Yet Another Subset Sum Problem

Let **Y** be an array of integers of size **N**.
Let **G(x)** be a set comprising of the size of all the subsets of the array Y whose sum is **x**.
Let **F(G(x))** denote the number of unique elements in the set **G(x)**.

Your task is to find the *maximum value of F(G(x))* and the *corresponding value x* for the given array Y.
In Case, many 'x' correspond to maximum F(G(x)), *print the smallest one*.

Input

The first line describes the number of test cases T.
The input contains several test cases, each one described in exactly two lines.
The first line contains an integer N indicating the number of elements in the array.
The second line contains N integers separated by single spaces, representing the elements of the array.

Output

For every test case, print two integers: maximum F(G(x)) and the minimum value of x corresponding to it.

Constraints
T<=50
1<=N<=50
1<=Y[i]<=1000

Example

Input:
2
4
1 2 3 4
6
3 2 3 4 5 3

Output:
2 3
2 5

Explanation
For test Case 1,
G(1) : {1} and F(G(1)) : 1.
G(2) : {1} and F(G(2)) : 1.
G(3) : {1,2} and F(G(3)) : 2.
G(4) : {1,2} and F(G(4)) : 2.
G(5) : {2,2} and F(G(5)) : 1.
G(6) : {2,3} and F(G(6)) : 2.
G(7) : {2,3} and F(G(7)) : 2.
G(8) : {3} and F(G(8)) : 1.
G(9) : {3} and F(G(9)) : 1.
G(10): {4} and F(G(10)) : 1.