Binary Search

→ Binary search on answer
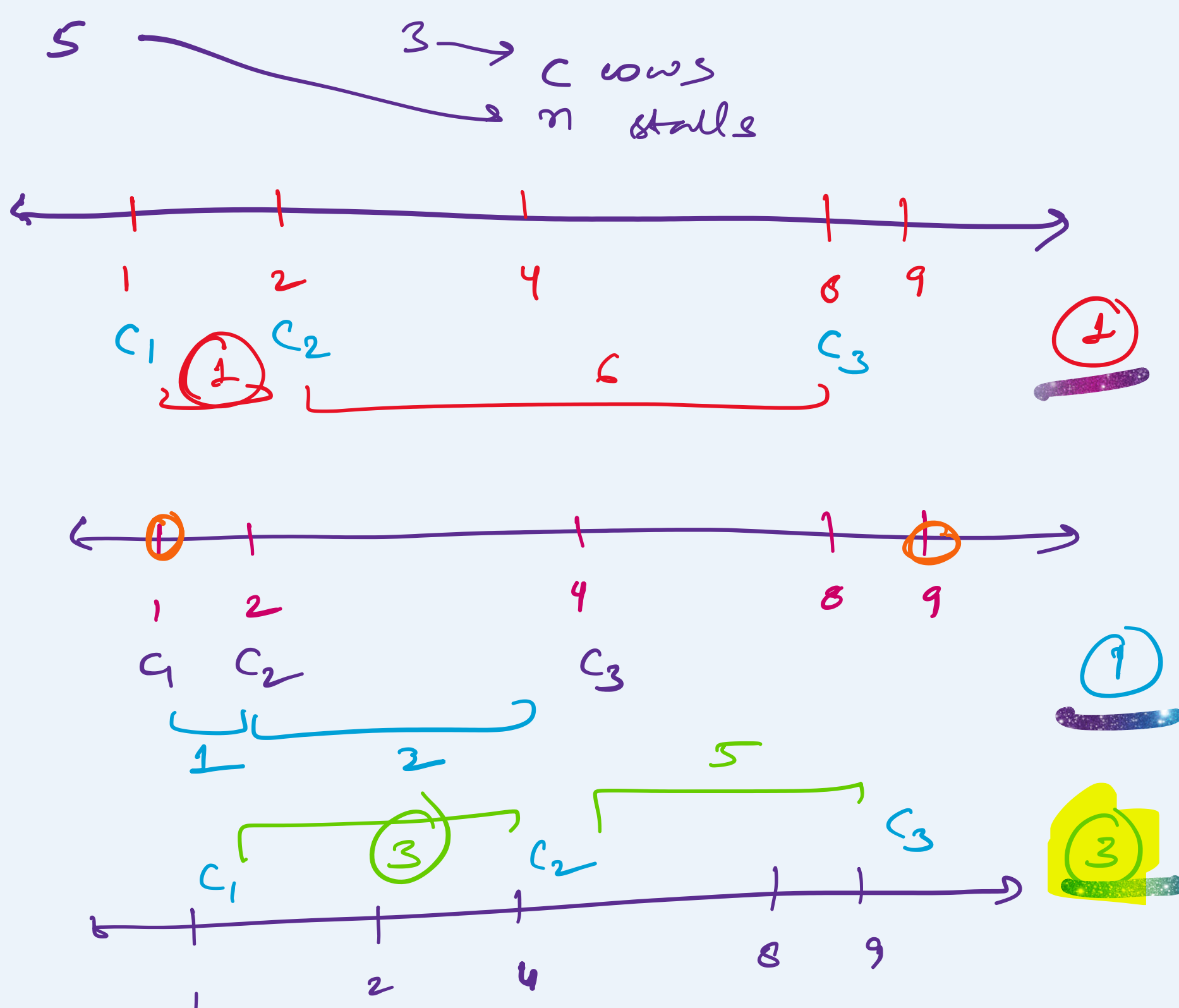
→ Minimax problems

 ↓

Problems when you need to minimise a value, which is a maximum of some other values.

$$min \ (\ max \ (\ , \ . \ .., \ ) \ )$$

or

$$max \ (\ min \ (\ , \ , \ .., \ ) \ )$$

5 ——————→ 3 —→ C cows
                  ↘ n stalls

| 1   2   4   8   9
C₁ (1) C₂   C₃   (1)
       └——————— C ——————┘

 (1)   4   8   9
 1   2
C₁ C₂   C₃   (9)
 └┘   └———┘
  1   2

              5
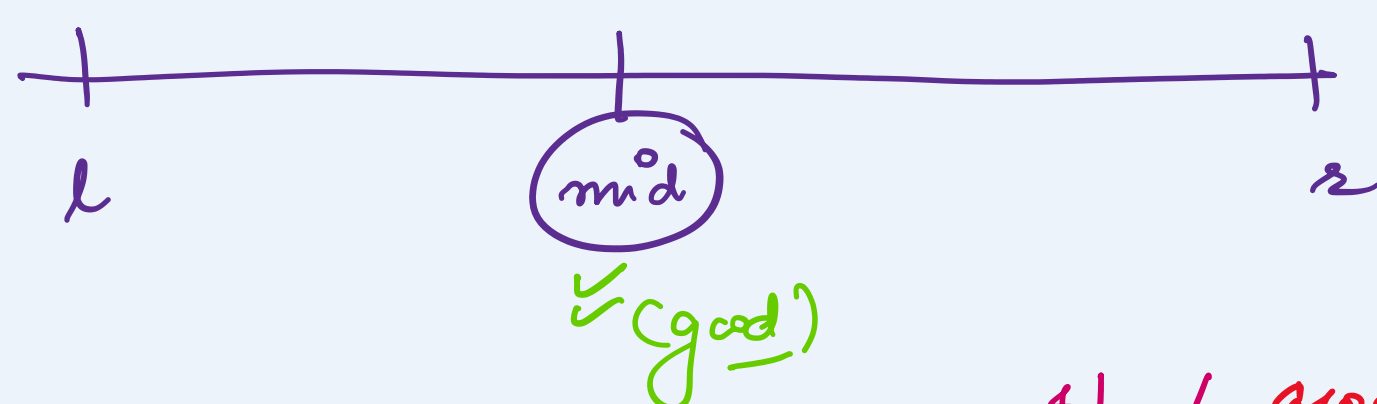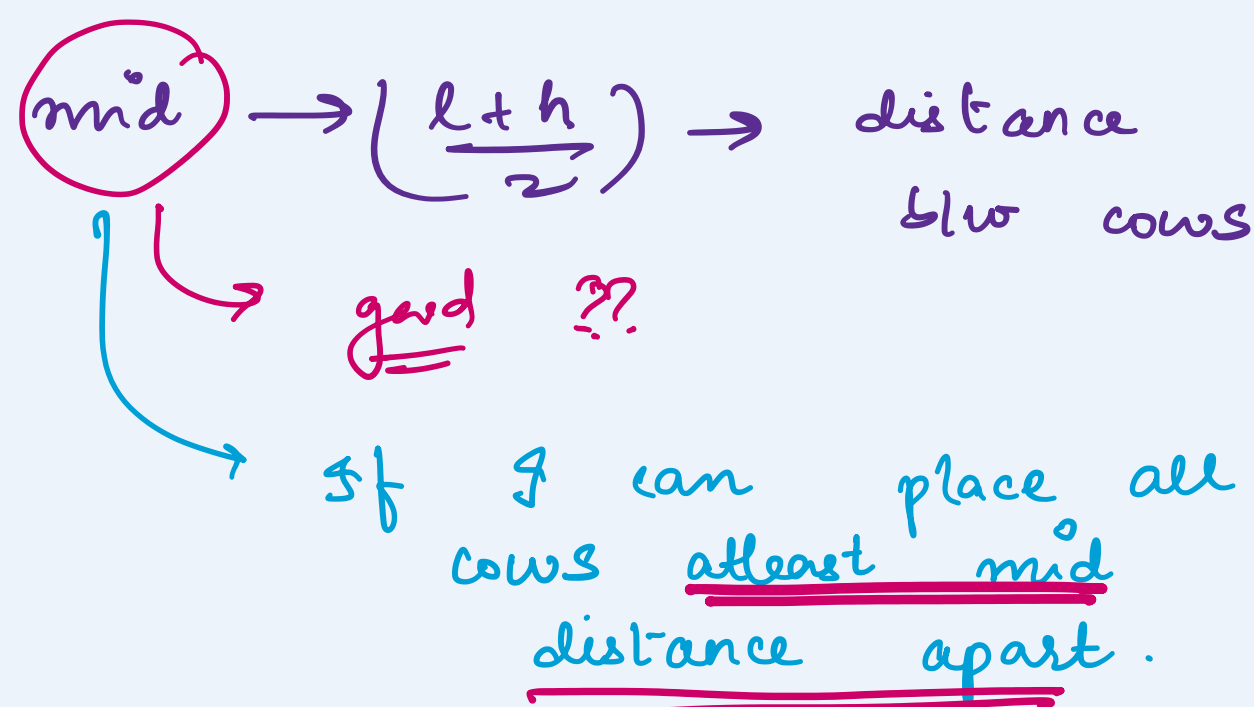   (3) C₂   ┌————┐ C₃   (3)
       C₁
 1   2   4   8   9

1. Search space
2. Middle
3. Decision based on mid value

    ans → distance b/w cows.

    l = 1
    h = max value of array.

         (mid) → ⌊ (l+h)/2 ⌋ → distance
                                  b/w cows
             ↓
          good ??

             → If I can place all
               cows atleast mid
               distance apart.

|————————————|————————————|
l   (mid)   r
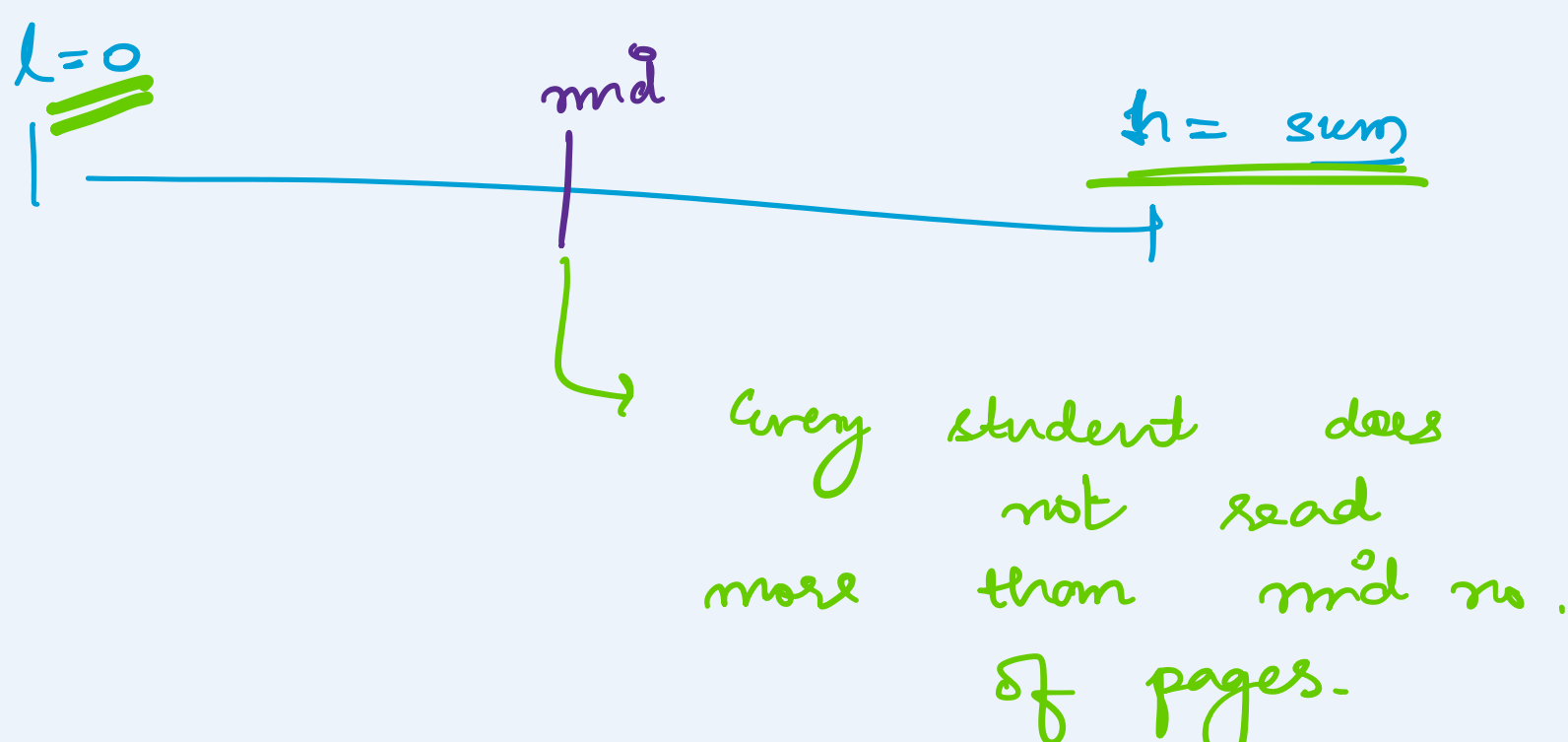   ↙(good)

                    If (good (mid) == t) ——→ right
                         else
                              → move left.

① Range/search space
② Mid
③ Decision based on mid value

   l = 0   mid   h = sum
   |————————————|———————————————|
                ↓
                → Every student does
                     not read
                  more than mid no.
                     of pages.

   good (mid) → left
            ↘ right.