code jam
hello, world!

Practice Mode



Qualification Round 2012



- Submissions

Speaking in Tongues
15pt Not attempted **17356/19464 users** correct (89%)

Dancing With the Googlers
10pt Not attempted **12384/13899 users** correct (89%)
10pt Not attempted **10762/12138 users** correct (89%)

Recycled Numbers
10pt Not attempted **11747/12327 users** correct (95%)
15pt Not attempted **6811/10604 users** correct (64%)

Hall of Mirrors
15pt Not attempted **551/879 users** correct (63%)
25pt Not attempted **184/259 users** correct (71%)

- Top Scores

| | |
|---|---|
| hos.lyric | 100 |
| qnighy | 100 |
| DjinnKahn | 100 |
| levlam | 100 |
| iwiskimo | 100 |
| mystic | 100 |
| TripleM | 100 |
| aleksey | 100 |
| royf | 100 |
| krijgertje | 100 |

# Problem C. Recycled Numbers

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the Quick-Start Guide to get started.

Small input
10 points

Download C-small.in

your output file: Choose File No file chosen

source file(s): not needed for the practice contest

Submit file Hide

Large input
15 points

Download C-large.in

your output file: Choose File No file chosen

source file(s): not needed for the practice contest

Submit file Hide

## Problem

Do you ever become frustrated with television because you keep seeing the same things, recycled over and over again? Well I personally don't care about television, but I do sometimes feel that way about numbers.

Let's say a pair of distinct positive integers ($n$, $m$) is *recycled* if you can obtain $m$ by moving some digits from the back of $n$ to the front without changing their order. For example, (12345, 34512) is a recycled pair since you can obtain 34512 by moving 345 from the end of 12345 to the front. Note that $n$ and $m$ must have the same number of digits in order to be a recycled pair. Neither $n$ nor $m$ can have leading zeros.

Given integers **A** and **B** with the same number of digits and no leading zeros, how many distinct recycled pairs ($n$, $m$) are there with $\mathbf{A} \le n < m \le \mathbf{B}$?

## Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow. Each test case consists of a single line containing the integers **A** and **B**.

## Output

For each test case, output one line containing "Case #x: y", where x is the case number (starting from 1), and y is the number of recycled pairs ($n$, $m$) with $\mathbf{A} \le n < m \le \mathbf{B}$.

## Limits

$1 \le \mathbf{T} \le 50$.
**A** and **B** have the same number of digits.

## Small dataset

$1 \le \mathbf{A} \le \mathbf{B} \le 1000$.

## Large dataset

$1 \le \mathbf{A} \le \mathbf{B} \le 2000000$.

Sample

| Input | Output |
| --- | --- |
| 4<br>1 9<br>10 40<br>100 500<br>1111 2222 | Case #1: 0<br>Case #2: 3<br>Case #3: 156<br>Case #4: 287 |

Are we sure about the output to Case #4?

Yes, we're sure about the output to Case #4.