

Problem E

Beautiful Prime

Time limit: 1 second
Memory: 1024 megabytes

Problem Description

In an adventure into the world of arithmetic, you are exploring a magical kingdom where every number has special properties. In this kingdom, there is a type of number called "beautiful prime." These numbers are not only prime numbers but also have digits that are considered "beautiful" - meaning the digits can only be **2**, **3**, **5**, or **7**.

As a mathematical researcher, you have been assigned an important task: to find all the beautiful prime numbers from **1** to **N**, where **N** is an integer you will receive in the problem. A beautiful prime number is a prime number that consists only of the digits **2**, **3**, **5**, and **7**, and of course, it must be a prime number - meaning it only has two divisors, **1** and **itself**.

The question is: Count how many beautiful primes exist from **1** to **N**. So, what is your task? How can you find these numbers in a range up to **10^9** ? This is a challenging problem, but you will need to apply optimal methods to complete the task.

Input:

- An only line contains an integer **N** ($N \leq 10^9$)

Output:

- A single integer: the number of beautiful prime numbers from **1** to **N**.

Example:

INPUT	OUTPUT
17	4