

# 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.