

Maximizing XOR

Problem Statement

Given two integers: L and R ,

find the maximal values of $A \text{ xor } B$ given, $L \leq A \leq B \leq R$

Input Format

The input contains two lines, L is present in the first line.
 R in the second line.

Constraints

$$1 \leq L \leq R \leq 10^3$$

Output Format

The maximal value as mentioned in the problem statement.

Sample Input#00

```
1
10
```

Sample Output#00

```
15
```

Sample Input#01

```
10
15
```

Sample Output#01

```
7
```

Explanation

In the second sample let's say $L = 10$, $R = 15$, then all pairs which comply to above condition are

$$10 \oplus 10 = 0$$

$$10 \oplus 11 = 1$$

$$10 \oplus 12 = 6$$

$$10 \oplus 13 = 7$$

$$10 \oplus 14 = 4$$

$$10 \oplus 15 = 5$$

$$11 \oplus 11 = 0$$

$$11 \oplus 12 = 7$$

$$11 \oplus 13 = 6$$

$$11 \oplus 14 = 5$$

$$11 \oplus 15 = 4$$

$$12 \oplus 12 = 0$$

$$12 \oplus 13 = 1$$

$$12 \oplus 14 = 2$$

$$12 \oplus 15 = 3$$

$$13 \oplus 13 = 0$$

$$13 \oplus 14 = 3$$

$$13 \oplus 15 = 2$$

$$14 \oplus 14 = 0$$

$$14 \oplus 15 = 1$$

$$15 \oplus 15 = 0$$

Here two pairs (10,13) and (11,12) have maximum xor value 7 and this is the answer.