

Problem K. K Co-prime Permutation

Kotori is very good at math (really?) and she loves playing with permutations and primes.

One day, she thinks of a special kind of permutation named *k co-prime permutation*. A permutation p_1, p_2, \dots, p_n of n is called a *k co-prime permutation* of n if there exists exactly k integers i such that $1 \leq i \leq n$ and $\gcd(p_i, i) = 1$, where $\gcd(x, y)$ indicates the greatest common divisor of x and y .

Given n and k , please help Kotori construct a *k co-prime permutation* of n or just report that there is no such permutation.

Recall that a permutation of n is a sequence of length n containing all integers from 1 to n .

Input

There is only one test case in each test file.

The first and only line contains two integers n and k ($1 \leq n \leq 10^6$, $0 \leq k \leq n$).

Output

Output one line containing n integers p_1, p_2, \dots, p_n separated by one space, indicating the permutation satisfying the given constraints. If no such permutation exists output “-1” (without quotes) instead. If there are multiple valid answers you can print any of them.

Please, DO NOT output extra spaces at the end of each line, otherwise your answer may be considered incorrect!

Examples

standard input	standard output
5 3	1 4 5 2 3
1 0	-1