

# Grouping

Problem ID: grouping

Time limit: 1 second

There are  $2n$  students in a school. Calculate the number of ways pick a group of at least 2 students so that for pair of students  $a$  and  $b$  in this group,  $|a - b| \neq 1$  and  $|a - b| \neq n + x$ .

## Input

The first line of input contains 2 integers  $n$  and  $x$  ( $1 \leq n \leq 10^{18}$ ,  $0 \leq x \leq n$ ).

## Output

Output a single integer, the answer to the problem modulo  $10^9 + 7$ .

## Explanation

In the sample test case, we can pick  $\{1, 3\}$  or  $\{2, 4\}$ .

### Sample Input 1

2 1	2
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### Sample Output 1