

Problem D. Kingdom

Time limit 250 ms
Memory limit 256MB

Problem Description

In a distant kingdom, there are N regions, each with a unique index from 1 to N . Each region has its own cultural value denoted by a_i .

To facilitate the management of these regions, the central government wants to merge different regions for better development. For example, if two regions with indices x and y ($1 \leq x < y \leq N$) want to merge, two metrics are introduced for evaluation:

- **Cultural Difference Value (V):** The sum of the cultural values of all regions between the two regions, calculated as $V = \sum_{k=x}^y a_k$.
- **Cross-Index Difference (D):** The index difference between the two regions, calculated as $D = y - x + 1$.

The most suitable regions for merging are those for which $V^2 + D^2$ is minimized.

As a member of the central government, your task is to find the pair of regions with the smallest value of $V^2 + D^2$. Output the indices of these two regions.

Input format

The first line contains an integer N ($2 \leq N \leq 10^6$) — the number of regions.

The second line contains N integers a_1, a_2, \dots, a_N ($-10^8 \leq a_i \leq 10^8$) — the cultural values of the regions.

Output format

Output two different integers x and y ($1 \leq x < y \leq N$) — the indices of the two regions that minimize $V^2 + D^2$.

If there are multiple such pairs, output any one of them.

Subtask score

Subtask	Score	Additional Constraints
1	30	$N \leq 5000$
2	70	No constraints

Sample

Sample Input 1

```
5
5 1 2 3 4
```

Sample Output 1

```
2 3
```

Sample Input 2

```
5
3 2 2 -2 3
```

Sample Output 2

```
3 4
```