Problem A

Add All

Given a set of numbers your goal is to add them all, while minimizing the cost of the addition. At any point, you may choose to add any two of the integers. The cost of doing so is simply the sum of the two numbers. For example, the cost of adding 1 and 10 is 11. 3, 6 and 2 can be added in several different ways. The minimum cost comes from adding 2+3 first to yield 5 and 5+6 to yield 11. The total cost for these two operations is 16 (5 + 11). Given a sequence of numbers calculate the minimum cost to add them into a single integer.

Input

First line of the input contains T the number of test cases. First line of each test case contains N the number of integers in the sequence. Second line contains N integers separated by a single space. N is between 1 and 20000 inclusive. Each of the integers in the sequence will be between 1 and 10000.

Output

For each test case output contains a single integer denoting the minimum cost.

Sample Input	Sample output
2	9
3	19
1 2 3	
4	
1 2 3 4	