BUBT INTRA-UNIVERSITY PROGRAMMING CONTEST SPRING 2017 (DIVISION 1)

☐ Finished

THE CONTEST HAS ENDED.

D. Bit Manipulation

Score: 2

CPU: 2s
Memory: 512MB

Abir recently learn about bit manipulation. He learn AND, OR, XOR and other basic operations of Boolean algebra. Now his teacher gives him a problem of bit manipulation. But he failed to solve it. So he asks your help to solve the problem. The problem was you are given two integer N and X. You need to calculate that Y (Y>=X and Y<=N) such that X XOR Y is equal N. (In C and C++ XOR sign is '^')

INPUT

First line contains number of test case T ($T \leq 100$). Following T lines contain two integers N and X ($0 \leq N, X \leq 10\^5$).

OUTPUT

For each test case you need to print the value of Y in the following format.If there is no Y found, just print -1.

Sample

Input	Output
2 13 5 2 7	8 -1

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