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## E. Sponsor of Your Problems

time limit per test: 2 seconds memory limit per test: 256 megabytes

For two integers a and b, we define f(a,b) as the number of positions in the decimal representation of the numbers a and b where their digits are the same. For example, f(12,21)=0, f(31,37)=1, f(19891,18981)=2, f(54321,24361)=3.

You are given two integers l and r of the **same** length in decimal representation. Consider all integers  $l \le x \le r$ . Your task is to find the minimum value of f(l,x) + f(x,r).

#### Input

Each test consists of multiple test cases. The first line contains a single integer t (  $1 \le t \le 10^4$ ) — the number of test cases. The description of the test cases follows.

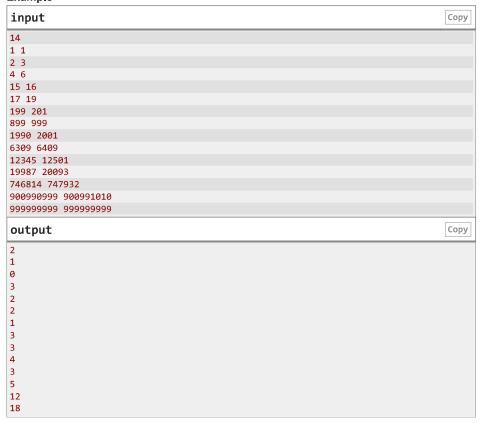
Each test case consists of a single line containing two integers l and r ( $1 \le l \le r < 10^9$ ).

It is guaranteed that the numbers l and r have the same length in decimal representation and do not have leading zeros.

#### Output

For each test case, output the minimum value of f(l,x)+f(x,r) among all integer values  $l\leq x\leq r$ .

### Example



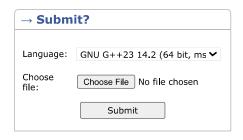
# **Note** In the first test case, you can choose x=1. Then f(1,1)+f(1,1)=1+1=2.

Codeforces Round 1032 (Div. 3)

Contest is running

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Contestant



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324832747	Jun/17/2025 18:06	Accepted

In the second test case, you can choose x = 2. Then f(2,2) + f(2,3) = 1 + 0 = 1.

In the third test case, you can choose x=5. Then f(4,5)+f(5,6)=0+0=0.

In the fourth test case, you can choose x = 15. Then f(15, 15) + f(15, 16) = 2 + 1 = 3.

In the fifth test case, you can choose x = 18. Then f(17, 18) + f(18, 19) = 1 + 1 = 2.

In the sixth test case, you can choose x=200. Then f(199,200)+f(200,201)=0+2=2.

In the seventh test case, you can choose x=900. Then f(899,900)+f(900,999)=0+1=1.

In the eighth test case, you can choose x=1992. Then f(1990,1992)+f(1992,2001)=3+0=3.

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