

Problem D. k-Tree

Time limit 1000 ms

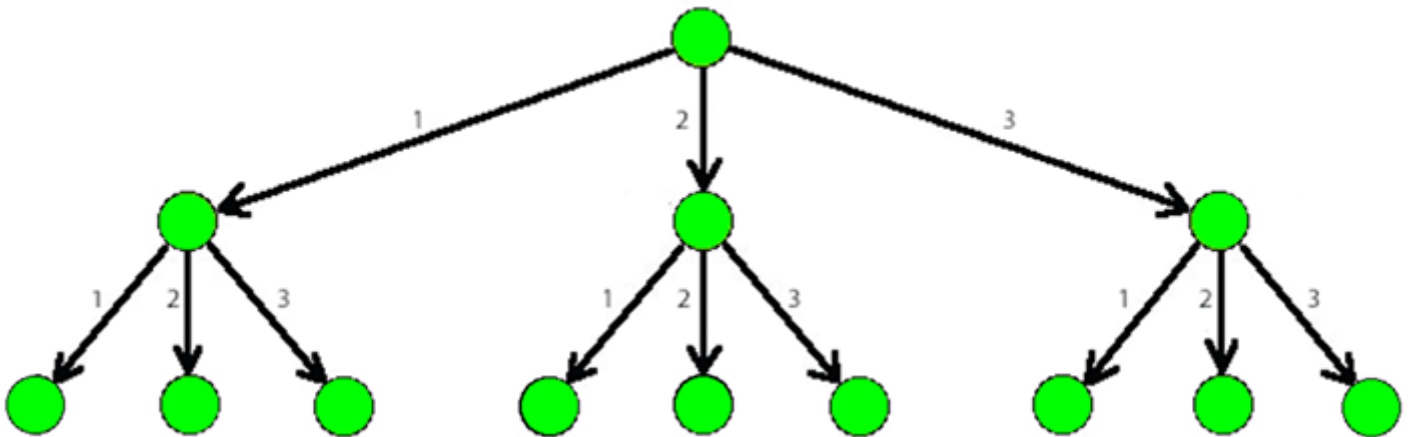
Mem limit 262144 kB

Quite recently a creative student Lesha had a lecture on trees. After the lecture Lesha was inspired and came up with the tree of his own which he called a k -tree.

A k -tree is an infinite rooted tree where:

- each vertex has exactly k children;
- each edge has some weight;
- if we look at the edges that goes from some vertex to its children (exactly k edges), then their weights will equal $1, 2, 3, \dots, k$.

The picture below shows a part of a 3-tree.



As soon as Dima, a good friend of Lesha, found out about the tree, he immediately wondered: "How many paths of total weight n (the sum of all weights of the edges in the path) are there, starting from the root of a k -tree and also containing at least one edge of weight at least d ?"

Help Dima find an answer to his question. As the number of ways can be rather large, print it modulo 1000000007 ($10^9 + 7$).

Input

A single line contains three space-separated integers: n , k and d ($1 \leq n, k \leq 100$; $1 \leq d \leq k$).

Output

Print a single integer — the answer to the problem modulo 1000000007 ($10^9 + 7$).

Sample 1

Input	Output
3 3 2	3

Sample 2

Input	Output
3 3 3	1

Sample 3

Input	Output
4 3 2	6

Sample 4

Input	Output
4 5 2	7