D. Ehab the Xorcist
https://codeforces.com/contest/1325/problem/D

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Given 2 integers u and v, find the shortest array such that bitwise-xor: https://en.wikipedia.org/wiki/Bitwise_operation#XOR of its elements is u, and the sum of its elements is v.

Input
The only line contains 2 integers u and v ($0 \leq u, v \leq 10^{18}$).

Output
If there's no array that satisfies the condition, print "-1". Otherwise:

The first line should contain one integer, n, representing the length of the desired array. The next line should contain n **positive** integers, the array itself. If there are multiple possible answers, print any.

Examples

Input	Output
2 4	2 3 1
1 3	3 1 1 1
8 5	-1
0 0	0

Note
In the first sample, $3 \oplus 1 = 2$ and $3 + 1 = 4$. There is no valid array of smaller length.

Notice that in the fourth sample the array is empty.