Dislike

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

brz is a beginning ACMer. One day he came across a problem like this:

> There is a sequence with length n. Now you are required to find the maximum number in it.

He thought that was so easy for him. So with great confidence, he started to strengthen this problem. Here is what he was thinking:

- I don't like focusing on the sequence itself, and how about studying all its continuous subsequences? (Subsequently let $F(S)$ be the maximum number in sequence S)
- I don't like to find the maximum number, and how about calculating the sum of the maximum numbers in all continuous subsequences?
- I don't like only to find the answer, and how about focusing on whether we can adjust the sequence to make the answer smaller?
- I don't like to play with one sequence or messy sequences, and how about playing with all the permutations?

Having all the information above sorted, *brz* gets a problem like this:

> I want to know, how many permutations with length n are **good**.
> A **good** permutation should satisfy the following condition:
>
> - For a permutation A (1-indexed), the **rotate** operation is defined as: take A_1 out, move all the rest elements left by one place, and place A_1 to the rightmost place of the sequence. After **rotate** once, the sequence is just like $A_2A_3...A_nA_1$.
> - let $K = \min_{S \in U} G(S)$, where U is a set consisting of all the permutations with length n, and $G(S) = \sum_{l=1}^{n} \sum_{r=l}^{n} F(S[l, r])$, where $S[l, r]$ refers to the subsequence of S forming with all the elements from S_l to S_r continuously.
> - A permutation S is **good** if and only if: After any times of **rotate** (possibly zero), $G(S)$ can be equal to K.

However, after being strengthened, the problem now is far beyond what he can solve. He asked *Mandy* for help, only to get a "No response" for it was more than easy for her and she thought *brz* could solve it on his own.

Now *brz* turns to you for help. Can you solve the problem for him?

Input

The first line contains one integer $T(1 \leq T \leq 10^5)$, the number of test cases.

Each of the following T lines contains one integer $n(1 \leq n \leq 10^5)$.

Output

Print T lines. The i-th line contains one integer, which is the answer of the i-th test case.

Since the answer may be too large, you only need to find the answer module 998 244 353.

Example

standard input	standard output
2 2 3	2 6