时间限制：C/C++ 1秒，其他语言2秒
空间限制：C/C++ 262144K，其他语言524288K
64bit IO Format: %lld

题目描述

Bob has a random number generator, it will generate x with probability p_x.

Now Bob will do the following operations:

Step 1. Generate a number x by random number generator.

Step 2. If x is the largest number among the generated numbers (i.e., x is no smaller than any previously generated numbers), go to step 1, otherwise, go to step 3.

Step 3. If Bob generates x numbers totally, Bob will get x^2 score.

Now Bob wants to know the expected value of the score he will get.

If the answer is irreducible fraction $\frac{x}{y}$, you need to output an integer d in [0,998244352] which satisfies $d \times y \ mod \ 998244353 = x \ mod \ 998244353$. It's guaranteed that $y \ mod \ 998244353 \neq 0$.

输入描述:

> The first line has one integers n, it means the random number generator can only generate integers in $[1,n]$.
>
> The second line has n positive integers $w_{1...n}$, it means $p_i = \frac{w_i}{\sum_{j=1}^{n} w_j}$.
>
> $2 \leq n \leq 100$.
>
> $1 \leq w_i \leq 10^6$.

输出描述:

> Output the answer.

示例1

输入

```
3
1 1 1
```

输出

```
499122190
```