Decoration Discount

Chef wants to decorate his house a bit, so he decides to buy **exactly two** flower vases.

The shop he visits has N flower vases, all arranged in a line.

The price of the i-th vase is A_i . It's guaranteed that all A_i are even.

If Chef buys vase number i, the price of vase number i+1 will be halved.

No other discounts are available.

Find the minimum cost of buying **two different vases.**

Input Format

- ullet The first line of input will contain a single integer T, denoting the number of test cases.
- Each test case consists of two lines of input.
 - $\circ~$ The first line of each test case contains a single integer N the number of vases in the store.
 - \circ The second line contains N space-separated integers A_1,A_2,\ldots,A_N the prices of the vases.

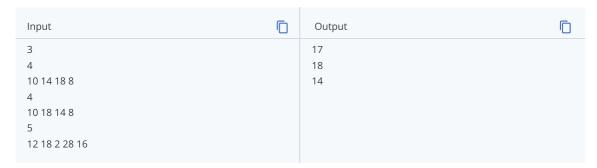
Output Format

For each test case, output on a new line the answer: the minimum cost of buying two different vases.

Constraints

- $1 \le T \le 100$
- $2 \le N \le 100$
- $2 \le A_i \le 100$
- ullet Each A_i is even.

Sample 1:



Explanation:

Test case 1: Chef should buy the first and second vases.

Buying vase 1 halves the price of vase 2, so the overall cost is $10 + \frac{14}{2} = 10 + 7 = 17$.