

Lucky Numbers

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(both inclusive) are lucky?

Lucky numbers are not to be confused with [Lucky Numbers](#)

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. Each line contains the required answer for the corresponding test case.

Constraints:

1 <= T <= 10000
1 <= A <= B <= 10^18

Sample Input:

2
1 20
120 130

Sample Output:

4
1

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