Team Selection

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	256 mebibytes

Evirir the dragon is a competitive flying coach. It coaches N dragon athletes numbered $0, 1, \ldots, N-1$. For each i, athlete i has speed A_i.

Evirir needs to form a team for the upcoming team flying competition. Due to weird regulations, the team must consist of a contiguous range of at least K athletes. That is, Evirir must choose l and r ($0 \le l \le r \le N-1$) such that $K \le r - l + 1$ and form a team consisting of athletes $l, l+1, \ldots, r$.

The *strength* of a team is the sum of the minimum and maximum speeds of the athletes in the team. Help Evirir find a team with the maximum strength. If multiple teams have the maximum strength, Evirir prefers one with the largest number of athletes (as large teams are more impressive).

Input

The first line contains two space-separated integers, N and K.

The second line contains N space-separated integers, $A_0, A_1, \ldots, A_{N-1}$.

Output

Let m be the maximum possible strength of a team, and suppose the team with strength m consists of athletes $l, l+1, \ldots, r$. Output three space-separated integers: m, l, and r ($0 \le l \le r \le N-1$, $K \le r - l + 1$).

If there are multiple teams with the maximum strength, output **any** such team with the largest number of athletes.

You can obtain partial points if you output the correct strength and any valid team. That is, output the correct m, and output any integers l and r such that $0 \le l \le r \le N-1$ and $K \le r - l + 1$. In particular, you can always output m, 0, $K-1$. See the Scoring section for scoring details.

Scoring

For all test cases, the input will satisfy the following constraints:

- $1 \le K \le N \le 2 \cdot 10^5$
- $1 \le A_i \le 10^9$ for all $0 \le i \le N-1$

For all subtasks, if you output the maximum strength with any valid team, you can get 50% of the subtask's points.

Subtask	Points	Additional constraints
1	8	$K = 1$
2	10	$N \le 5000$
3	14	$A_i \le 2$ for all $0 \le i \le N-1$
4	26	$A_i \le 20$ for all $0 \le i \le N-1$
5	10	$A_i \le 50$ for all $0 \le i \le N-1$
6	32	—

Examples

example input	example output
9 3 1 2 3 3 4 3 1 5 2	7 2 5
5 2 2 2 1 2 2	4 0 1
2 1 6 7	14 1 1

Note

Example 1

This example is valid for subtasks 2, 4, 5, and 6.

There are $N = 9$ athletes and Evirir must choose a team of at least $K = 3$ athletes. One optimal team is $l = 2$ and $r = 5$, whose athletes' speeds are 3, 3, 4, and 3. The minimum speed is 3 and the maximum speed is 4, so the strength of the team is $3 + 4 = 7$. Therefore, the output is `7 2 5`.

Here are some other outputs and their results.

Output	Points	Explanation
7 7 8	0%	The team has fewer than 3 athletes.
4 0 2	0%	The team strength is not the maximum possible.
7 0 2	50%	The team strength is correct, even though the output team is incorrect.
7 2 4	50%	For full points, the team size must be the largest possible.

Example 2

This example is valid for subtasks 2, 3, 4, 5, and 6.

Note that the output `4 3 4` will also be awarded full points because the team also has the maximum possible strength of 4 and the maximum number of athletes of 2.

Example 3

This example is valid for subtasks 1, 2, 4, 5, and 6.

If the team consists of one athlete only, the team strength is twice of that athlete's speed because both the minimum and maximum speeds in the team belong to that athlete.