Day 6: Birthday Cake

This time it is Andrew's birthday and Laurence and Goefferey decide to make a cake again, but this time they plan to choose the amount of flour (in grams) in a different way. Geofferey will pick two numbers x and y at random and Laurence will decide the amount of flour by using the following method: - The smallest possible value of x⩚ n + y⩚ n for any given n, where ⩚ denotes the bitwise XOR operation.

Input Format

First line contains the number of test cases m (1 ≤ m ≤ 100000). Following test cases contain two integers x and y (1 ≤ x, y ≤ 10000000000)

Constraints

- (1 ≤ m ≤ 100000)
- (1 ≤ x, y ≤ 10000000000)

Output Format

For every test case, output --> smallest possible value of x⩚ n + y⩚ n for any given n

Sample Input 0

```
6
6 12
4 9
59 832
28 14
4925 2912
1 1
```

Sample Output 0

```
10
13
891
18
6237
0
```

Explanation 0

For the first input x = 6, y = 12, if we pick n = 4, then (6 ⩚ 4) + (12 ⩚ 4) = 2+8 = 10. This is also the smallest value