

## armless Sweetie

Input file:           standard input  
Output file:         standard output  
Time limit:          1 second  
Memory limit:       512 megabytes

*I'm Sucrose, a researcher of alchemy. I heard you've been to a lot of places, so I was wondering if you... Ah, what am I saying! It's only our first meeting, I shouldn't trouble you. But... If you're willing, I'd love to hear any stories you have about your adventures. I'd... really like that.*

—Sucrose



Sucrose loves experimenting and spends most of her time researching on bio-alchemy, which means she has to do a lot of synthetic experiments.

Today, Sucrose is synthesizing a sequence  $a$  of length  $n$ , which is satisfied  $a_i \in \{1, -1\}$ . In one operation, she can synthesize two **adjacent** numbers  $a_i$  and  $a_{i+1}$  to a single number  $a_i \cdot a_{i+1}$ , and get  $a_i \cdot a_{i+1}$  score then.

Obviously, after each operation, the length of  $a$  will be reduced by one. When the length of  $a$  becomes 1, Sucrose stops. Now, Sucrose wants to calculate the maximum score she can get when she stops.

Sucrose needs to do a lot of synthetic experiments, so you need to answer her queries for  $T$  times.

### Input

The first line contains a single integer  $T$  ( $1 \leq T \leq 10^5$ ) — the number of Sucrose's queries.

Each query contains two lines in the following  $2T$  lines. In each query, The first line contains a single number  $n$  ( $1 \leq n \leq 10^5$ ), which means the length of sequence  $a$ ; The second line contains  $n$  number  $a_1, a_2, \dots, a_n$  ( $a_i \in \{1, -1\}$ ).

It is guaranteed that sum of  $n$  across all queries does not exceed  $10^5$ , i.e.  $\sum n \leq 10^5$ .

### Output

For Sucrose's each query, output a single integer — the maximum score Sucrose can get. Output  $T$  Lines totally.

## Example

standard input	standard output
10	2
5	1
1 1 1 1 -1	0
4	0
1 1 1 -1	5
1	7
-1	7
1	2
1	4
10	5
-1 1 1 -1 1 1 1 -1 1 1	
10	
1 -1 1 1 -1 -1 1 -1 -1 -1	
10	
-1 -1 1 1 1 -1 1 -1 -1 -1	
5	
-1 -1 -1 -1 -1	
5	
1 1 1 1 1	
8	
-1 -1 1 -1 1 -1 -1 -1	

## Note

The 10-th example is explained as follows (we use underline to mark the numbers we choose to synthesize):

- $[-1, -1, 1, -1, 1, -1, -1, -1]$
- $[1, 1, -1, 1, \underline{-1}, \underline{-1}, -1]$
- $[\underline{1}, \underline{1}, -1, 1, 1, -1]$
- $[1, -1, \underline{1}, \underline{1}, -1]$
- $[1, -1, \underline{1}, \underline{-1}]$
- $[1, \underline{-1}, \underline{-1}]$
- $[\underline{1}, \underline{1}]$
- $[1]$

In these rounds, Sucrose gets 1, 1, 1, 1, -1, 1, 1 score respectively, so she gets 5 scores totally.

*Due to spending most of her time researching and experimenting, Sucrose is a recluse. She has trouble talking with others, as she worries frequently about unintentionally offending them. Lisa remarks that she is hopeless when talking to people, and she herself admits that she is scared of Jean to the point that she often asks Albedo to go on her behalf. However, she does not share the same issue when talking about bio-alchemy or Albedo. She reveres Albedo to the point that she considers he to be a true gentleman and maintains an excessively formal manner towards him, despite both of them being at a similar age.*