

3. PRINOVA

Brojko and Brojana are happily married with N little boys. The boys are named with distinct **even** integers P_1, P_2, \dots, P_N .

Brojko and Brojana are expecting an addition to their family and have to come up with a nice name for the little girl. They have decided that the name will be an **odd** integer in the range $[A, B]$. Because they find all integers in that range equally beautiful, they have decided to choose the number which maximizes the distance to the name of the closest of the N boys.

More precisely, they seek an odd integer $X \in [A, B]$ such that the expression

$$\min\{|X - P_i|, i \in [1, N]\}$$

is as large as possible.

Write a program that determines the name for the little girl. If there are multiple solutions, output any of them.

Input

The first line contains an integer N ($1 \leq N \leq 100$), the number of boys.

The second line contains N distinct even integers, the names of the boys. The integers will be less than 10^9 .

The third line contains the integers A and B ($1 \leq A < B \leq 10^9$), the range of names they are considering for the girl.

Output

Output an integer, the name for the little girl.

Sample test data

input	input	input
3	3	3
2 6 16	2 6 16	2 6 16
20 50	3 15	1 7
output	output	output
49	11	5