Greedy Algorithms - 2

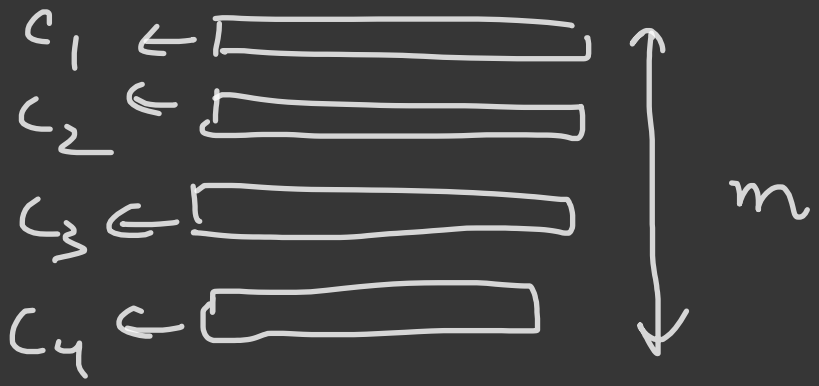
Dev Karan Singh (devkaran1231)
Expert at codeforces (1817)
5 star at codechef (2040)

Today's plan

- Questions :
  - https://codeforces.com/problemset/problem/33/A
  - https://codeforces.com/problemset/problem/620/C
  - https://codeforces.com/problemset/problem/587/A
  - https://codeforces.com/problemset/problem/723/C
  - https://codeforces.com/problemset/problem/949/A
  - https://codeforces.com/problemset/problem/898/D

1600

Monday's Daily task



n techs

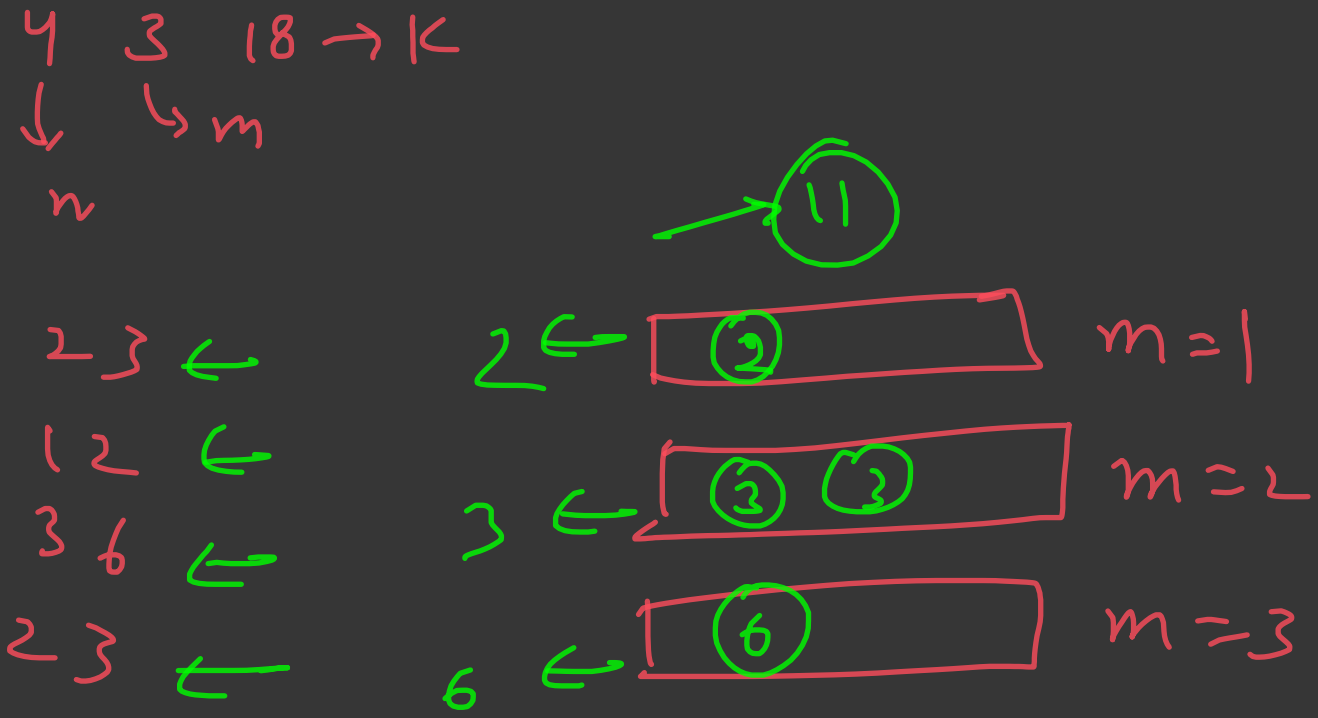
c

c < 0

$n \leq K$

$\hookrightarrow$ n

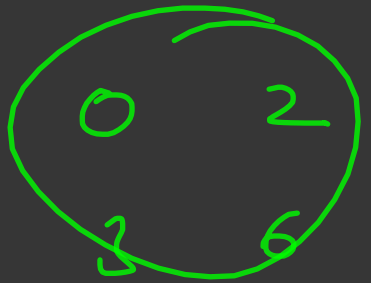
K


4 3 18 → K
m
n
11
2 3 ←
1 2 ←
3 6 ←
2 3 ←
2 ←
3 ←
6 ←
m = 1
m = 2
m = 3

Q2

n = 7

1, 2, 1, 3, 1, 2

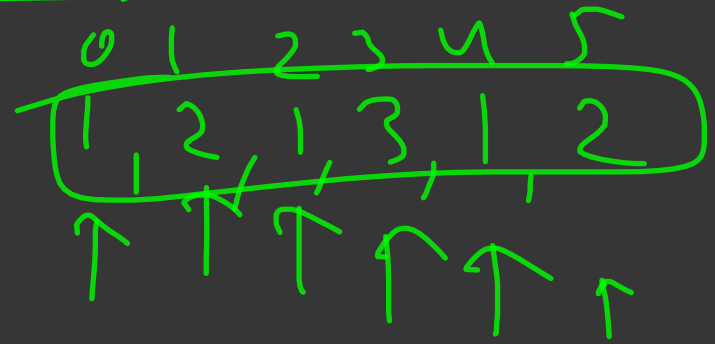


ans → [[1, 2, 1, 3] [3, 1, 2]]

map

[3, 1, 2]

n = 6



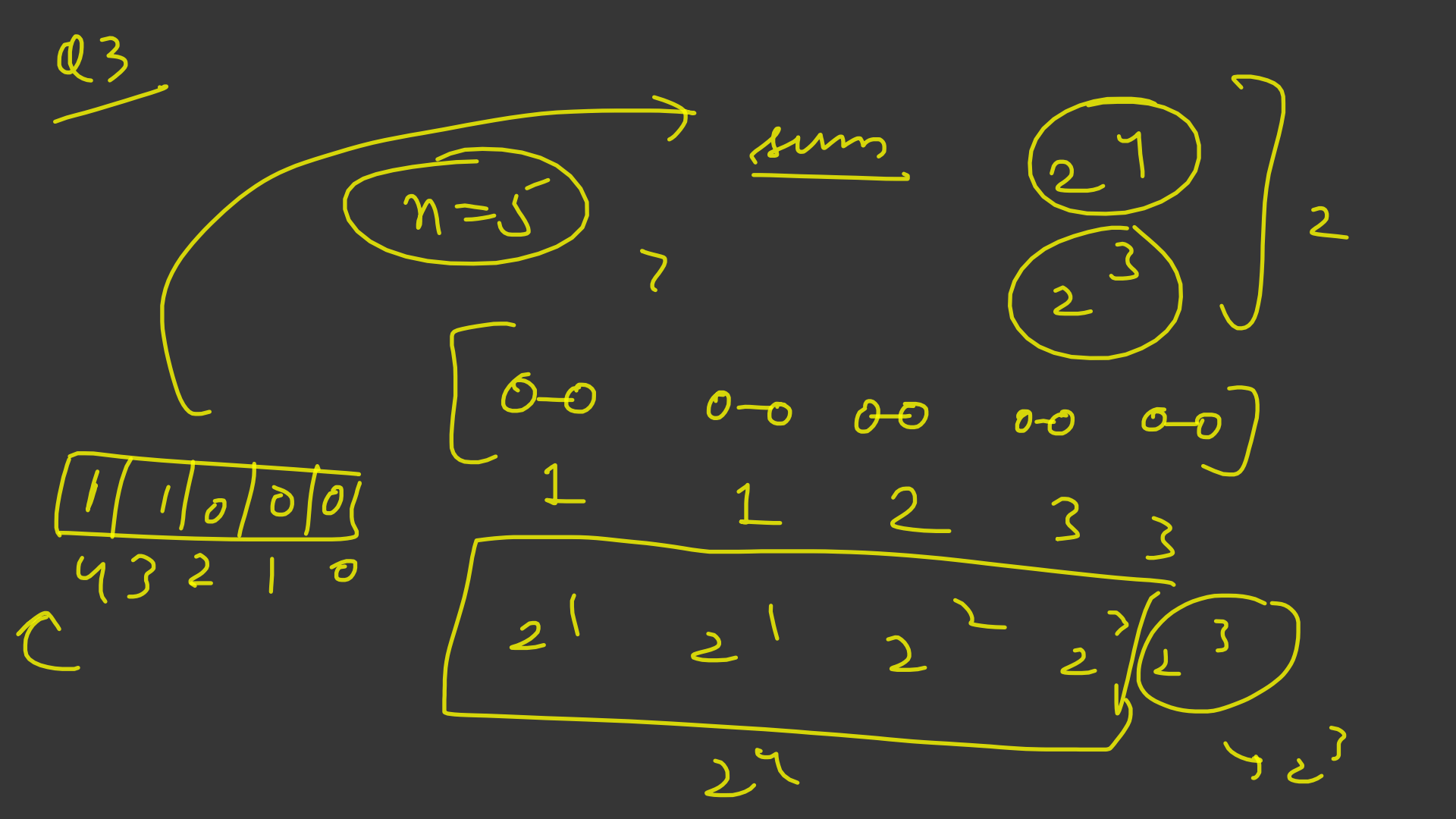
0 to n-1

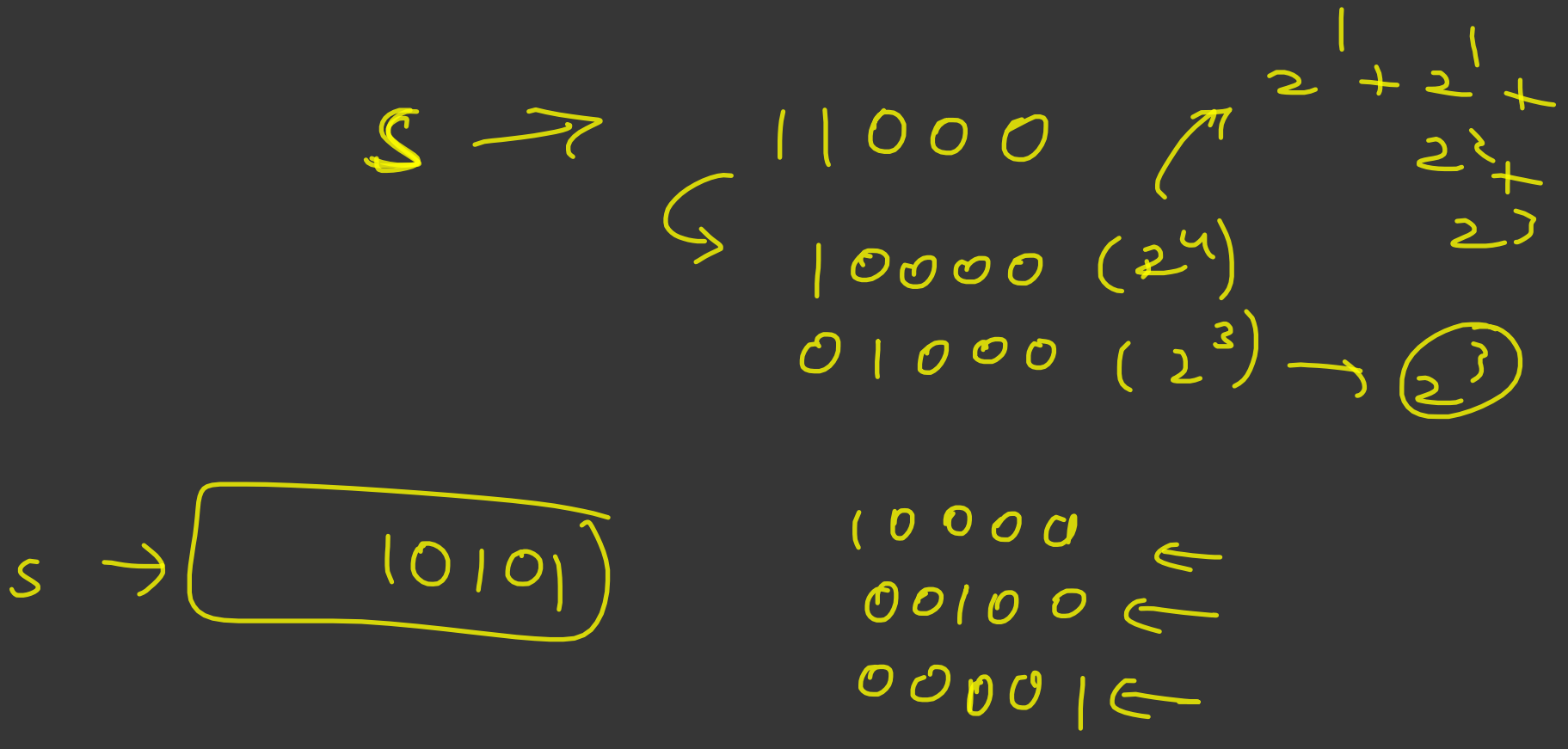
↳

1 to n

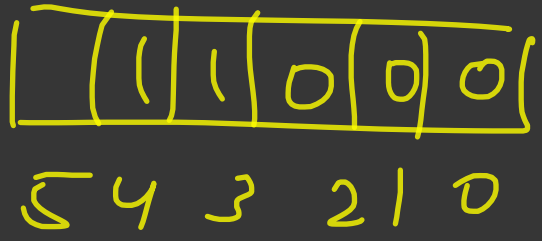
num → 3

2 3 1


Q3
sum
n=5
7
2 7
2 3
2
1 1 0 0 0
4 3 2 1 0
1 1 2 3 3
2 1 2 1 2 2 2 3
2 4
4 2 3


S
11000
$2^1 + 2^1 + 2^2 + 2^3$
10000 (2^4)
01000 (2^3)
2^3
S
10101
10000
00100
00001

Eg →



5×10^6 bits

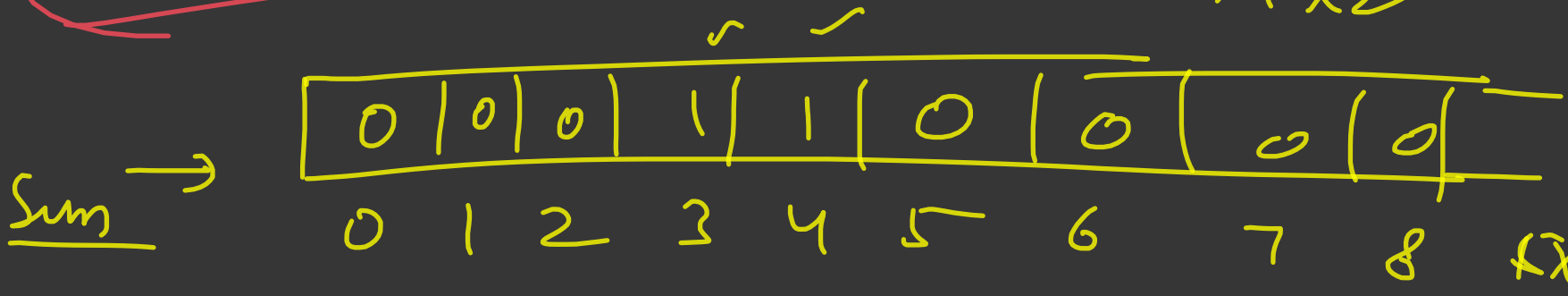
$7 \times 2^8 \rightarrow 6 \times 2^8 \rightarrow 3 \times 2^9$

$\hookrightarrow 1 \times 2^8 \rightarrow 2^8$

5×10^6

$3 \times 2^3 \rightarrow 1 \times 2^4$

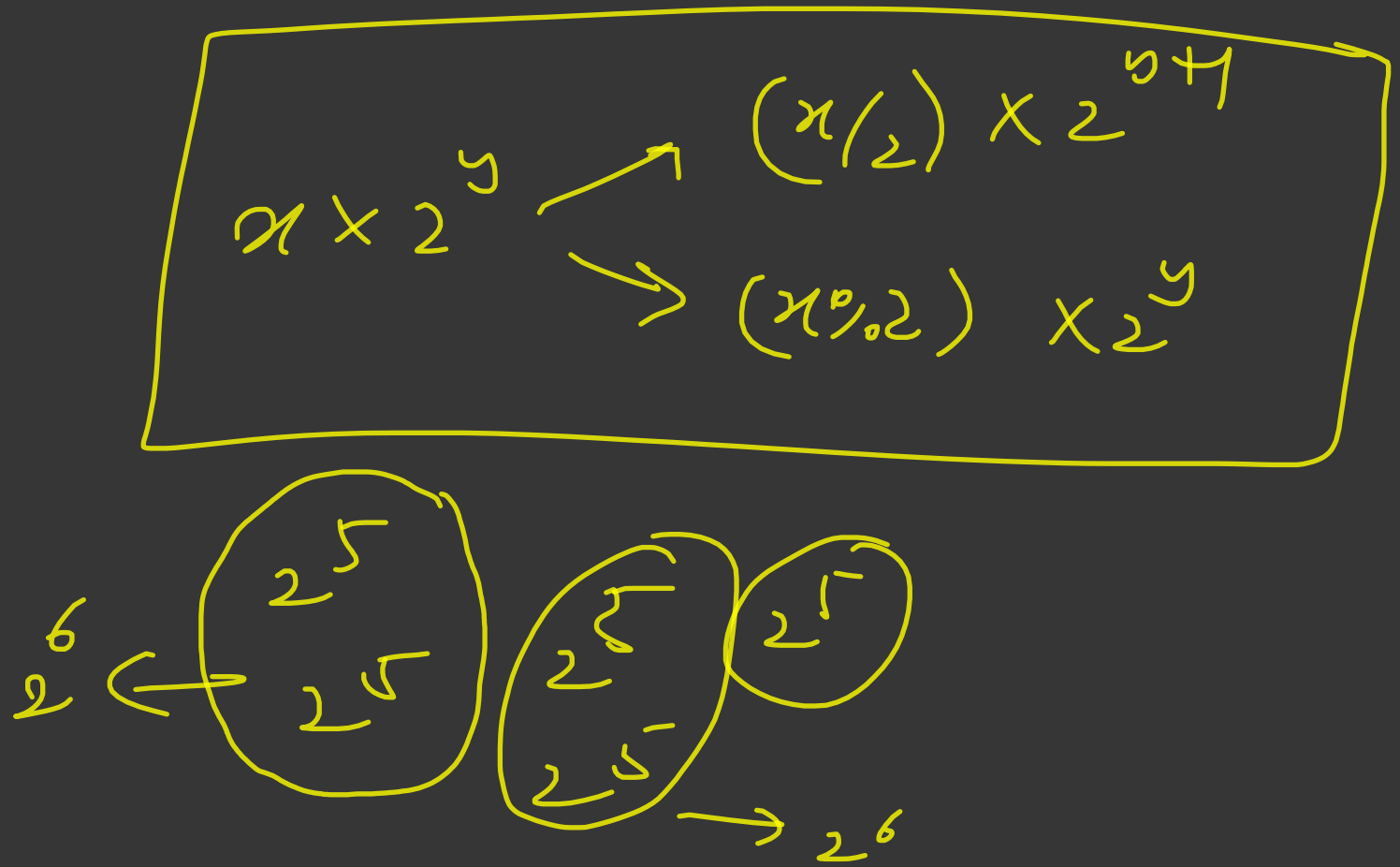
$\rightarrow 1 \times 2^3$



cnt → 2

ans → [1, 1, 2, 3, 3]

1 → 2
2 → 1
3 → 2


$x \times 2^y$
$(x/2) \times 2^{y+1}$
$(x\%2) \times 2^y$
2^5
2^5
2^6
2^5
2^5
2^1
2^6

$n \rightarrow 10^6$

$9^0 \rightarrow 10^6$

$10^6 + 20$

$0\,0\,0\,0\,0\,0$ ——— 10^6

2×10^6

$\log_2(10^6)$

$\rightarrow 20$

Qu

n → 7

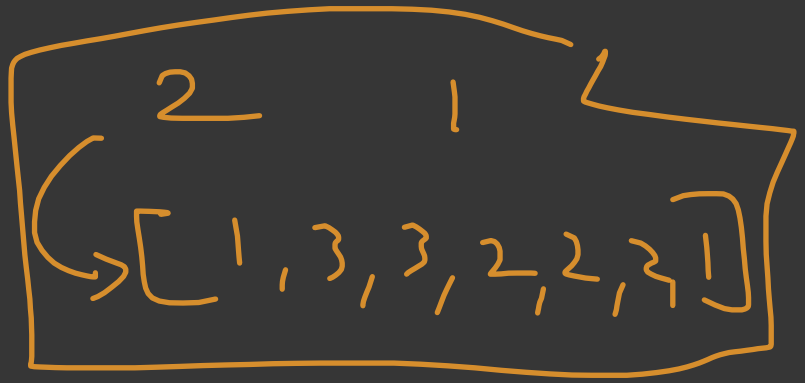
m2

3

Eg →

3

an → [1, 3, 2, 2, 2, 2, 1]



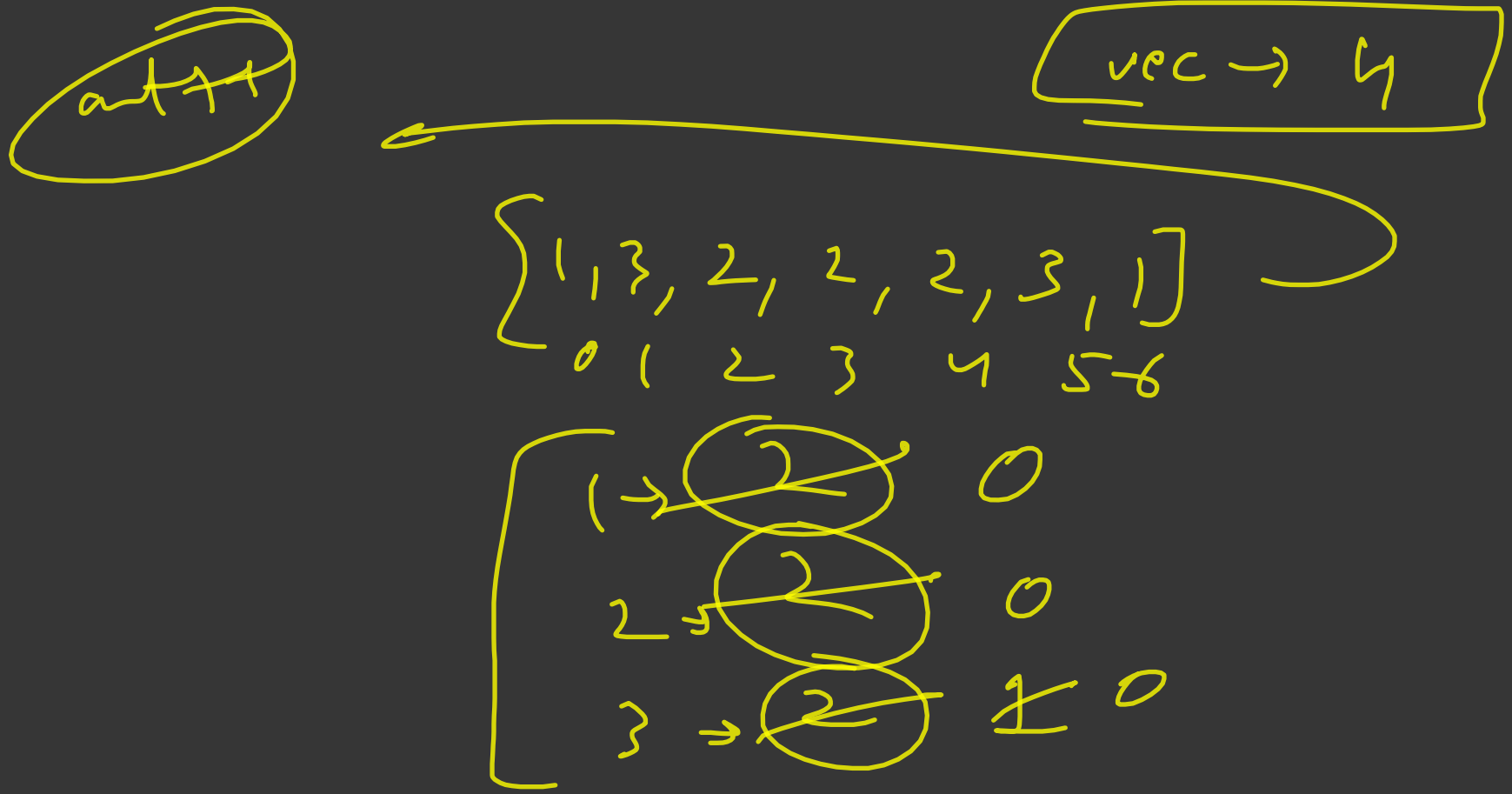
b

2

Sol^n →

$n = 7$

$m = 3$


ans++
vec → 4
[1, 3, 2, 2, 2, 3, 1]
0 1 2 3 4 5 6
1 → 2 0
2 → 2 0
3 → 2 1 0


2×10⁵


00|0|00