781. Rabbits in Forest

There is a forest with an unknown number of rabbits. We asked n rabbits **"How many rabbits have the same color as you?"** and collected the answers in an integer array `answers` where `answers[i]` is the answer of the i^{th} rabbit.

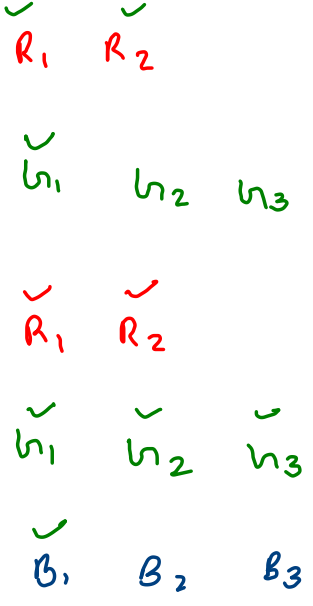
Given the array `answers`, return *the minimum number of rabbits that could be in the forest.*

```
Input: answers = [1,1,2]
Output: 5
```

arr = [1, 1, 2]

0 1 2

R_1 R_2 b_1



arr = [1, 1, 2, 2, 2, 2]

2 3 3

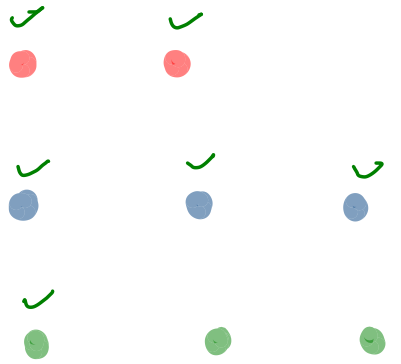
Hashmap → Key : ans

value : how many rabbit

arr = [1, 1, 2, 2, 2, 2]

1 → 2

2 → 4



gs = key + 1

$$ans += \left\lceil \frac{val}{gs} \right\rceil * gs$$

$gs = key + 1$

$mrt = \left\lceil \frac{val}{gs} \right\rceil * gs$

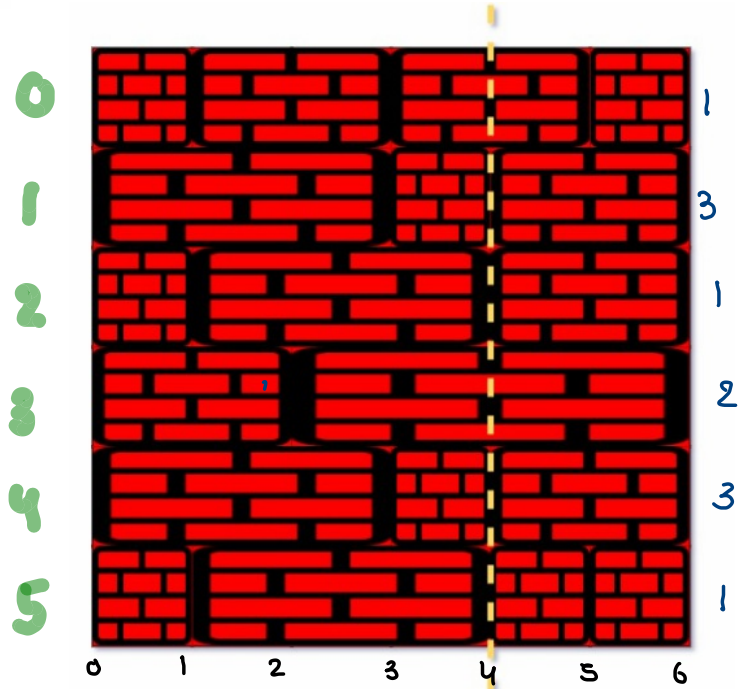
arr : [1, 1, 1, 2, 2, 2, 2, 2, 3, 3, 3, 3, 4, 4]

1 → 3

2 → 5

3 → 4

554. Brick Wall

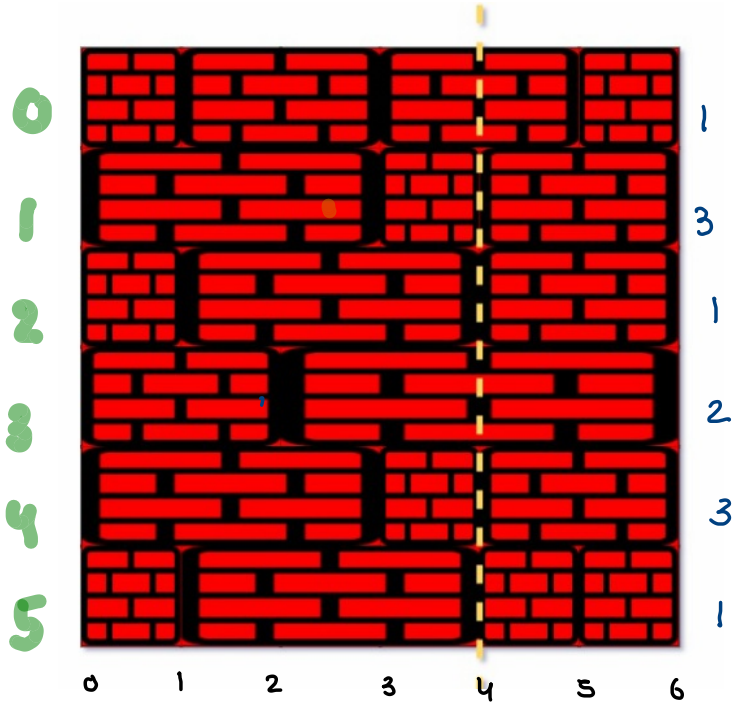


$x = a$

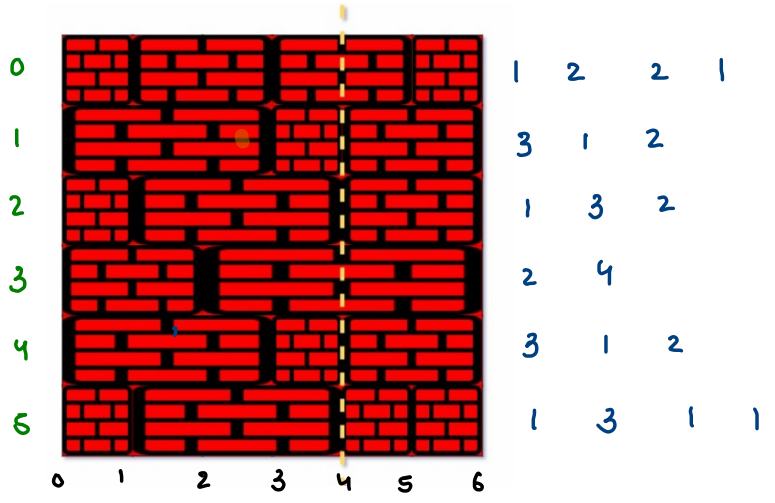
can 'a' be a decimal value?

→ all bricks will be crossed

min no. of bricks crossed = max no. gaps crossed



					gaps	x vs count of gap
0	1	2	2	1	1, 3, 5	
1	3	1	2		3, 4	1 -> 3
2	1	3	2		1, 4	2 -> 1
3	2	4			2	3 -> 3
4	3	1	2		3, 4	4 -> 4
5	1	3	1	1	1, 4, 5	5 -> 2



X vs count of gap

1 → 3 2 → 1

3 → 3

5 → 2

4 → 4

maxgap = 4

minbricks = 6 - 4 = 2

```
for(List<Integer>list : wall) {
    int ps = 0;
    for(int i=0; i < list.size()-1;i++) {
        ps += list.get(i);
        int nf = map.getOrDefault(ps,0) + 1;
        map.put(ps,nf);
    }
}
```

```
int maxgap = 0;

for(int key : map.keySet()) {
    if(map.get(key) > maxgap) {
        maxgap = map.get(key);
    }
}

int minbrick = wall.size() - maxgap;

return minbrick;
```

914. X of a Kind in a Deck of Cards

Easy 1159 281 Add to List Share

In a deck of cards, each card has an integer written on it.

Return `true` if and only if you can choose `X >= 2` such that it is possible to split the entire deck into 1 or more groups of cards, where:

- Each group has exactly `X` cards.
- All the cards in each group have the same integer.

4, 4, 2, 2, 2, 2, 3, 3, 3, 3, 4, 4, 4, 4, 4, 4

(i) each group size must equal
(ii) element in a group must be same.

2 → 4
3 → 4
4 → 8

2 → 4
3 → 6

gs = gcd (values)