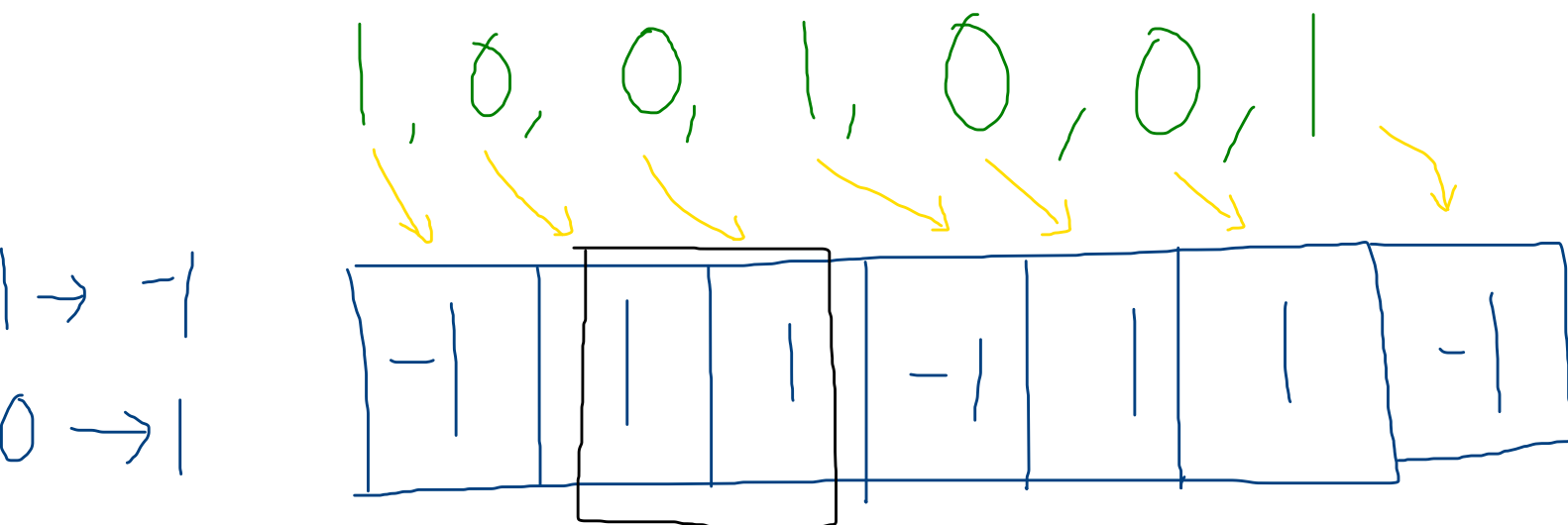
currentProfit  $\rightarrow$  ~~0~~ ~~3~~ ~~5~~ 3

maxProfit  $\rightarrow$  ~~0~~ ~~3~~ (5)  $\downarrow \rightarrow$  0









number of 0's - number of 1's

↪

1, 1, 2, 2, 3, 3, 3

$i \rightarrow$  unique  
values

1 2 3

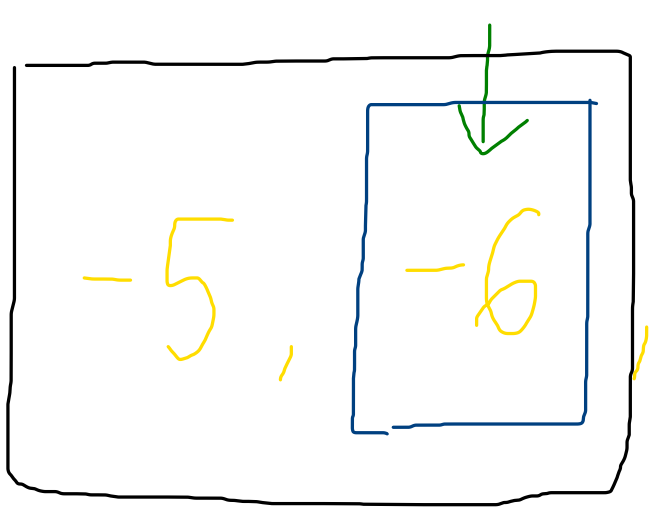
1, 7, 3, 6, 5, 4

0 - n

→ 28

→ unique

0 + 1 + 2 + ... + n



-1

$$c = -5$$

$$\max = -5$$

$$c = \underbrace{-1, -1-6}_{\rightarrow \underline{\underline{-1}}}$$

~~0~~, ~~1~~, ~~0~~, 3, 12

→ 1, 3, 12    ~~3~~, ~~12~~

0    0