

Umnozak

The digit-product of a positive integer is the product of the number's decimal digits. For example, the digit-product of 2612 is $2 \cdot 6 \cdot 1 \cdot 2 = 24$.

The self-product of a number is the product of the number and its digit-product. For example, the self-product of 2612 is $2612 \cdot 24 = 62688$.

Write a program that, given two positive integers A and B ($1 \leq A \leq B < 10^{18}$), calculates the number of positive integers whose self-product is between A and B, inclusive.

Input

The first line of input contains the integer T ($1 \leq T \leq 20$). The next T lines each contain a pair of integers A and B.

Output

For each test case, print a line with the number of positive integers whose self-product is between A and B.

Example

Input:

```
3
20 30
145 192
2224222 2224222
```

Output:

```
2
4
1
```

For the second example, the self-products of the numbers 19, 24, 32, and 41 are 171, 192, 192 and 164, respectively.