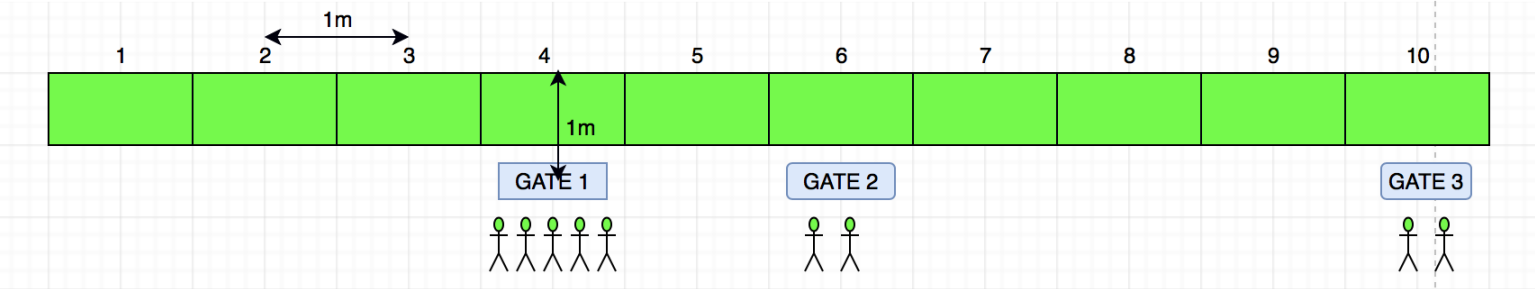


There are N fishing spots and 3 gates. At each gate there are some fishermen waiting to reach the nearest unoccupied fishing spot. (Total no of fisherman <=N)

Distance between consecutive spots = distance between gate and nearest spot = 1 m

Only 1 gate can be opened(other gates after that gate) at a time and all fishermen of that gate must occupy the spots before the next gate is opened.

Distance is calculated as gate to nearest spot + nearest spot to closest vacant spot. Find the total sum of minimum distances need to walk for all the fishermen.



Input Format

Number of fishing spots, N Position of the gates, G_i , $1 < i < 3$ Number of fishermen at each gates, G_{n_i}

Constraints

$1 \leq N \leq 10$ $1 \leq G_i \leq N$ $1 \leq G_{n_i} \leq 15$

Output Format

Output single integer

Sample Input 0

```
10
4 6 10
5 2 2
```

Sample Output 0

```
18
```