Problem B. Sum of difference

Time limit 2000 ms
Mem limit 1048576 kB

Problem Statement

Given are N integers $A_1, \ldots, A_N$.

Find the sum of $|A_i - A_j|$ over all pairs i, j such that $1 \leq i < j \leq N$.

In other words, find $\sum_{i=1}^{N-1} \sum_{j=i+1}^{N} |A_i - A_j|$.

Constraints

- $2 \leq N \leq 2 \times 10^5$
- $|A_i| \leq 10^8$
- A_i is an integer.

Input

Input is given from Standard Input in the following format:

```
N
A_1 ... A_N
```

Output

Print the answer.

Sample 1

Input	Output
3 5 1 2	8

We have $|5 - 1| + |5 - 2| + |1 - 2| = 8$.

Sample 2

Input	Output
5 31 41 59 26 53	176