

Sansa has an array. She wants to find the value obtained by XOR-ing the contiguous subarrays, followed by XOR-ing the values thus obtained. Determine this value.

**Example**

*arr* = [3, 4, 5]

Subarray	Operation	Result
3	None	3
4	None	4
5	None	5
3, 4	3 XOR 4	7
4, 5	4 XOR 5	1
3, 4, 5	3 XOR 4 XOR 5	2

Now we take the resultant values and XOR them together:

$3 \oplus 4 \oplus 5 \oplus 7 \oplus 1 \oplus 2 = 6$ . Return 6.

**Function Description**

Complete the *sansaXor* function in the editor below.

sansaXor has the following parameter(s):

- *int arr[n]*: an array of integers

**Returns**

- *int*: the result of calculations

**Input Format**

The first line contains an integer *t*, the number of the test cases.

Each of the next *t* pairs of lines is as follows:

- The first line of each test case contains an integer *n*, the number of elements in *arr*.
- The second line of each test case contains *n* space-separated integers *arr[i]*.

**Constraints**

$1 \leq t \leq 5$   
 $2 \leq n \leq 10^5$   
 $1 \leq arr[i] \leq 10^8$

**Sample Input 0**

```
2
3
1 2 3
```

```
4
4 5 7 5
```

### Sample Output 0

```
2
0
```

### Explanation 0

Test case 0:

$$1 \oplus 2 \oplus 3 \oplus (1 \oplus 2) \oplus (2 \oplus 3) \oplus (1 \oplus 2 \oplus 3) = 2$$

Test case 1:

$$4 \oplus 5 \oplus 7 \oplus 5 \oplus (4 \oplus 5) \oplus (5 \oplus 7) \oplus (7 \oplus 5) \oplus (4 \oplus 5 \oplus 7) \oplus (5 \oplus 7 \oplus 5) \oplus (4 \oplus 5 \oplus 7 \oplus 5) = 0$$

### Sample Input 1

```
2
3
98 74 12
3
50 13 2
```

### Sample Output 1

```
110
48
```

### Explanation 1

Test Case 0:

$$98 \oplus 74 \oplus 12 \oplus (98 \oplus 74) \oplus (74 \oplus 12) \oplus (98 \oplus 74 \oplus 12) = 110$$

Test Case 1:

$$50 \oplus 13 \oplus 2 \oplus (50 \oplus 13) \oplus (13 \oplus 2) \oplus (50 \oplus 13 \oplus 2) = 48$$