

Problem J

Game of Gold

My partner and I have bags of gold, lined up in a row. The bags are different sizes. My partner has offered to split up the gold using the following system: we take turns, each time choosing one bag from either end of the line. She has even generously offered to let me go first. I need software to tell me the total amount of gold that I will get compared to how much my partner will get if I choose first. Of course we will assume that my partner and I are brilliant and always choose in the optimum way. Given the values of all the bags of gold in the order in which they are lined up your program should calculate how much more gold I will get than my partner if we both behave optimally. (I fear that the answer might be a negative number since my partner proposed the plan.)

Input

The first line of the input gives an integer T, which is the number of test cases. First line of each test case contains N the number of bags. Second line contains N values of the bags (in the order) separated by a single space. N is between 1 and 50 inclusive. Each of the integers in the sequence will be between 1 and 100000 inclusive.

Output

For each test case, output the amount of gold that I will get more than my partner if we both behave optimally.

Sample Input	Sample output
3	-2
3	2
2 7 3	-13
6	
6 4 3 5 8 8	
5	
1 5 20 2 1	