Rightmost different bit

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Given two numbers **M** and **N**. Write a program to find the position of rightmost different bit in binary representation of numbers.

Input:
First line of input contains a single integer T which denotes the number of test cases. T test cases follows. First line of each test case contains two space separated integers M and N.

Output:
For each test case print the position of rightmost different bit in binary representation of numbers. If both M and N are same then print -1 in this case.

Constraints:
1<=T<=100
1<=M<=1000
1<=N<=1000

Example:
Input:
2
11 9
52 4
Output:
2
5