# D. Ehab the Xorcist

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 of its elements is $u$, and the sum of its elements is $v$.

## Input

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

## 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 | Copy |
|---|---|
| 2 4 | |

| output | Copy |
|---|---|
| 2<br>3 1 | |

| input | Copy |
|---|---|
| 1 3 | |

| output | Copy |
|---|---|
| 3<br>1 1 1 | |

| input | Copy |
|---|---|
| 8 5 | |

| output | Copy |
|---|---|
| -1 | |

| input | Copy |
|---|---|
| 0 0 | |

| output | Copy |
|---|---|
| 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.