# B. XOR Equation

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Two **positive** integers $a$ and $b$ have a sum of $s$ and a bitwise XOR of $x$. How many possible values are there for the ordered pair $(a, b)$?

## Input

The first line of the input contains two integers $s$ and $x$ ($2 \leq s \leq 10^{12}$, $0 \leq x \leq 10^{12}$), the sum and bitwise xor of the pair of positive integers, respectively.

## Output

Print a single integer, the number of solutions to the given conditions. If no solutions exist, print $0$.

### Examples

| input |
| --- |
| 9 5 |
| **output** |
| 4 |

| input |
| --- |
| 3 3 |
| **output** |
| 2 |

| input |
| --- |
| 5 2 |
| **output** |
| 0 |

## Note

In the first sample, we have the following solutions: $(2, 7)$, $(3, 6)$, $(6, 3)$, $(7, 2)$.

In the second sample, the only solutions are $(1, 2)$ and $(2, 1)$.