import java.io.\*;

import java.util.\*;

import java.text.\*;

import java.math.\*;

import java.util.regex.\*;

public class Solution {

public static void main(String[] args) {

Scanner in = new Scanner(System.in);

int t = in.nextInt();

for(int a0 = 0; a0 < t; a0++){

int n = in.nextInt();

int k = in.nextInt();

//System.out.println(n);

//System.out.println(k);

System.out.println(solve(n,k));

}

in.close();

}

static int solve(int n,int k)

{

int findresult=0;

for(int A=0;A<=n;A++)

{

for(int B=A+1;B<=n;B++)

{

int current=A&B;

if(current>findresult && current<k)

{

findresult=current;

}

}

}

return findresult;

}

}