

Given a permutation  $a_1, a_2, \dots, a_N$  of  $\{1, 2, \dots, N\}$ , we define its E-value as the amount of elements where  $a_i > i$ . For example, the E-value of permutation  $\{1, 3, 2, 4\}$  is 1, while the E-value of  $\{4, 3, 2, 1\}$  is 2. You are requested to find how many permutations of  $\{1, 2, \dots, N\}$  whose E-value is exactly  $k$ .

## Input

There are several test cases, and one line for each case, which contains two integers,  $N$  and  $k$ . ( $1 \leq N \leq 1000, 0 \leq k \leq N$ ).

## Output

Output one line for each case. For the answer may be quite huge, you need to output the answer *module* 1,000,000,007.

### Explanation for the sample:

There is only one permutation with E-value 0:  $\{1, 2, 3\}$ , and there are four permutations with E-value 1:  $\{1, 3, 2\}$ ,  $\{2, 1, 3\}$ ,  $\{3, 1, 2\}$ ,  $\{3, 2, 1\}$

## Sample Input

```
3 0
3 1
```

## Sample Output

```
1
4
```