

# Village Hidden in The Leaf

locked

Problem

Submissions

Time Limit :  $C/C++ (2s)$  ,  $Java (4s)$ 

Memory Limit :  $512 MB$ 

Little Labib lives in a village that is hidden in the leaf. There are  $N$  houses in the village located in a line and represented by an array  $A$  where  $A_i$  denotes the holding number of the  $i^{th}$  ( $1 \leq i \leq N$ ) house. If Labib wants to move from house  $i$  he can move to his adjacent houses ( $i + 1$  or  $i - 1$ ), where house holding number can't be a prime number. Keep in mind that he can't go outside of the village. Now you will be given  $Q$  queries of 2 types.

- 1  $X$  - How many houses can Labib can go to from the  $X^{th}$  house with mentioned condition.
- 2  $X Y$  - Replace the holding number of the  $X^{th}$  house with  $Y$ .

## Input Format

Input start with an integer  $T$  denoting the number of test cases. Then  $T$  testcases follow.

For each test case, input starts with two integers  $N$  and  $Q$  denoting number of houses and number of queries to be performed.

Next line contains an array  $A$  of  $N$  integers denoting house holding numbers.

Each of the next  $Q$  lines contains a query as described above.

## Constraints

$$1 \leq T \leq 10^4$$

$$1 \leq N \leq 10^5$$

$$1 \leq Q \leq 10^5$$

$$1 \leq A_i, Y \leq 10^7$$

$$1 \leq X \leq N$$

It is guaranteed that both the sum of  $N$  and the sum of  $Q$  over all test cases do not exceed  $5 * 10^5$ .

## Output Format

For each query of type 1, print the expected result in a separate line. You may see the sample I/O for better explanation.

## Sample Input 0

```
1
5 5
2 1 4 3 6
1 1
1 2
1 4
2 3 5
1 4
```

## Sample Output 0

2  
1  
3  
1

Explanation 0

- First query: he can go house **2** and **3** from house **1**.
- Second query: he can go only house **3** from house **2**.
- Third query: he can go house **2, 3** and **5** from house **4**.
- Fourth query: he replaced the house **3** with new holding number **5**, now array looks like [**2,1,5,3,6**].
- Fifth query: he can go only house **5** from house **4**.



Submissions: 167

Max Score: 1

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C

```
1 #include <stdio.h>
2 #include <string.h>
3 #include <math.h>
4 #include <stdlib.h>
5
6 int main() {
7
8     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
9     return 0;
10 }
11
```

Line: 1 Col: 1

[Upload Code as File](#) ☐ Test against custom input

Run Code

Submit Code