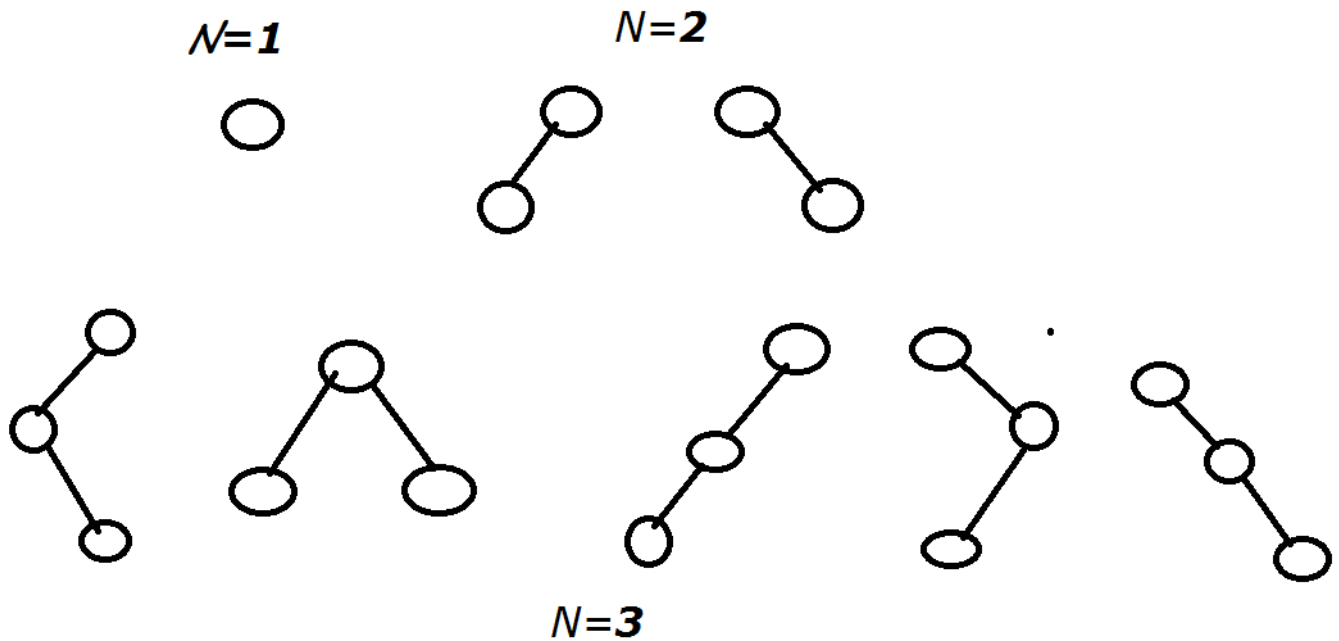


TREE SHAPES

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Problem Statement:

Given n , the number of nodes, find the number of different possible binary trees that can be constructed. A tree differs from another tree if its shape looks different.



Input Specification:

The first line is an integer t , denoting the number of test cases. Then each test case consists of one integer n , the number of nodes.

Output Specification:

For each test case print the number of possible trees that can be constructed using n nodes in a separate line.

Print the answer mod 10^9+7 .

Input Constraints:

$$1 \leq t \leq 100$$

$$1 \leq n \leq 50$$

Sample Input:

```
4
1
2
```

3
4

Sample Output:

1
2
5
14