

E. Yaroslav and Arrangements

time limit per test: 3 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Yaroslav calls an array of r integers a_1, a_2, \dots, a_r *good*, if it meets the following conditions:

$|a_1 - a_2| = 1, |a_2 - a_3| = 1, \dots, |a_{r-1} - a_r| = 1, |a_r - a_1| = 1$, at that .

An array of integers b_1, b_2, \dots, b_r is called *great*, if it meets the following conditions:

1. The elements in it do not decrease ($b_i \leq b_{i+1}$).
2. If the inequalities $1 \leq r \leq n$ and $1 \leq b_i \leq m$ hold.
3. If we can rearrange its elements and get at least one and at most k distinct good arrays.

Yaroslav has three integers n, m, k . He needs to count the number of distinct great arrays. Help Yaroslav!

As the answer may be rather large, print the remainder after dividing it by 1000000007 ($10^9 + 7$).

Two arrays are considered distinct if there is a position in which they have distinct numbers.

Input

The single line contains three integers n, m, k ($1 \leq n, m, k \leq 100$).

Output

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

Examples

input
1 1 1
output
0

input
3 3 3
output
2