Problem J. Just Another Number Theory Problem

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	1024 mebibytes

Given are n **prime** numbers $1 < p_1 < p_2 < \ldots < p_n < 10^{18}$ with $p_1 \le 100$. We say that the number x is *good* if x is divisible by at least one p_i.

Take all *good* numbers $a_1, a_2, \cdots, a_m$ in $[0, p_1 \cdot p_2 \cdot \ldots \cdot p_n]$ and sort them in order $(a_1 < a_2 < \ldots < a_m)$. Your task is to calculate $\sum_{i=1}^{m-1}(a_{i+1} - a_i)^2$. As the sum could be very large, you should output it modulo 998 244 353.

Input

The first line of the input contains a single integer n $(1 \le n \le 10^5)$.

The next line of the input contains n integers $p_1, p_2, \ldots, p_n$ $(1 < p_1 < p_2 < \ldots < p_n < 10^{18})$. It is guaranteed that $2 \le p_1 < 100$ and each p_i $(1 \le i \le n)$ is a prime number.

Output

Output a single line with a single integer, indicating the answer modulo 998 244 353.

Examples

standard input	standard output
2 2 5	18
3 5 7 233	31275

Note

In the first example, the list of good numbers is:

- $a_1 = 0$
- $a_2 = 2$
- $a_3 = 4$
- $a_4 = 5$
- $a_5 = 6$
- $a_6 = 8$
- $a_7 = 10$

Thus, the answer is $(2-0)^2 + (4-2)^2 + (5-4)^2 + (6-5)^2 + (8-6)^2 + (10-8)^2 = 18$.