

5004 Balanced Number

A balanced number is a non-negative integer that can be balanced if a pivot is placed at some digit. More specifically, imagine each digit as a box with weight indicated by the digit. When a pivot is placed at some digit of the number, the distance from a digit to the pivot is the offset between it and the pivot. Then the torques of left part and right part can be calculated. It is balanced if they are the same. A balanced number must be balanced with the pivot at some of its digits. For example, 4139 is a balanced number with pivot fixed at 3. The torques are $4 * 2 + 1 * 1 = 9$ and $9 * 1 = 9$, for left part and right part, respectively. It's your job to calculate the number of balanced numbers in a given range $[x, y]$.

Input

The input contains multiple test cases. The first line is the total number of cases T ($0 < T \leq 30$). For each case, there are two integers separated by a space in a line, x and y . ($0 \leq x \leq y \leq 10^{18}$).

Output

For each case, print the number of balanced numbers in the range $[x, y]$ in a line.

Sample Input

```
2
0 9
7604 24324
```

Sample Output

```
10
897
```