C - Sum of Product   Editorial (/contests/abc405/tasks/abc405_c/editorial)   🇯🇵 / 🇬🇧

Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

Problem Statement

You are given a length-N integer sequence $A = (A_1, A_2, \ldots, A_N)$.

Compute the value of $\displaystyle\sum_{1 \le i < j \le N} A_i A_j$.

Constraints

- $2 \le N \le 3 \times 10^5$
- $1 \le A_i \le 10^4$
- All input values are integers.

Input

The input is given from Standard Input in the following format:

```
N
A_1  A_2  ...  A_N
```

Output

Output the answer.

Sample Input 1 [Copy]

```
3
4 2 3
```

Sample Output 1 [Copy]

```
26
```

We have $\sum_{1 \le i < j \le N} A_i A_j = A_1 A_2 + A_1 A_3 + A_2 A_3 = 4 \cdot 2 + 4 \cdot 3 + 2 \cdot 3 = 26$.

Sample Input 2 [Copy]

```
2
9 45
```

Sample Output 2 [Copy]

```
405
```

Sample Input 3 [Copy]

```
10
7781 8803 8630 9065 8831 9182 8593 7660 7548 8617
```

Sample Output 3 [Copy]

```
3227530139
```

'(#telegram)

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