

Popeye and the magical land

As usual Popeye and brutus are fighting for olive, and suddenly a witch appears and took popeye to magical land as brutus called that witch. In magical land, the witch with her magic make $N(1 \leq N \leq 100)$ number of clones of popeye of different strength ($0 \leq S_i \leq 100$) i.e each popeye can hold another popeyes above his head, and number of popeyes which can be hold will be less than or equal to strength of popeye which is holding other popeyes.

Eg: Imagine there are three popeyes: the first has strength 2, the second has strength 1 and the third has strength 1. We cannot put the second and the third popeye simultaneously on the top of the first one. But the second popeye can place directly on the top of the first one, and then the third popeye directly on the top of the second one. We will call such construction of popeye a "**Popeye-stack**".

The witch want him to make **Minimum** number of popeye-stack and give her **Maximum Height** of popeye-stack from that arrangement, then only she release him from the magic and give him spinach to defeat brutus. Help popeye to get released from the magic of the witch.

Input

First line of Input contains no. of test cases $T(T \leq 1000)$. Each test case contain two lines: 1st line contains $N(1 \leq N \leq 100)$ and 2nd line contain N spaced S_i (strength of N popoyes) ($0 \leq S_i \leq 100$)

Output

For each test case output a string "Case #i: " ("i" is test case number) followed by **Minimum** number of popeye-stack and **Maximum Height** of popeye-stack seperated by a space.

Example

Input:

```
2
5
0 1 2 3 4
9
0 1 0 2 0 1 1 2 10
```

Output:

```
Case #1: 1 5
Case #2: 3 4
```