Tobby has learned to calculate the sum of the digits of a given number X, but this is very easy for him. Lately he has been studying about prime numbers and he has found a more challenging question:

How many integer numbers in the range from L to R (inclusive) exist such that the sum of their digits is a prime number?.

Tobby is an smart puppy but he can only count to 100, can you help him to solve this problem?

Input

The input consists of several test cases and must be read until EOF. The first line of each test case contains two integers L and R ($1 \leq L \leq R \leq 10^{500}$).

Output

For each test case the output consists of one number X indicating how many numbers in the range L, R meet the property previously mentioned. Because this amount can be very large you also should print the answer modulo $10^9 + 7$.

Sample Input

```
1 10
20 46
```

Sample Output

```
4
11
```