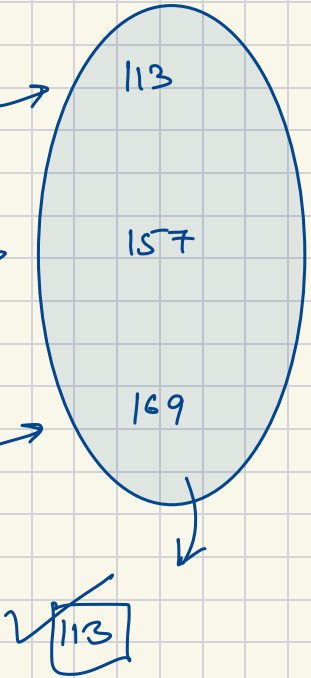
Allocate Minimum Number of Pages.

int[] Books = {34, 12, 67, 90} stud = 2

way 1
S1 → 34, 12, 67
S2 → 90

way 2
S1 → 34, 12
S2 → 67, 90

way 3
S1 → 34
S2 → 12, 67, 90



Books[] = {34, 12, 67, 90}

Case 1 : when we have only one student

M = 1

way 1 : S1 → 34, 12, 67, 90 → 203 pages → min

203 pages

Case 2: when we have M = N students

way 1 : S1 → 34
S2 → 12
S3 → 67
S4 → 90

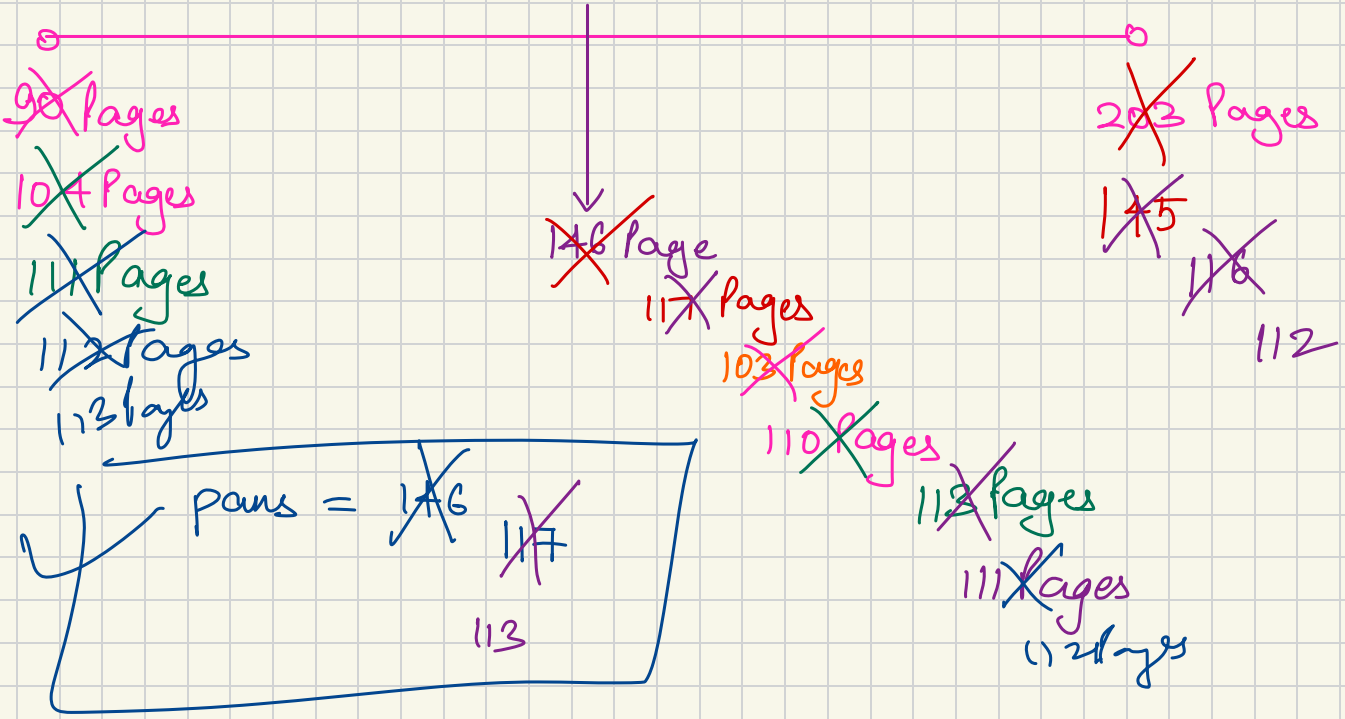
→ 90 Pages → min

90 pages

$1 \leq \text{Students} \leq N$

Range.

stud = 2



int[] Books = { 34, 12, 67, 90 }

✓ maxPages = 146

S1 → 34 + 46 + 67 }
S2 → 90

int[] Books = { 34, 12, 67, 90 }

maxPages = 117

S1 → 34 + 12 + 67 }
S2 → 90

int[] Books = { 34, 12, 67, 90 }

maxPages = 103

S1 → 34 + 12 }
S2 → 67
S3 → 90

int[] Books = {34, 12, 67, 90}

maxPages = 110 Pages

S1 → 34 + 12
S2 → 67
S3 → 90

int[] Books = {34, 12, 67, 90}

maxPages = 113 Pages

S1 → 34 + 12 + 67
S2 → 90

int[] Books = {34, 12, 67, 90}

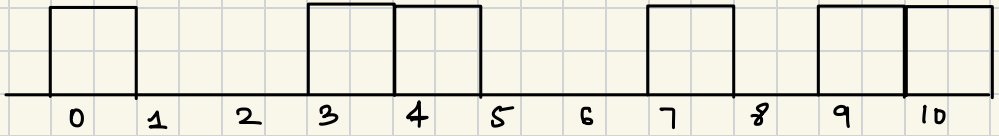
maxPages = 111 Pages

S1 → 34 + 12
S2 → 67
S3 → 90

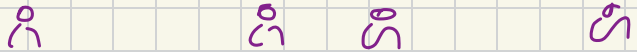
Aggressive Cows

stalls[] = { 0, 7, 3, 9, 10, 4 } cows = 4

maximize the min. dist. b/w any two cows.



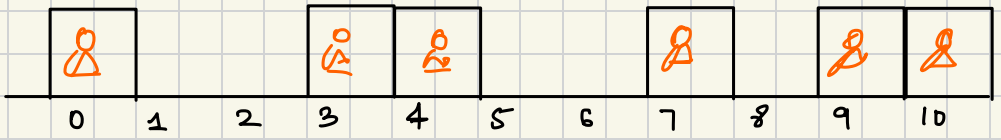
way1



$\frac{4!}{2!2!}$

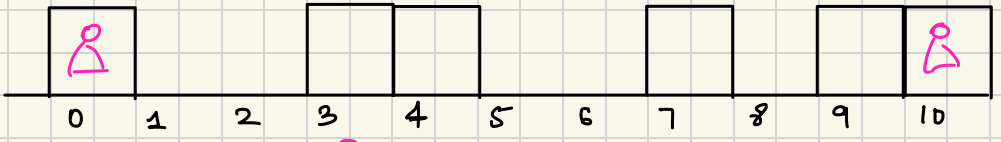
${}^{6}C_{4}$ ways = 15 ways

Case 1 cows = N



minDist = 1 units

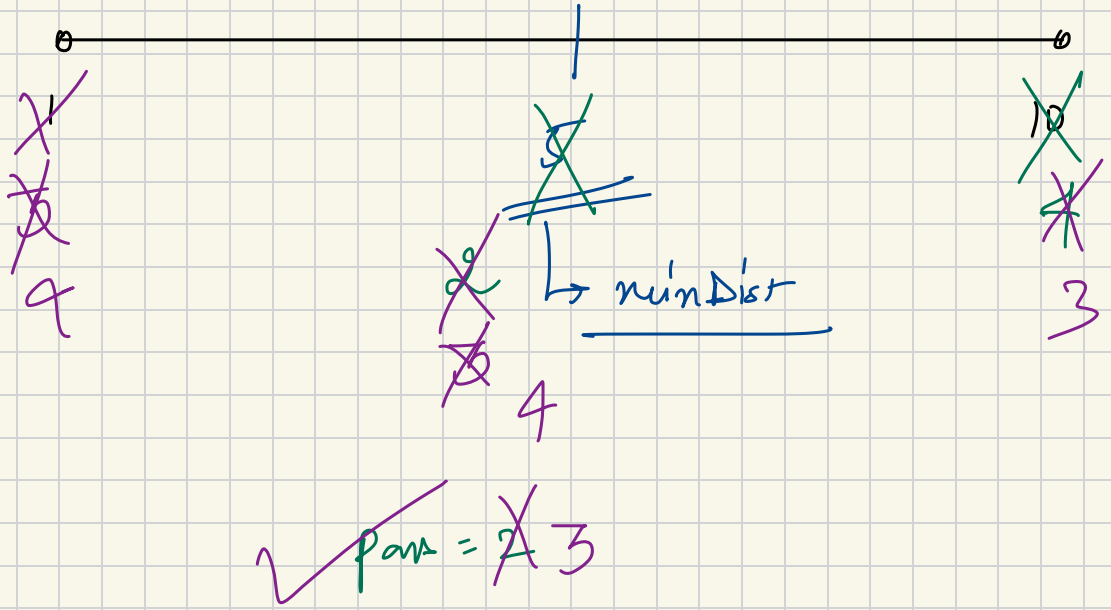
Case 2 cows = 2



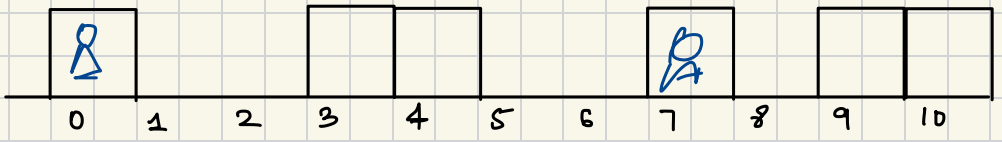
minDist = 10 units

$1 \leq cows \leq 10$

$COWS = 4$

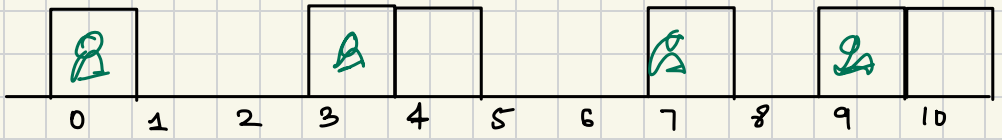


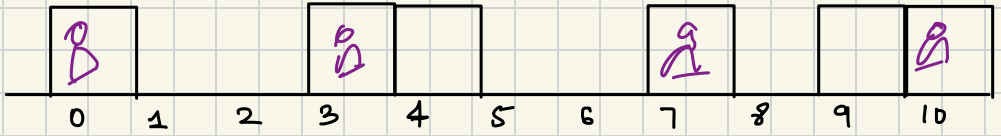
minDist = 5



cowsPlaced = 2

number = 2





minDist = 3

int mid = (si + ei) / 2

int int

$= si - \frac{si}{2} + \frac{ei}{2}$

$$mid = si + \frac{(ei - si)}{2}$$

H.W.

1. Minimum Number of Days to Make m Bouquets