Problem I. Substring Pairs

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	256 mebibytes

Snuke came up with an integersing pair of strings (s, t), but forgot it. He remembers the following information:

- The length of s is exactly N.
- The length of t is exactly M.
- t is a substring of s. (You can choose consecutive M characters from s that are the same as t.)

Compute the number of possible pairs of strings (s, t), modulo $10^9 + 7$. Assume that the size of the alphabet is A.

Input

First line of the input consists of three integers N, M and A ($1 \leq N \leq 200$, $1 \leq M \leq 50$, $M \leq N$, $1 \leq A \leq 1000$)

Output

Print the number of pairs of strings (s, t) that satisfy the conditions above, modulo $10^9 + 7$.

Examples

standard input	standard output
3 2 2	14
200 50 1000	678200960