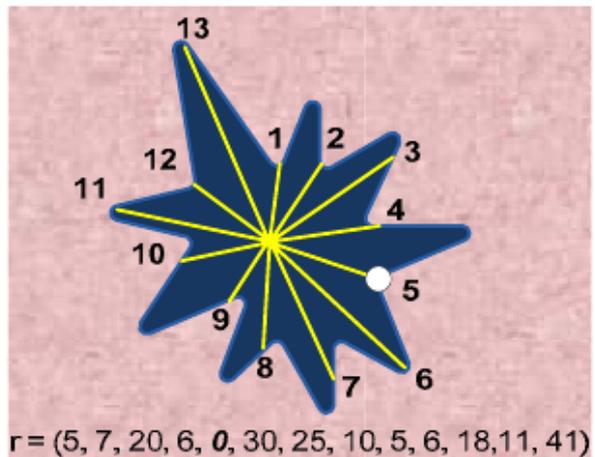


4005 Ig-Nobel Prize

One of the scientific research projects was almost chosen to the shortlist of the Ig Nobel. It was rejected because the author stated that the analyzed data is not sufficient, and that it will be studied further in the future. The research is to investigate the shape of ink drops left by grade 1 students in their notebooks. The author chose a point in the ink drop to act as the center. A line starting from that point rotates 360° ; and whenever it hits an angle of $360^\circ/n$, the intersection of the line and the border of the drop will be marked. At the i -th mark, we get the i -th intersection ($i = 1, 2, \dots, n$). Thus, after the $(n - 1)$ -th is the n -th, and after the n -th is the 1-st one. The author recorded the length r_i from the center to the i -th intersection by ($1 \leq r_i \leq 10^6$).



However, at the m -th marking of the intersection, he accidentally made a hole in the paper. Therefore, he didn't have the exact r_m . With the honesty of a scientist, he left r_m blank, recorded as a value of 0. One of the research goals is to find a rain drop which has a shape closest to that of the ink drop. In order to find it, the author planned to eliminate a minimal number of intersections so that the r_i of the remaining intersections can form a **descending order** of values starting from a certain intersection by either directions (in a circular way). In this process, the unknown value r_m is assigned by a value k in the range from 1 to n .

Given n and r_i ($i = 1 \dots n$), your task is to write a program to find the value of k in order that the number of the eliminated intersections is minimal. In the case that there is more than one value of k , find the smallest one.

Input

The input file consists of several data sets. The first line of the input file contains the number of data sets which is a positive integer and is not bigger than 20. The following lines describe the data sets.

For each test case, the first line contains the integer n ($1 < n \leq 10000$). The second line contains n integers r_1, r_2, \dots, r_n separated by space.

Output

For each test case, write in one line two integers: k and the minimal number of eliminated intersections separated by one single space.

Sample Input

```
1
5
5 7 0 7 4
```

Sample Output

1 1