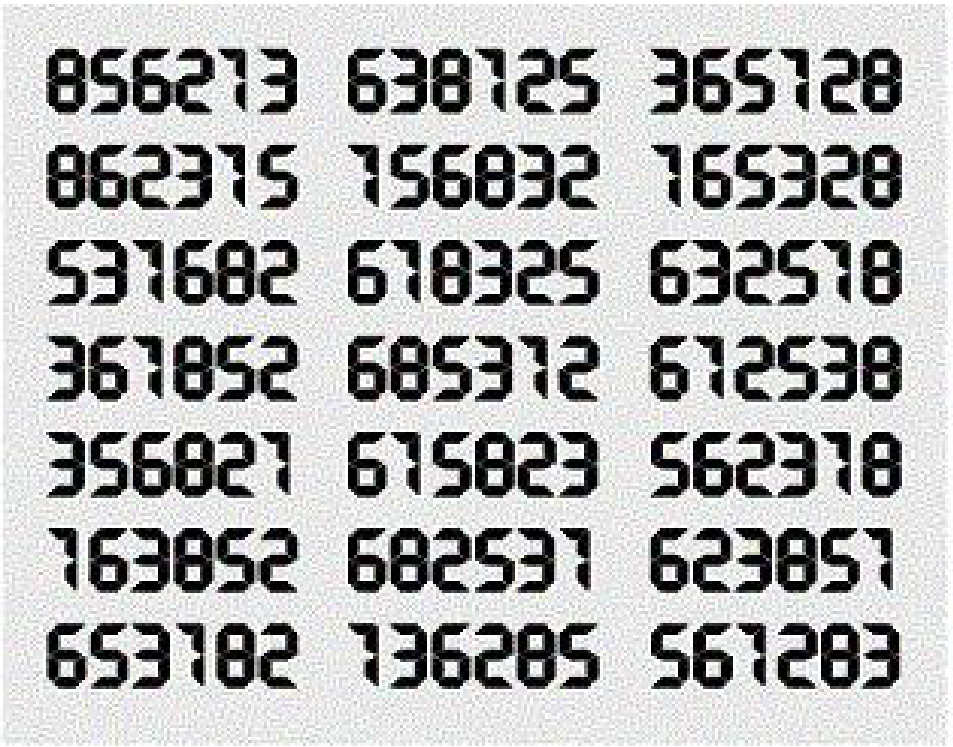
3017 - Permutation Primes

Asia - Dhaka - 2004/2005



Permutations of a sequence of decimal digits have an interesting property. Any two permutations of a sequence of digits have a difference, which is divisible by 9. Quite interesting, isn't it? For example:

$$| 458967 - 456879| = 2088 = 9*232$$

We won't ask for the proof today (as it is very easy) but we will focus towards a different aspect of this property. There are some numbers whose difference with one (or more) of its permutation is of the form 9p, where p is a prime less than 1111111. These numbers are called permutation primes. For example **92-29=63=9*7**, where **7** is a prime. So 92 is a permutation prime. Now you have to write a program that finds out how many permutation primes are there within a specified range.

Input

First line of input contains an integer T ($0 < T < 51$) denoting the number of test cases to follow. Then follows T lines each of which contains two positive integers p and q. Both of them are less than **99999999**, without any leading zero(s) and $| p - q| \leq 1000$.

Output

There will be one line of output for each test case. At first print `Case i: ' (without the quotes) where i is an integer denoting the i-th test case starting from one. Then the line will contain an integer N that denotes the

number of permutation primes between p and q (inclusive).

Sample Input

```
2
1 10
1 20
```

Sample Output

```
Case 1: 0
Case 2: 5
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