

F - Interesting Ranges

A positive integer is a *palindrome* if its decimal representation (without leading zeros) is a palindromic string (a string that reads the same forwards and backwards). For example, the numbers 5, 77, 363, 4884, 11111, 12121 and 349943 are palindromes.

A range of integers is *interesting* if it contains an even number of palindromes. The range $[L, R]$, with $L \leq R$, is defined as the sequence of integers from L to R (inclusive): $(L, L+1, L+2, \dots, R-1, R)$. L and R are the range's first and last numbers.

The range $[L_1, R_1]$ is a *subrange* of $[L, R]$ if $L \leq L_1 \leq R_1 \leq R$. Your job is to determine how many interesting subranges of $[L, R]$ there are.

Input

The first line of input gives the number of test cases, **T**. **T** test cases follow. Each test case is a single line containing two positive integers, **L** and **R** (in that order), separated by a space.

Output

For each test case, output one line. That line should contain "Case #x: y", where x is the case number starting with 1, and y is the number of interesting subranges of $[L, R]$, modulo 1000000007.

Limits

$$1 \leq T \leq 120$$

$$\text{Small dataset: } 1 \leq L \leq R \leq 10^{13}$$

$$\text{Large dataset; } 1 \leq L \leq R \leq 10^{100}$$

Sample

Input:

```
3
1 2
1 7
12 110
```

Output:

```
Case #1: 1
Case #2: 12
Case #3: 2466
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