

D. Dima and Figure

time limit per test: 3 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Dima loves making pictures on a piece of squared paper. And yet more than that Dima loves the pictures that depict one of his favorite figures.

A piece of squared paper of size $n \times m$ is represented by a table, consisting of n rows and m columns. All squares are white on blank squared paper. Dima defines a *picture* as an image on a blank piece of paper, obtained by painting some squares black.

The picture portrays one of Dima's favorite figures, if the following conditions hold:

- The picture contains at least one painted cell;
- All painted cells form a connected set, that is, you can get from any painted cell to any other one (you can move from one cell to a side-adjacent one);
- The minimum number of moves needed to go from the painted cell at coordinates (x_1, y_1) to the painted cell at coordinates (x_2, y_2) , moving only through the colored cells, equals $|x_1 - x_2| + |y_1 - y_2|$.

Now Dima is wondering: how many paintings are on an $n \times m$ piece of paper, that depict one of his favorite figures? Count this number modulo 1000000007 ($10^9 + 7$).

Input

The first line contains two integers n and m — the sizes of the piece of paper ($1 \leq n, m \leq 150$).

Output

In a single line print the remainder after dividing the answer to the problem by number 1000000007 ($10^9 + 7$).

Examples

input
2 2
output
13

input
3 4
output
571