Modulo Chain

Shor the Duck gets sad every time he sees a submission that only gets WA because of a mistake in modular arithmetic. (Especially subtraction!)

This is a problem meant to ~~torture Shor with more WAs~~ help people make sure they understand modular arithmetic.

There are N integers in the list A, numbered from 1 to N, and Shor the Duck has three tasks for you. Output the sum of all integers modulo $10^9 + 7$, the product of the **first** and **last** integers modulo $10^9 + 7$, and the first integer minus the sum of all other integers, modulo $10^9 + 7$.

Input Format

Your program must read from standard input.

The input consists of 2 lines.
The first line consists of the integer N. The second line consists of N integers, separated by spaces.

Output Format

Your program must print to standard output.

The output should consist of 1 line, with 3 integers separated by spaces denoting the sum of all integers modulo $10^9 + 7$, the product of the **first** and **last** integers modulo $10^9 + 7$, and the first integer minus the sum of all other integers, modulo $10^9 + 7$.

Subtasks

The maximum execution time on each instance is 1.0s, and the maximum memory usage on each instance is 512MB. For all test cases, the input will satisfy the following bounds:

- $2 \leq N \leq 10^5$
- $0 \leq A_i \leq 10^{18}$

Your program will be tested on input instances that satisfy the following restrictions:

Subtask	Marks	Additional Constraints
1	100	No additional constraints with special scoring

Special scoring

Your program will be scored as follows:
Your total score will be the minimum of all scores for each testcase.
Each testcase's solution will be awarded an additional 20 points if the sum is correct,
an additional 30 points if the product is correct,
and an additional 50 points if the final part with subtraction is correct.

Sample Testcase 1

Input:

```
4
1000000000 10 3 2
```

Output:

```
8 999999993 999999985
```