Find Largest Prime Substring

Given a string of digits, your task is to find the largest prime number which presents in that string. Our prime numbers are values between 2 to 100,000 only.

Input

Each line contains a string of digits (255 digits at most). The line containing '0' only indicates the end which will not be processed. The input does not exceed 1,000 lines. We guarantee that each input string will contain at least one prime.

Output

Print out in each line the largest prime number found in each input string.

Sample Input

```
11245
91321150448
1226406
0
```

Sample Output

```
11
1321
2
```