Pot

Problem ID: pot
CPU Time limit: 1 second
Memory limit: 1024 MB
Difficulty: 1.3

Author(s): Nikola Dmitrović
Source: Croatian Open Competition in Informatics 2015/2016, contest #3

The teacher has sent an e-mail to her students with the following task: "Write a program that will determine and output the value of X if given the statement:

$$X = number_1^{pow_1} + number_2^{pow_2} + \ldots + number_N^{pow_N}$$

and it holds that $number_1$, $number_2$ to $number_N$ are integers, and pow_1, pow_2 to pow_N are one-digit integers." Unfortunately, when the teacher downloaded the task to her computer, the text formatting was lost so the task transformed into a sum of N integers:

$$X = P_1 + P_2 + \ldots + P_N$$

For example, without text formatting, the original task in the form of $X = 21^2 + 125^3$ became a task in the form of $X = 212 + 1253$. Help the teacher by writing a program that will, for given N integers from P_1 to P_N determine and output the value of X from the original task.

Input

The first line of input contains the integer N ($1 \leq N \leq 10$), the number of the addends from the task. Each of the following N lines contains the integer P_i ($10 \leq P_i \leq 9999$, $i = 1, \ldots, N$) from the task.

Output

The first and only line of output must contain the value of X ($X \leq 1\,000\,000\,000$) from the original task.

Sample Input 1

```
2
212
1253
```

Sample Output 1

```
1953566
```

Sample Input 2

```
5
23
17
43
52
22
```

Sample Output 2

```
102
```

Sample Input 3

```
3
213
102
45
```

Sample Output 3

```
10385
```