Problem B

Opposite Number

Time limit: 1 second
Memory: 1024 megabytes

Problem Description

In mathematics, the concept of coprime numbers and the greatest common divisor (GCD) plays an important role in analyzing the properties of integers. Two integers X and Y are said to be coprime if they do not share any common divisor greater than 1, i.e., their greatest common divisor (GCD) is 1. This means that X and Y have no common factors other than 1.

In this problem, we introduce a new concept: the opposite number. An opposite number is a positive integer X such that when paired with its reversed number, the two are coprime. The reversed number is defined as the number formed by writing the digits of the original number in reverse order.

For example, consider the number 123. The reverse of 123 is 321. We calculate the GCD of 123 and 321. If the GCD is 1, then 123 is considered an opposite number.

Problem Requirements: You are tasked with writing a program to check whether a given positive integer is an opposite number.

Input Structure:

- The first line contains a positive integer N (with $N \leq 10^3$), representing the number of integers to check.
- The following N lines each contain a positive integer a_i (with $a_i \leq 2 \times 10^9$), representing the numbers to be checked.

Output Structure:

- The program will output N lines, each containing the number 1 if the corresponding integer is an opposite number, and 0 otherwise.

Example:

INPUT	OUTPUT
3 123 201 2021	0 0 1