CODE FORCES
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HOME   TOP   CONTESTS   GYM   **PROBLEMSET**   GROUPS   RATING   API   CALENDAR   HELP   **10 YEARS!** 🎁

PROBLEMS   SUBMIT   STATUS   STANDINGS   CUSTOM TEST

D. How many trees?

time limit per test: 1 second
memory limit per test: 64 megabytes
input: standard input
output: standard output

In one very old text file there was written Great Wisdom. This Wisdom was so Great that nobody could decipher it, even Phong — the oldest among the inhabitants of Mainframe. But still he managed to get some information from there. For example, he managed to learn that User launches games for pleasure — and then terrible Game Cubes fall down on the city, bringing death to those modules, who cannot win the game...

For sure, as guard Bob appeared in Mainframe many modules stopped fearing Game Cubes. Because Bob (as he is alive yet) has never been defeated by User, and he always meddles with Game Cubes, because he is programmed to this.

However, unpleasant situations can happen, when a Game Cube falls down on Lost Angles. Because there lives a nasty virus — Hexadecimal, who is... mmm... very strange. And she likes to play very much. So, willy-nilly, Bob has to play with her first, and then with User.

This time Hexadecimal invented the following entertainment: Bob has to leap over binary search trees with n nodes. We should remind you that a binary search tree is a binary tree, each node has a distinct key, for each node the following is true: the left sub-tree of a node contains only nodes with keys less than the node's key, the right sub-tree of a node contains only nodes with keys greater than the node's key. All the keys are different positive integer numbers from 1 to n. Each node of such a tree can have up to two children, or have no children at all (in the case when a node is a leaf).

In Hexadecimal's game all the trees are different, but the height of each is not lower than h. In this problem «height» stands for the maximum amount of nodes on the way from the root to the remotest leaf, the root node and the leaf itself included. When Bob leaps over a tree, it disappears. Bob gets the access to a Cube, when there are no trees left. He knows how many trees he will have to leap over in the worst case. And you?

Input
The input data contains two space-separated positive integer numbers n and h ($n \le 35$, $h \le n$).

Output
Output one number — the answer to the problem. It is guaranteed that it does not exceed $9 \cdot 10^{18}$.

Examples

input
```
3 2
```

output
```
5
```

Codeforces Beta Round #9 (Div. 2 Only)
Finished

→ **Virtual participation**

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ **Problem tags**

combinatorics   divide and conquer   dp
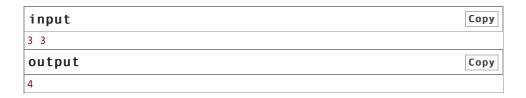*1900
No tag edit access

→ **Contest materials**

- Announcement #1 ✕
- Announcement #2 ✕
- Tutorial ✕

input	Copy

3 3

output	Copy

4