

# Maximizing XOR

Given two integers,  $L$  and  $R$ , find the maximal value of  $A \text{ xor } B$ , where  $A$  and  $B$  satisfy the following condition:

$$L \leq A \leq B \leq R$$

## Input Format

The input contains two lines;  $L$  is present in the first line and  $R$  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

```
10
15
```

## Sample Output

```
7
```

## Explanation

The input tells us that  $L = 10$  and  $R = 15$ . All the pairs which comply to above condition are the following:

- $10 \oplus 10 = 0$
- $10 \oplus 11 = 1$
- $10 \oplus 12 = 6$
- $10 \oplus 13 = 7$
- $10 \oplus 14 = 4$
- $10 \oplus 15 = 5$
- $11 \oplus 11 = 0$
- $11 \oplus 12 = 7$
- $11 \oplus 13 = 6$
- $11 \oplus 14 = 5$
- $11 \oplus 15 = 4$
- $12 \oplus 12 = 0$
- $12 \oplus 13 = 1$
- $12 \oplus 14 = 2$
- $12 \oplus 15 = 3$
- $13 \oplus 13 = 0$
- $13 \oplus 14 = 3$
- $13 \oplus 15 = 2$
- $14 \oplus 14 = 0$
- $14 \oplus 15 = 1$
- $15 \oplus 15 = 0$

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

