

Last Stone



Bob and Sally play the following game. At the beginning of the game several stones lie in a box. The two players take stones in turns, and the player who takes the last stone wins. On each turn, a player may take T_i stones for any i between 1 and s . For each number k between m and n , inclusive, the game is played once with the box containing k stones at the start of the game. Assuming both players play optimally, find out how many times Bob will win (Bob always moves first).

Input Format

First line of input contains 3 numbers s , m and n . Second line contains s numbers T_1, T_2, \dots, T_s .

Constraints

- $1 \leq s \leq 50$
- $1 \leq T_i \leq 100$
- Sequence T_1, T_2, \dots, T_s will be in strictly ascending order.
- $T_1 = 1$
- $1 \leq m \leq n \leq 100000$

Output Format

Print a single number — how many times Bob will win.

Sample Input 0

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

Sample Output 0

```
4
```

Explanation 0

If the box contains 1, 3 or 4 stones, Bob wins by taking them all on his first turn. If the box contains 2 stones, Bob is forced to take 1 stone, and Sally wins by taking the other one. If the box contains 5 stones, Bob takes 3 stones (leaving 2 stones in the box) and wins the game on his next turn.

Sample Input 1

```
1 1 100
1
```

Sample Output 1

```
50
```

Sample Input 2

```
10 1 10
1 2 3 4 5 6 7 8 9 10
```

Sample Output 2

10

Sample Input 3

3 1 8
1 2 3

Sample Output 3

6