

# Project Euler #41: Pandigital prime



This problem is a programming version of [Problem 41](#) from [projecteuler.net](#)

We shall say that an  $n$ -digit number is pandigital if it makes use of all the digits 1 to  $n$  exactly once. For example, 2143 is a 4-digit pandigital and is also prime.

What is the largest  $n$ -digit pandigital prime  $\leq N$ ? If there is none, print -1

### Input Format

First line contains  $T$  that denotes the number of test cases. This is followed by  $T$  lines, each containing an integer,  $N$ .

### Output Format

Print the required answer for each test case.

### Constraints

$$1 \leq T \leq 10^5$$

$$10 \leq N \leq 10^{10} - 1$$

### Sample Input

```
2
100
10000
```

### Sample Output

```
-1
4231
```