Exercise – *Deck of Cards*

You are given a deck of n custom made cards, denoted by $0, \ldots, n-1$ going from the top of the deck to the bottom. Each card i has a number v_i which represents its value. You play a strange game with your younger brother, where he tells you his favourite number k and you need to find cards i and j such that $i \leqslant j$ and $\sum_{\ell=i}^{j} v_\ell = k$. Since you are older than your brother, you know that finding such a subset of the deck won't always be possible. Thus, you want to write a program which finds two cards i and j such that the sum $\sum_{\ell=i}^{j} v_\ell$ is as close as possible to k. If there are multiple candidates for the solution, find the one which is lexicographically smallest.

Input The first line of the input contains the number $t \leqslant 80$ of test cases. Each of the t test cases is described as follows.

- It starts with a line that contains two integers n k, separated by a space, where n denotes the number of cards, and such that $1 \leqslant n \leqslant 10^5$ and $0 \leqslant k \leqslant 2^{30}$.
- The following line defines the values of the cards 0 to $n-1$, in that order. It contains n integers v_0 ... v_{n-1}, separated by a space, and such that $0 \leqslant v_i \leqslant 2^{30}$, for $i \in \{0, \ldots, n-1\}$. It is guaranteed that $\sum_{i=0}^{n-1} v_i \leqslant 2^{30}$.

Output A solution is a pair i, j of cards with $i \leqslant j$. We define the value of the solution i, j as

$$\mathrm{val}(i, j) := \left| k - \sum_{\ell=i}^{j} v_\ell \right|.$$

For each test case output a single line containing two numbers i and j, separated by a space, corresponding to the solution i, j with the smallest value. If there are multiple such solutions, output the lexicographically smallest one.

Note: (i, j) is lexicographically smaller than (i', j') iff $i < i'$ or $i = i'$ and $j < j'$.

Points There are three groups of test sets. For each group there is also a corresponding hidden test set. Overall, you can achieve 100 points.

1. For the first group of test sets, worth 20 points, and the corresponding hidden test set, worth 5 points, you may assume $n \leqslant 200$.
2. For the second group of test sets, worth 40 points, and the corresponding hidden test set, worth 10 points, you may assume $n \leqslant 3000$.
3. For the third group of test test sets, worth 20 points, and the corresponding hidden test set, worth 5 points, there are no additional assumptions.

Corresponding sample test sets are contained in `testi.in/out`, for $i \in \{1, 2, 3\}$.

Sample Input

```
3
5 1
3 1 5 2 1
5 6
3 2 5 2 3
5 22
2 3 4 6 2
```

Sample Output

```
1 1
0 1
0 4
```