Task D
Pizza Party

Alice and Bob share a pizza. The pizza is sliced by cuts from the middle to the crust. There may be any number of pieces which may be of various sizes. To eat the pizza Alice and Bob have to stick to the following rules:

- They pick pieces in an alternating fashion,

- Alice starts by eating any piece of the pizza,

- Afterward only pieces adjacent to already eaten pieces may be picked.

Your task is to compute the total size of the slices eaten by Alice when both Alice and Bob play their best strategies. Your algorithm should work in $O(n^2)$-time.

Input

The first line contains an integer z $(1 \leqslant z \leqslant 2 \cdot 10^9)$ – the number of data sets. Each data set is as follows:

The first line contains a number n - the number of slices $(1 \leqslant n \leqslant 4000000)$. The next line contains n integers denoting the sizes of the consecutive slices, separated by a space.

Output

The total size of slices eaten by Alice when both Alice and Bob play their best strategies.

Available Memory: 64MB

Example

For the input:

```
2
5
0 1 2 1 2
15
0 2 0 2 0 0 1 0 1
```

the output is:

```
4
4
```