

Birds

Description

There are n trees form a cycle, the i -th tree has a bird with value a_i on it. You, the talent hunter, want to shot some birds and maximize the sum of values. But when you shot at one bird, the birds on the adjacent trees will be scared and fly away (wave).

Input

The first line contains a integer T indicating the total number of test cases. Each test case contains two lines. The first line contains a integer n , denoting the number of birds. The second line contains n integers a_1, a_2, \dots, a_n , denoting the value of each bird in clockwise order.

- $1 \leq T \leq 1000$
- $3 \leq n \leq 100000$
- $1 \leq a_i \leq 10000$
- There are at most 10 test cases with $n > 1000$.

Output

For each test case, print the maximum sum of values you can get.

Sample Input

```
2
3
5 1 4
6
3 1 4 1 5 9
```

Sample Output

```
5
13
```