Problem G. Greenberg Mass Comparison

Input file: stdin
Output file: stdout
Time limit: 1 second
Memory limit: 256 MB

Linguist Joseph Greenberg proposed the method of mass comparison for determining genetic relatedness between languages. In this method, N languages are categorized into one or more families. Formally, given a set of N different languages $\mathcal{L} = \{L_1, \ldots, L_N\}$, a relation analysis is a set of families \mathcal{F} , satisfying the following properties:

- $\mathcal{F} = \{F_1, \dots, F_k\}$ for some k
- For $1 \leq i \leq k$, $F_i \subseteq \mathcal{L}$ and $F_i \neq \emptyset$
- For $1 \le i, j \le k, i \ne j, F_i \cap F_j = \emptyset$
- $\bigcup_{1 \leq i \leq k} F_i = \mathcal{L}$

Greenberg wants to know how many distinct relation analysis are there for N languages. Two relation analyses \mathcal{F}_1 and \mathcal{F}_2 are distinct if $\mathcal{F}_1 \neq \mathcal{F}_2$. Can you help him compute this number?

Input

The first line of input contains a single integer T ($1 \le T \le 100$), the number of test cases. In the following T lines, each line contains a single integer N ($1 \le N \le 100$).

Output

For each test case, output a line containing the answer for the queried N, modulo $(10^9 + 7)$.

Examples

stdin	stdout
4	1
1	2
2	5
3	840750853
40	