

Summing Slopes

A digit in a number N is a minima if it is lesser than both the digits adjacent to it. Similarly, a digit is a maxima if it is greater than both the digits adjacent to it. The slope of N is the number of digits in N (leaving out the first and the last digit) which are either a minima or a maxima. Given A and B , count the sum of the slopes of all numbers between A and B .

Input

The first line contains the number of test cases T . Each of the next T lines contains two integers A and B .

Output

Output T lines one for each test case, containing the required sum for the corresponding test case.

Sample

Input

```
3
101 101
1 100
100 150
```

Output

```
1
0
19
```

Constraints

$1 \leq T \leq 50000$

$1 \leq A \leq B \leq 1000000000000000 (10^{15})$