

LCM Plus GCD

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

You are given two integers, x and k . Your task is to determine the total number of sets that contain exactly k distinct positive integers a_1, a_2, \dots, a_k such that the sum of their Least Common Multiple (LCM) and Greatest Common Divisor (GCD) equals x , i.e. $\text{LCM}(a_1, a_2, \dots, a_k) + \text{GCD}(a_1, a_2, \dots, a_k) = x$.

The LCM of a set of numbers is the smallest positive integer that each number in the set can divide, while the GCD is the largest positive integer that can divide each number in the set. For instance, $\text{LCM}(4, 6, 8) = 24$ and $\text{GCD}(4, 6, 8) = 2$.

As the result could potentially be a very large number, you should provide the output modulo $10^9 + 7$.

Input

One line contains two integers x and k ($1 \leq x, k \leq 10^9$).

Output

Output an integer denoting the answer modulo $10^9 + 7$.

Examples

standard input	standard output
14 2	3
14 3	4