Problem C: Cut The Stick Pro [Middle I]

Time Limit: 1 Sec Memory Limit: 128 MB
Submit: 900 Solved: 187
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Description

Lanran wants to cut one stick with length L into exactly N sticks with length $L_i(i = 1, 2...N)$, so $L = \sum_{i=1}^{N} L_i$. However, the cost to cut one stick into two pieces is the length of the stick, which means cutting a stick with length x will cost x. Now he wants to know the minimal cost if he cuts stick optimally to get N sticks.

Input

The first line will be an integer $T(1 \le T \le 5)$, which is the number of test cases.

For each test, the first line contains an integer N ($1 \le N \le 10^5$) — the number of sticks Lanran needs to get. Then the next line contains N integers, the i-th integer $L_i(1 \le p_i \le 10^5)$ indicates the length of N sticks Lanran wants to get.

Output

For each case print the minimal cost if Lanran cuts stick optimally to get N sticks.

Sample Input

```
1
4
1 4 2 6
```

Sample Output

```
23
```

HINT

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