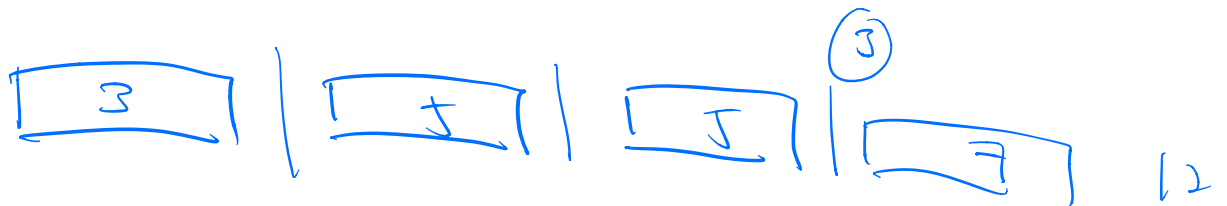
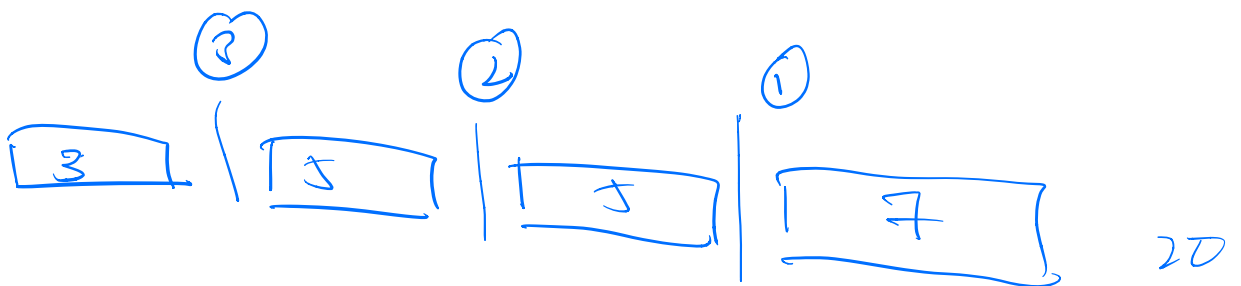


minimum amt of ink.



Ink = 49

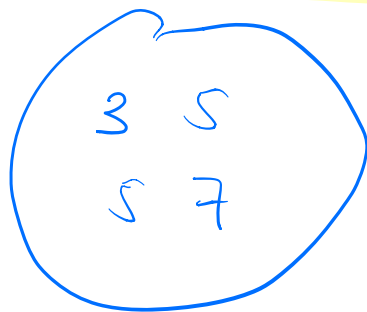
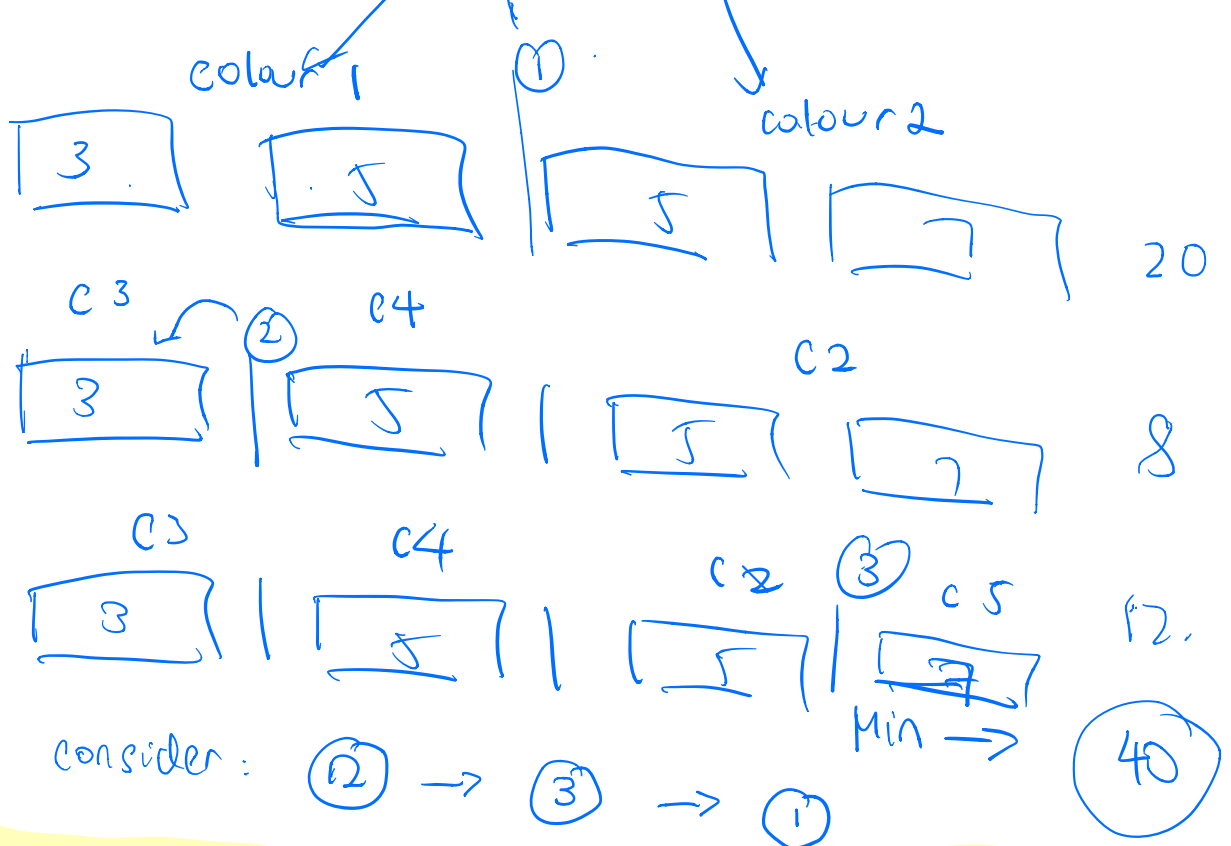


13

8

Ink. 41

Cause Diff colour



Reverse Thinking

- At the end, must have N groups of diff colour canvas.
- Each group only 1 canvas.

a) Combine 3 & 5 → 8

Now left 5, 7, 8

b) Combine 5 & 7 → 12

Now left 8, 12

c) Combine 8 & 12 → 20

$$\text{Minimum ink} = 8 + 12 + 20 = 40$$

- It turns out to be always combining the 2 smallest canvases groups will lead to minimum ink
- Combine 3 & 5 → ink required to make 3 & 5 different colour.
- Use priority queue.
- Greedy Algorithm - local optimal is always combining the 2 smallest groups which would require the least amount of ink.

smallest group which would require the least amount
of ink

int T; 10^2

int N; $1 \leq N \leq 10^5$

long long minInk = 0;

priority_queue<ll, vector<ll>, greater<ll>> canvases;

if (N == 1)

else {

while (!canvases.empty())