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A strange lift

Time Limit: 2000/1000 MS (Java/Others) Memory Limit: 65536/32768 K (Java/Others)
Total Submission(s): 37557 Accepted Submission(s): 13286

Problem Description

There is a strange lift. The lift can stop at every floor as you want, and there is a number K_i ($0 \leq K_i \leq N$) on every floor. The lift has just two buttons: up and down. When you are at floor i , if you press the button "UP", you will go up K_i floor, i.e., you will go to the $i + K_i$ floor; as the same, if you press the button "DOWN", you will go down K_i floor, i.e., you will go to the $i - K_i$ floor. Of course, the lift can't go up higher than N , and can't go down lower than 1. For example, there is a building with 5 floors, and $k_1 = 3, k_2 = 3, k_3 = 1, k_4 = 2, k_5 = 5$. Beginning from the 1st floor, you can press the button "UP", and you'll go up to the 4th floor; and if you press the button "DOWN", the lift can't do it, because it can't go down to the -2nd floor, as you know, the -2nd floor isn't exist. Here comes the problem: when you are on floor A , and you want to go to floor B , how many times at least he has to press the button "UP" or "DOWN"?

Input

The input consists of several test cases. Each test case contains two lines.
The first line contains three integers N, A, B ($1 \leq N, A, B \leq 200$) which describe above. The second line consists of N integers k_1, k_2, \dots, k_n .
A single 0 indicates the end of the input.

Output

For each case of the input output an integer, the least times you have to press the button when you are on floor A , and you want to go to floor B . If you can't reach floor B , printf "-1".

Sample Input

```
5 1 5
3 3 1 2 5
0
```

Sample Output

```
3
```

Recommend

8600

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Hangzhou Dianzi University Online Judge 3.0
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Designer & Developer : Wang Rongtao LinLe GaoJie GanLu
Total 0.000000(s) query 1, Server time : 2019-07-17 19:16:47, Gzip disabled

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