Nice partition P22494_en

In this problem, we say that a partition of the numbers $\{1, \ldots, n\}$ is nice if

- it has at least two subsets,
- and every subset has at least two elements.

Additionally, we only consider partitions that are qualitatively different.

For instance, for $n = 5$ we only have one nice partition: $\{\{1, 2\}, \{3, 4, 5\}\}$. Notice that $\{\{1, 2, 3, 4, 5\}\}$ would not fulfil the first property above, $\{\{2\}, \{1, 3, 4, 5\}\}$ would not fulfil the second property above, while $\{\{2, 3\}, \{1, 4, 5\}\}$ would be basically the same partition as the only one given.

Given n, how many nice partitions do we have?

Input

Input consists of several cases, each one with an n between 1 and $3 \cdot 10^4$.

Output

For every n, print the number of nice partitions of $\{1, \ldots, n\}$ modulo $10^8 + 7$.

Sample input 1	Sample output 1
3 5 6 10 114 30000	0 1 3 11 674029 55250428

Problem information

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Generation: 2026-01-25T10:15:21.464Z