Game of Gold

Filename: gold
Time Limit: 5 seconds

Along with your friend Sabrina, you've discovered gold!!! You've found a row of bags, each containing equal weighted gold coins. You've agreed to split the gold using a game. In the game, the two of you will alternate turns. Each person may choose one of two bags of gold on their turn: the bag that is at the left end of the row of bags, or the bag that is at the right end of the row of bags. Sabrina has kindly allowed you to go first. For example, if the row of bags contained the following numbers of gold coins, in order:

3 8 9 2 5 10

Then you could choose either the bag on the left with 3 coins, or the bag on the right with 10 coins. Assuming you select the bag on the right, the resulting sequence of bags would be:

3 8 9 2 5

In this case, Sabrina could choose from either the bag with 3 coins on the left, or the bag with 5 coins on the right. You would continue the game until all 6 bags of gold coins were taken.

Since you expect to find more gold, write a program that determines how many more gold coins than Sabrina you will get, assuming that both of you play optimally. Note that this number may be negative in some cases.

Input

The first line of the input file contains a single positive integer, *t (t ≤ 100)*, representing the number of test cases. The first line of each test case contains a single positive integer, *n (n ≤ 25)*, representing the number of bags of coins for that test case. The second line of each test case contains *n* space-separated positive integers, representing the number of gold coins in each bag, from left to right, in order. (Note: Each of these *n* integers will be less than or equal to 100.

Output

For each test case, write out an integer on a line by itself representing how many more gold coins than Sabrina you'll get.

Sample Input

```
3
6
3 8 9 2 5 10
2
17 99
5
1 5 20 2 1
```

Sample Output

```
7
82
-13
```