

D. Destruction of the Dandelion Fields

time limit per test: 2 seconds

memory limit per test: 256 megabytes

Farmer John has a lawnmower, initially turned off. He also has n fields, with the i -th field having a_i dandelions. He will visit all the fields in any order he wants, and each field **exactly once**.

FJ's lawnmower seems to have a mind of its own. Right before visiting a field, it checks if the field has an even or odd number of dandelions. If it has an odd number, then the lawnmower toggles its state (if it is off, it turns on; if it is on, it turns off). Then, if the lawnmower is on, it will cut all dandelions in that field. Otherwise, if the lawnmower is off, then FJ will simply visit the field and cut no dandelions.

If FJ visits the n fields in optimal order, what is the maximum total number of dandelions he can cut?

Input

The first line contains an integer t ($1 \leq t \leq 10^4$) — the number of test cases.

The first line contains an integer n ($1 \leq n \leq 2 \cdot 10^5$) — the number of fields.

The following line contains n space-separated integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 10^9$) — the number of dandelions in each field.

It is guaranteed that the sum of n over all test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, output an integer on a new line: maximum dandelions FJ can cut if he visits all n fields in optimal order.

Example

input	Copy
3	
3	
2 4 6	
4	
4 2 1 6	
4	
1000000000 999999999 1000000000 999999999	
output	Copy
0	
13	
2999999999	

Note

For the first test case, since there is no field with an odd number of dandelions, FJ can never turn his lawnmower on. Since his lawnmower is always off, he can never cut any dandelions, so the answer is 0.

For the second test case, FJ can visit the third field first; then his lawnmower will turn on. Then he can visit the other fields in any order. Since his lawnmower is always on, dandelions in every field can be cut.

For the third test case, FJ can visit the fields in the following order: field 2, field 1, field 3, then field 4.

Codeforces Round 1050 (Div. 4)

Finished

Practice

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++23 14.2 (64 bit, ms)

Choose file: Escolher arquivo Nenhuma...colhido

Submit

→ Last submissions

Submission	Time	Verdict
338450692	Sep/13/2025 18:29	Accepted
338428005	Sep/13/2025 18:09	Wrong answer on test 2

→ Problem tags

constructive algorithms greedy

sortings *1000

No tag edit access

→ Contest materials

Announcement (en)

Tutorial (en)

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