Waterloo 2017 Fall D - Drama

Time limit: 1.0s **Memory limit:** 512M

2017 Fall Waterloo Local ACM Contest, Problem D

Vera has a grid with H rows and N columns. Rows are numbered 1 to H and columns are numbered 1 to N. Let the cell in the r-th row and c-th column be (r, c). Cells are coloured white or black. A colouring is a pyramid if:

- Exactly N cells are black.
- $(1, 1)$ is black.
- If (r, a) and (r, b) are black, then (r, k) is black for $a < k < b$.
- If (r, c) is black, then $(r - 1, c)$, if it exists, is black.
- If (r, c) is black and there is no $k < c$ such that (r, k) is black, then $(r + 1, c)$, if it exists, is white.

Two pyramids are different if there is a cell that is white in one pyramid and black in the other. Compute the number of different pyramids modulo $10^9 + 7$.

Input

Line 1 contains integers H and N ($1 \leq H, N \leq 10^5$).

Output

Print one line with one integer, the number of different pyramids modulo $10^9 + 7$.

Sample Input 1

```
2 6
```

Sample Output 1

```
7
```

Sample Input 2

```
3 20
```

Sample Output 2

```
487
```

Note

For the first example, the seven pyramids are:

```
######      ####..      ####..      #####.      #####.      #####.      #####.
......      .##...      ..##..      .#....      ..#...      ...#..      ....#.
```