

Project Euler #35: Circular primes

This problem is a programming version of [Problem 35](#) from [projecteuler.net](#)

The number, **197**, is called a circular prime because all rotations of the digits: **197**, **971**, and **719**, are themselves prime.

There are thirteen such primes below 100: **2, 3, 5, 7, 11, 13, 17, 31, 37, 71, 73, 79, and 97**. Sum of which is **446**

Find the sum of circular primes that are below N ?

Note

Rotations can exceed N .

Input Format

Input contains an integer N

Constraints

- $10 \leq N \leq 10^6$

Output Format

Print the answer corresponding to the test case.

Sample Input

```
100
```

Sample Output

```
446
```