

A number is called *lucky* if the sum of its digits, as well as the sum of the squares of its digits is a prime number. How many numbers between *a* and *b* inclusive, are lucky?

For example, *a* = 20 and *b* = 25. Each number is tested below:

value	digit sum	digit squares	squares sum
20	2	4,0	4
21	3	4,1	5
22	4	4,4	8
23	5	4,9	13
24	6	4,16	20
25	7	4,25	29

We see that two numbers, 21, 23 and 25 are *lucky*.

**Note:** These lucky numbers are not to be confused with [Lucky Numbers](#)

### Function Description

Complete the *luckyNumbers* function in the editor below. It should return an integer that represents the number of lucky numbers in the given range.

luckyNumbers has the following parameter(s):

- *a*: an integer, the lower range bound
- *b*: an integer, the higher range bound

### Input Format

The first line contains the number of test cases *T*.  
Each of the next *T* lines contains two space-separated integers, *a* and *b*.

### Constraints

- $1 \leq T \leq 10^4$
- $1 \leq a \leq b \leq 10^{18}$

### Output Format

Output T lines, one for each test case in the order given.

### Sample Input

```
2
1 20
120 130
```

### Sample Output

4  
1

### Explanation

For the first case, the lucky numbers are **11, 12, 14**, and **16**.  
For the second case, the only lucky number is **120**.