

Magic Number

Given two natural numbers n and m of length $1 \leq k \leq 200$, print largest number a such that a is a magic number for n and a is a magic number for m . We say that any number j is a magic number for a number p if j can be formed from digits of p . Ex. 524 is a magic number of 245, 425, 524, 12345, 145672, etc. You can assume that both n and m will have at least one digit in common and neither n nor m has the digit 0. Input will satisfy all constraints given.

Input

First line contains an integer t signifying number of test cases. This is followed by t lines each containing 2 space separated numbers n and m .

Output

Largest number a such that a is a magic number for n and a is a magic number for m .

Constraints

$1 \leq T \leq 10000$

$0 < n, m < 10^{200}$

n, m have at least one digit in common

n, m do not have digit 0

Time limit: 2 sec

Sample Input

2

1223487 567891222

123 432

Sample Output

87221

32

Author: Deepanker Aggarwal

Tester: Deepanker Aggarwal

Other Solutions: Amol Verma and Maneet Singh