

SIR CHIRAG AND MAGIC NUMBERS

Sir Chirag is famous for his 'Intelligencia". He found that **Dukkar** and **Chapta** were unable to solve a question.

The magic Numbers are described as: The numbers are strictly positive, don't contain any leading zeroes. It has exactly 'p' digits and if we move the last digit of the number to the beginning, it grows exactly 'x' times.

Chirag Sir took the task to solve it. It took him minutes to solve. Now its your turn.

You have to find the Minimum possible number that satisfies the above conditions Given 'p' and 'x'.

Input

First line contains the number of test cases T: $0 < T \leq 50$

Next T lines contains two intergers **p** and **x**

$0 < p \leq 1000000$ and $0 < x < 10$

Output

If such a number is not possible then print "Impossible" (Without the quotes). else print the number.

Example

Input:

3

6 5

1 2

6 4

Output:

142857

Impossible

102564

(observe that for the first test case : $142857 \times 5 = 714285$)