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:

- $\mathcal{F} = \{F_1, \ldots, F_k\}$ for some k
- For $1 \leq i \leq k$, $F_i \subseteq \mathcal{L}$ and $F_i \neq \varnothing$
- For $1 \leq i, j \leq k, i \neq j$, $F_i \cap F_j = \varnothing$
- $\cup_{1 \leq i \leq k} F_i = \mathcal{L}$

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

Output

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

Examples

stdin	stdout
4 1 2 3 40	1 2 5 840750853