

Sum of Digits

You are given n natural numbers $a_1, a_2, a_3, \dots, a_n$. Let **SOD** of a number be defined as the **Sum of Digits** of that number. Compute the value of

$$\{ [\text{SOD}(a_1) + \text{SOD}(a_2) + \dots + \text{SOD}(a_n)] \% 9 \} - \{ [\text{SOD}(a_1 + a_2 + \dots + a_n)] \% 9 \}$$

Input

The first line consists of the value of n . Next n lines are such that the i th line consists of a single natural number a_i .

Output

Print a single line consisting of the computed value.

Input:

3
1
2
3

Output:

0

Constraints:

$2 \leq n \leq 100000$

$1 \leq a_i \leq 10^{100000}$