

## C. k-Tree

time limit per test: 1 second  
memory limit per test: 256 megabytes  
input: standard input  
output: standard output

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  $1000000007$  ( $10^9 + 7$ ).

### Examples

<b>input</b>
3 3 2
<b>output</b>
3
<b>input</b>
3 3 3
<b>output</b>
1
<b>input</b>
4 3 2
<b>output</b>
6
<b>input</b>
4 5 2
<b>output</b>

