

## Problem D. Little Girl and Maximum XOR

**Time limit** 1000 ms

**Mem limit** 262144 kB

A little girl loves problems on bitwise operations very much. Here's one of them.

You are given two integers  $l$  and  $r$ . Let's consider the values of  $a \oplus b$  for all pairs of integers  $a$  and  $b$  ( $l \leq a \leq b \leq r$ ). Your task is to find the maximum value among all considered ones.

Expression  $x \oplus y$  means applying bitwise excluding or operation to integers  $x$  and  $y$ . The given operation exists in all modern programming languages, for example, in languages *C++* and *Java* it is represented as "`^`", in *Pascal* — as "`xor`".

### Input

The single line contains space-separated integers  $l$  and  $r$  ( $1 \leq l \leq r \leq 10^{18}$ ).

Please, do not use the `%lld` specifier to read or write 64-bit integers in C++. It is preferred to use the `cin`, `cout` streams or the `%I64d` specifier.

### Output

In a single line print a single integer — the maximum value of  $a \oplus b$  for all pairs of integers  $a, b$  ( $l \leq a \leq b \leq r$ ).

#### Sample 1

Input	Output
1 2	3

#### Sample 2

Input	Output
8 16	31

#### Sample 3

Input	Output
1 1	0