

Problem B. Shift and Paint

Input file: *standard input*
Output file: *standard output*
Time limit: 1 second
Memory limit: 512 mebibytes

N balls are arranged in a row. You can perform an operation called *Shift*:

Shift Operation. Choose L consecutive balls, and move the rightmost chosen ball to the left of the leftmost chosen ball. In other words, if you choose balls at positions $i, i + 1, \dots, i + L - 1$, these balls will go to positions $i + L - 1, i, i + 1, \dots, i + L - 2$ after the operation.

You want to color these balls with K colors. How many ways are there to color the balls? Two ways of coloring are considered equivalent if you can reach from one coloring to the other by repeating the *Shift* operations zero or more times. Compute the answer modulo $10^9 + 7$.

Input

N K L

- $2 \leq N \leq 10^6$
- $1 \leq K \leq 10^6$
- $2 \leq L \leq N$

Output

Print the number of ways to color the balls, modulo $10^9 + 7$.

Example

standard input	standard output
3 3 3	11
3 3 2	10

Note

In Sample 1, there are 11 ways to paint the balls:

$(1, 1, 1), (1, 1, 2), (1, 1, 3), (1, 2, 2), (1, 2, 3), (1, 3, 2), (1, 3, 3), (2, 2, 2), (2, 2, 3), (2, 3, 3)$, and $(3, 3, 3)$.

In Sample 2, here are 10 ways to paint the balls:

$(1, 1, 1), (1, 1, 2), (1, 1, 3), (1, 2, 2), (1, 2, 3), (1, 3, 3), (2, 2, 2), (2, 2, 3), (2, 3, 3)$, and $(3, 3, 3)$.