Pot

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:

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

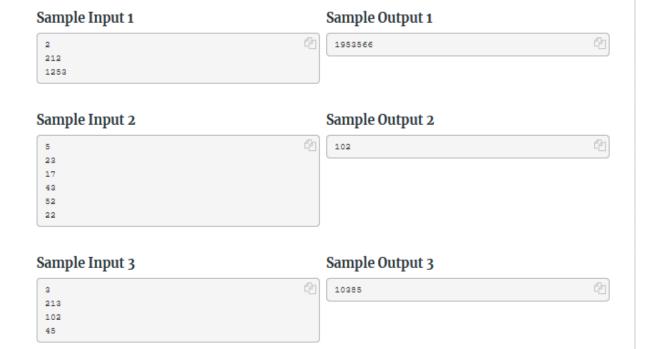
For example, without text formatting, the original task in the form of $X=21^2+125^3$ became a task in the form of X=212+1253. Help the teacher by writing a program that will, for given N integers from P_1 to P_N determine and output the value of X from the original task.

Input

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

Output

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



```
import sys #imported the sys library to exit the program when need be
n = int(input())
if n < 1 or n > 10: #included my constraints
   sys.exit()
addlist = [] #created a list
while n != 0:
   p = int(input())
   if p < 10 or p > 9999: #included my constraints
       sys.exit()
   s = p 10 #took the modulo of p that will give me the last digit of the int and assigned a variable
   p=str(p) #made the int input into a string in order to take the last digit off
   p=p[:-1] #Took of the last digit from the string
   p=int(p) #Made the string into an integer again
   p=p**s #Squared the int p
   addlist.append(p) # Appended it to a list
   n -= 1
r = sum(addlist) #Added all of the content on the list
print(r)
```