

Project Euler #37: Truncatable primes



This problem is a programming version of [Problem 37](#) from [projecteuler.net](#)

The number 3797 has an interesting property. Being prime itself, it is possible to continuously remove digits from left to right, and remain prime at each stage: 3797, 797, 97, and 7. Similarly we can work from right to left: 3797, 379, 37, and 3.

Find the sum of primes that are both truncatable from left to right and right to left below N .

NOTE: 2, 3, 5, and 7 are not considered to be truncatable primes.

Input Format

Input contains an integer N .

Output Format

Print the answer corresponding to the test case.

Constraints

$$100 \leq N \leq 10^6$$

Sample Input

100

Sample Output

186