H. INVERSIONS

A permutation of length N is an array containing each integer from 1 to N exactly once. An inversion of a permutation P is a pair of positions (i, j) such that $i < j$ and $P_i > P_j$.

You are given three integers N, M, and K. Print the K-th lexicographically smallest permutation of length N that has exactly M inversions. If there is no such permutation, print -1 instead.

INPUT

The first and only line contains three integers N, M, and K ($1 \le N \le 100$, $0 \le M \le N \times (N - 1) / 2$, $1 \le K \le 10^{18}$)

OUTPUT

Print one line containing N integers - the required permutation. If there is no such permutation, print -1 instead.

Sample Input	Sample Output
5 1 2	1 2 4 3 5
5 0 2	-1