IIUPC 2012

Problem C: Sohel Sir's Assignment

Sohel sir gave an assignment in CSE-315 course instead of a class test. The assignment was to make questions and provide corresponding answers from the chapters 2, 3, 4, 5. Each student is assigned chapter no **y** according to the formula :

$$y = (Roll \% 4) + 2$$

I.e. he has to make questions and answers from chapter **y**. According to this rule, Roll **4** was supposed to make questions and answers from chapter **2** as **(4%4) + 2 = 2** and Roll **35** was assigned to chapter **5** as **(35%4) +2 = 5**. In the meantime, roll **35** had already made the questions & answers from chapter **5** and Roll **4** got the complete assignment of roll **35** .So to copy that assignment Roll **4** wanted to change the divisor 4 of the formula to some number **m** such that his assignment changes to chapter **5 ,** that is **(4%m) + 2 = 5**. But he failed to find such number. Now, your problem is similar to the above problem.

Given two number **x** and **y** you have to find a positive number **m** such that **(x%m) + 2 = y**.
If multiple **m** is possible, choose the minimum one .If no answer is found print **Impossible**.

Input

First line of input will contain the number of test cases, **T ≤ 125.** Then there follows **T** lines, each containing two integers **x** ($0 \le x \le 10^{12}$) and **y** ($2 \le y \le x+2$).

Output

For each case, print **m**, if **m** is found. Otherwise print "**Impossible**" (without quotes).See the samples given below for exact formatting.

Sample Input	Output for Sample Input
4 4 5 35 5 4 2 11 5	Impossible 4 1 4
Problem Setter: Mohammad Hafiz Uddin	
Alternate Solution: Radi Muhammad Reza	