

Problem Q. Q

Time limit 2000 ms

Mem limit 1048576 kB

Problem Statement

You are given an integer sequence $A = (A_1, A_2, \dots, A_N)$ of length N and integers L and R such that $L \leq R$.

For each $i = 1, 2, \dots, N$, find the integer X_i that satisfies both of the following conditions. Note that the integer to be found is always uniquely determined.

- $L \leq X_i \leq R$.
- For every integer Y such that $L \leq Y \leq R$, it holds that $|X_i - A_i| \leq |Y - A_i|$.

Constraints

- $1 \leq N \leq 2 \times 10^5$
- $1 \leq L \leq R \leq 10^9$
- $1 \leq A_i \leq 10^9$
- All input values are integers.

Input

The input is given from Standard Input in the following format:

```
N L R
A_1 ... A_N
```

Output

Print X_i for $i = 1, 2, \dots, N$, separated by spaces.

Sample 1

| Input | Output |
|--------------------|-----------|
| 5 4 7 3 1 4 9 7 | 4 4 4 7 7 |

For $i = 1$:

- $|4 - 3| = 1$
- $|5 - 3| = 2$
- $|6 - 3| = 3$
- $|7 - 3| = 4$

Thus, $X_i = 4$.

Sample 2

| Input | Output |
|--------------------|----------|
| 3 10 10 11 10 9 | 10 10 10 |