Q2 - Requests in the buffer

There is a buffer which stores the requests in recent 5000 milliseconds. The request will be removed if it stays more than 5000 milliseconds in the buffer.
In other words, if a requrest arrives at the x th milliseconds, it stays at the buffer during [x, x+5000](both x and x+5000 are included) millisecond.
If there is a new request, the buffer will first store the request, and then output the count of the requests which are currently in the buffer.
Please print the count of the requests which are currently in the buffer.

Input Format

The first line contains an integer which is the count of all requests.
The second line contains integers in ascending order. Each integer represents the time each request arrives. The time is between [0, 20000](both 0 and 20000 are included). The requests arrive sequentially, so the two requests never arrive at the same time.

Constraints

Please use queue to implement.

Output Format

Please print the count of the requests which are currently in the buffer after each request stores in the buffer.

Sample Input 0

```
7
0 1 100 5000 5001 15000 19999
```

Sample Output 0

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

Explanation 0

time	buffer	count
0	[0]	1
1	[0, 1]	2
100	[0, 1, 100]	3
5000	[0, 1, 100, 5000]	4
5001	[1, 100, 5000, 5001]	4
15000	[15000]	1
19999	[15000, 19999]	2