# D - Las Megas Casino

Place your bets!

The problem

In the famous Silly-Tont Valley, where the largest number of technology companies are concentrated (Brick, Pear, Inter ...), Las Megas Casino has just been built, where workers can bet on different and original games.

One of the games is trying to get the most memory for our algorithms.

An even number of memory chips, all of the same price, are arranged on the game board in a row. Each chip is associated with a positive integer value c that expresses its capacity ($1 \leq c \leq 1000$). There are two players who alternately choose a memory chip from among those located at the ends. Each chosen chip is removed and the turn passes to the opposing player. The process is repeated until all the chips are finished. One of the players is The Casino, and his strategy is to choose, from the two extremes available in each of his turns, the chip with the largest memory capacity. We are the other player and our particular strategy should allow us to obtain as much memory as possible, which will be obtained by adding the memory capacities associated with the chips that we have selected during the game.

If in The Casino's turn the chips that are at that moment in the extremes have the same capacity, we will assume that the casino will choose, without knowing it, the one that in the end will harm us the most.
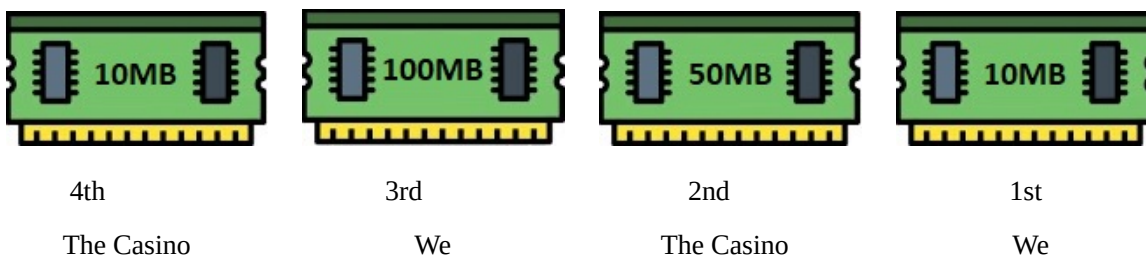
For example:
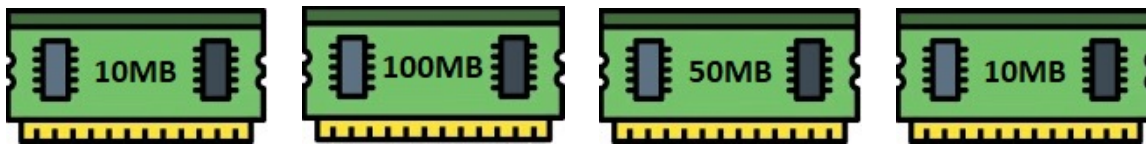
If The Casino starts by choosing, The Casino will get 110Mb and we will get 60MB, in the following order of selection:

4th	3rd	2nd	1st
We	The Casino	We	The Casino
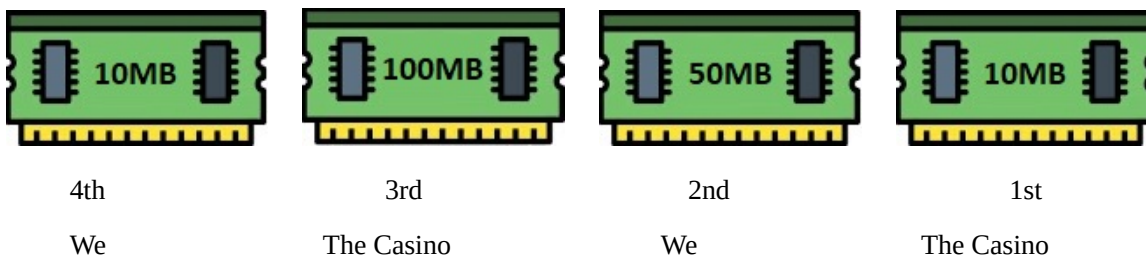
If we started, our solution would be 110MB and The Casino's will be 60MB, with the following selection order:

4th	3rd	2nd	1st
The Casino	We	The Casino	We

The number of chips on the game board is n, $2 \leq n \leq 200$, where n is even.

In the game there is a solution if The Casino starts and another solution if we start. The final solution will be the least amount of memory that we can get in both solutions

The Input

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

For each test case, there are two lines; the first one contains an even integer *n*, which indicates the number of chips in that case, where $4 \le n \le 200$; the second line contains *n* integers that express the capacity of each of the *n* chips, with values between 1 and 1000. The order of the numbers corresponds to the order in the row.

The Output

For each test case, the output will be a line that will show, among the solutions obtained starting at The Casino and starting with us, the benefit of the one that indicates the lowest value. (The benefit of a solution is obtained by adding the capacities associated with the chips that we have selected).

Sample Input

```
2
4
10 100 50 10
6
250 275 200 350 500 300
```

Sample Output

```
60
950
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