Problem L. Lost In The Echo

Input file:	`standard input`
Output file:	`standard output`
Time limit:	8 seconds
Memory limit:	256 megabytes

Charles enjoys learning. He often goes to the website Wikipedia to study computer science. Just now Charles seriously studied a series of expressions, in which algebraic expression has a great influence on him.

He is curious about how many different algebraic expressions built up from n distinct variables, elementary arithmetic operations (i.e. addition, subtraction, multiplication and division), and brackets such that each variable appears exactly once and each operation is after a variable or a pair of brackets. Can you help him calculate the answer in modulo $(10^9 + 7)$?

Two algebraic expressions in this problem are considered as equivalent if and only if they can be simplified as the same rational expression. For example, assuming a, b, c and d are variables, $(a - d)/(b - c)$ is equivalent to $(d - a)/(c - b)$, $a/(b - c) * d$ is equivalent to $a/((b - c)/d)$ but $a/b + c/d$ is not equivalent to $d/c + b/a$.

Input

The first line contains one integer T, indicating the number of test cases.

Each of the following T lines describes a test case and contains only one integer n.

$1 \leq T, n \leq 60000$.

Output

For each test case, output the answer modulo $(10^9 + 7)$ in one line.

Example

standard input	standard output
6 1 2 3 4 5 6	1 6 68 1170 27142 793002