

Problem E. Except One

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

You are given three integers p , k , t , where p is a prime number.

The set S is defined as follows: $S = \{x \mid x \in N, 1 \leq x \leq p-1, x \neq k\}$.

Find the sum of the products of all t -element subsets of S , modulo p .

Input

The first line contains three integers p , k , t (p is a prime number; $1 \leq k \leq p-1$; $1 \leq t \leq p-2$; $p \leq 10^9$).

Output

Print the sum of the products of all t -element subsets of S , modulo p .

Examples

<i>standard input</i>	<i>standard output</i>
7 5 3	1
11 6 7	3