Thursday, 4 March 2021 8:17 PM

Binary Search over Answers

Q. Given a value (x) tell if x is a square of an integer value.

Eg: → 16 Yes / True
20 No / False

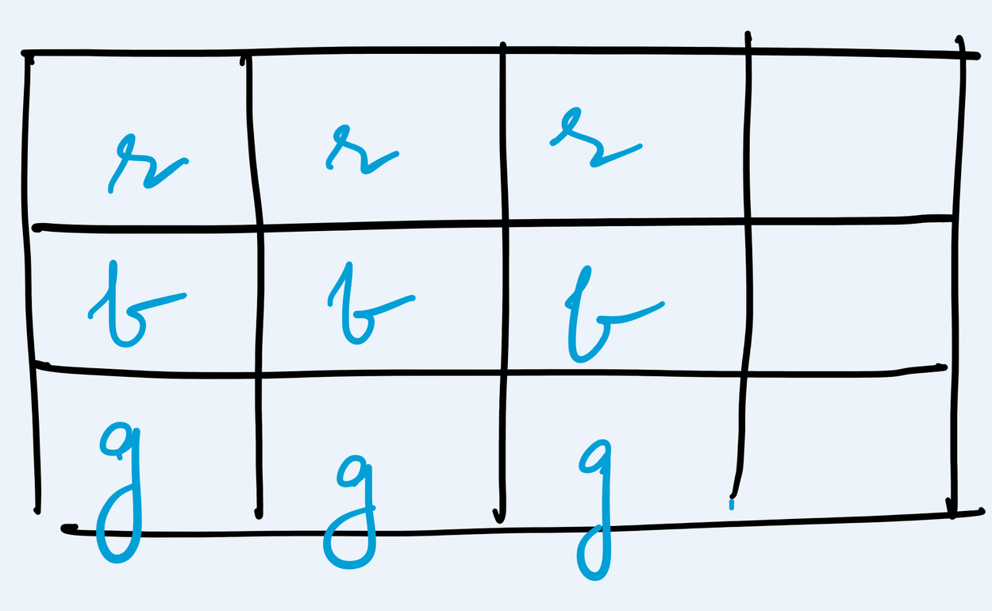
sqrt(x) → take x into

* You can not use sqrt function directly.

(x) → find sqrt(x) → Yes / No

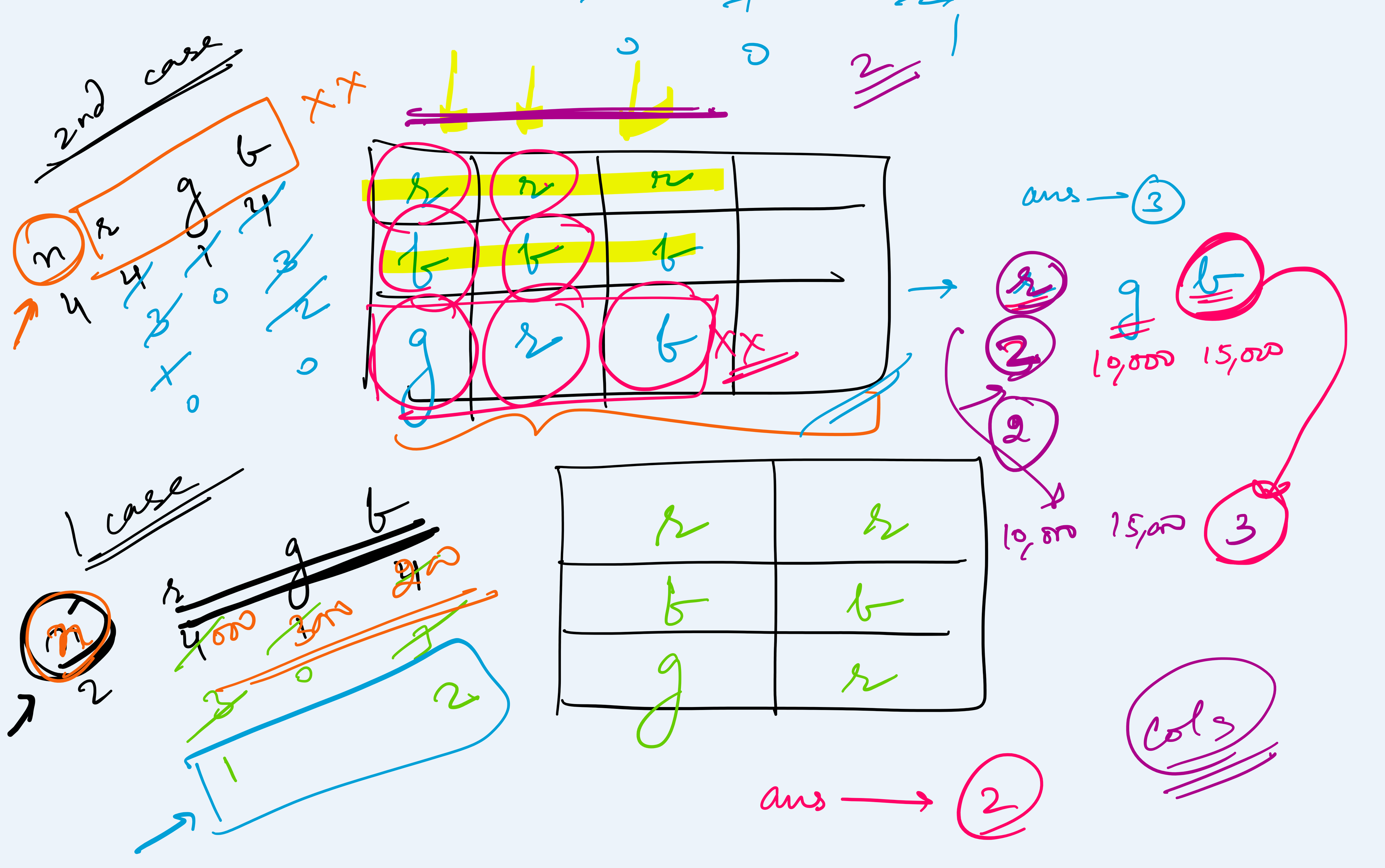
[0 , x]

1. low = 0
   high = (x) (small)
   → go high / go low / exact
2. Find mid (0 + x)/2
3. if (mid * mid == x) → O(1) found ans;
   else if (mid * mid > (x)) {
   (0 → mid) go to left }
   else {
   (mid + 1 → x) go to right }



3 rows

ans → 3



2nd case

ans → 3

1 case

ans → 2

cols

1. Range

Columns

lower bound → [min_ cols = 0
max_ cols = Math. min (n, Math. min (red, blue))]

cols

mid → good

3 x mid

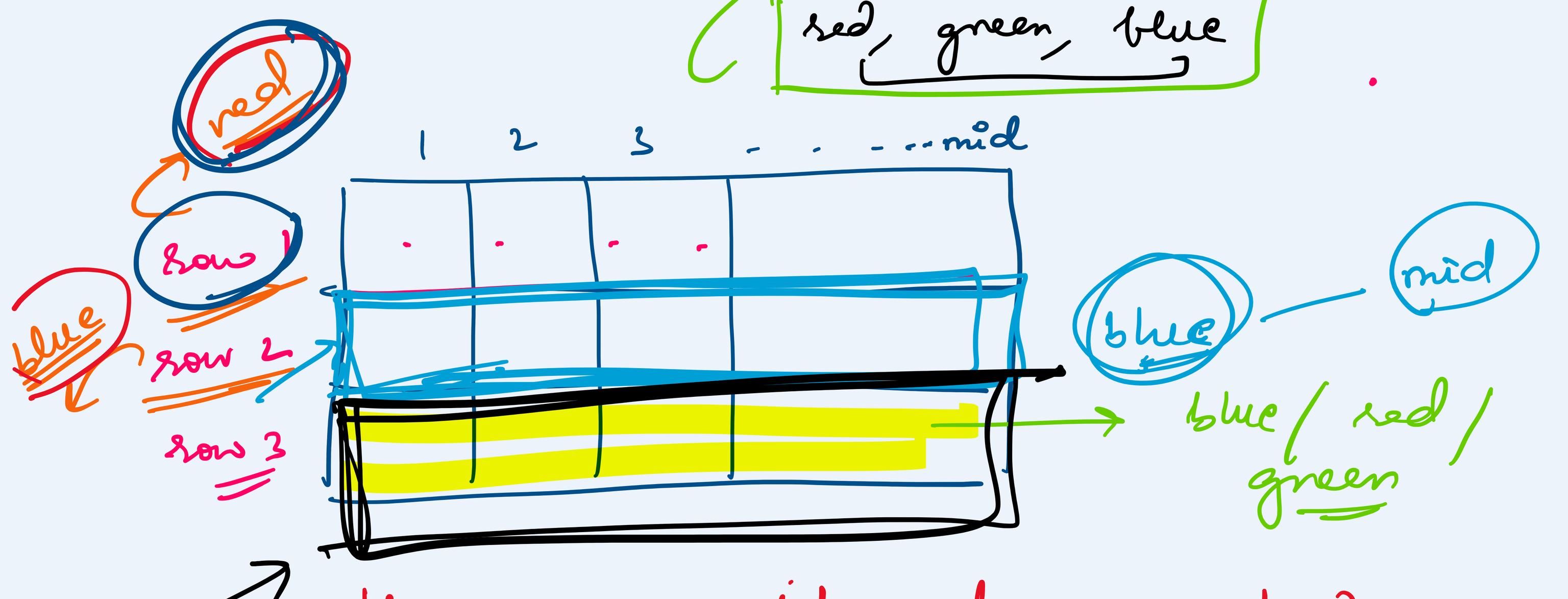
no. of cols that can be filled

If I can fill mid cols

good fn

rows → 3
cols → mid
red, green, blue

3 x mid



How many tiles do you need to fill 1st row of red col??

↑ false
true

left over → red - mid
blue - mid

How many tiles do I need to fill third row ??
no. of tiles → mid
colour → red / blue / green

Q. N stalls → 5
C Cows → 3