

## Circular Primes (Edited)

Extracted from: Project Euler - Problem 35  
Source filename: circular.py  
Time limit: 15 second(s)

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.

What is the sum of all circular primes that are below  $d$ ?

**Help:** An efficient method to generate prime numbers can be done with the Sieve of Eratosthenes.

### Input

The input contains several test cases. Each test case is a single integer  $d$  ( $1 \leq d < 10^6$ ).

### Output

For each number in the input, your program should output the sum of all the circular primes below  $d$ .

Sample Input	Sample Output
97	446
100	446
1000	6440
193939	822591