CODECON

Memory Limit: 1024 MB
Time Limit: 5 s

Passport Control (300 points)

Introduction

Upon arrival at an international airport, passengers must go through passport control. They are arranged in a line and must go to the lowest numbered available passport control booth, where a border agent will check their travel documents.

Passengers can come alone or in groups. You should assume that every passenger will get through passport control after 1 minute, so a group of 5 passengers will have all its checks completed after 5 minutes. Each group of passengers will be processed by a single border agent.

Each passenger group is immediately assigned to the lowest numbered available border agent, so you should assume no time is spent for this.

Case 1: The group of passengers should go to Booth 2

```
                  Booth 1      Booth 2     Booth 3     ...   Booth N
Passengers ---->  Unavailable  Available   Available   ...   Available
```

Case 2: The group of passengers should go to Booth 1

```
                  Booth 1    Booth 2     Booth 3       ...   Booth N
Passengers ---->  Available  Available   Unavailable   ...   Available
```

After checking 10 passenger groups (regardless of size), each border agent is required to take a break, which will make their respective booth unavailable during 5 minutes.

Your task is to count how many groups were through each booth.

Input Specifications

The first line is a single integer representing the number of passport booths $0 < N \leq 10$. The second line is a single integer representing the number of groups in the queue for passport control, $0 < M \leq 60$. This will be followed by M lines, each representing a group, with a single integer representing the number of passengers in that group $0 < G_M \leq 100$

Output Specifications

You should output a space separated list of integers containing how many groups each border agent has processed. Note that the sum of these integers must be equal to M.

Sample Input/Output

Input

```
3
6
4
2
1
3
```

```
5
1
```

Output

```
2 2 2
```

Explanation

Agents 1, 2 and 3 will take groups with 4, 2 and 1 passengers at first, respectively. Then, agent 3 will take a group with 3 passengers, agent 2 will process the group with 5 and finally agent 3 will let through the final passenger. Each agent will have processed 2 groups.

Input

```
3
6
4
2
1
2
5
1
```

Output

```
1 2 3
```

Explanation

Agents 1, 2 and 3 will take groups with 4, 2 and 1 passengers at first, respectively. Then, agent 3 will take a group with 2 passengers, agent 2 will process the group with 5 and finally agent 2 will let through the final passenger. The final count will be 1, 2 and 3.

Input

```
10
19
1
10
10
10
10
10
10
10
10
10
1
1
1
1
1
1
```

```
1
1
1
```

Output

```
10 1 1 1 1 1 1 1 1 1
```

Explanation

Bad luck, Agent #1

Input

```
10
20
1
10
10
10
10
10
10
10
10
10
1
1
1
1
1
1
1
1
1
1
```

Output

```
10 2 1 1 1 1 1 1 1 1
```

Explanation

Take a rest, Agent #1

Input

```
10
19
10
10
10
10
10
10
```

```
10
10
10
10
1
1
1
1
1
1
1
1
1
1
```

Output

```
1 1 1 1 1 1 1 1 1 10
```

Explanation

Bad luck, Agent #10

Input

```
2
17
1
10
1
1
1
1
1
1
1
1
1
1
1
1
1
1
1
1
```

Output

```
11 6
```

Explanation

Agent #1 returns from break