

Problem D. Dios Primes

Source file name: D.c, D.cpp, D.java
Input: Standard
Output: Standard
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In number theory, a left-truncatable prime is a primer number which, in a given base, contains no 0, and if the leading ("left") digit is successively removed, then all resulting numbers are prime. For example, 9137 is a left-truncatable prime, since 9137, 137, 37, 7 are all prime. For this problem, decimal representation is assumed.

A Dios prime is a left-truncatable prime such that the number obtained by reversing its digits is also left-truncatable. The number 3467 is a Dios prime, since 3467 is left-truncatable and 7643 is also left-truncatable. Given two numbers a and b , your task is to find the number of Dios primes in the range $[a, b]$.

Input

The first input line contains a number T , the number of test cases. Each of the following T lines contains two numbers a and b separated by a space.

- $1 \leq T \leq 10^5$
- $1 \leq a \leq b \leq 10^9$

Output

For each test case you must print the number of Dios primes in the range $[a, b]$.

Example

Input	Output
4	4
1 10	2
11 100	1
3467 3467	1
7643 7643	

Explanation

Side Remark. In order to dial *DIOS in a telephone, one has to dial *3467. That's how the Dios primes got their name.