Prime Words

Background

A prime number is a number that has only two divisors: itself and the number one. Examples of prime numbers are: 2, 3, 5, 17, 101 and 10007.

In this problem you should read a set of words, each word is composed only by letters in the range a-z and A-Z. Each letter has a specific value, the letter **a** is worth 1, letter **b** is worth 2 and so on until letter z that is worth 26. In the same way, letter **A** is worth 27, letter **B** is worth 28 and letter **Z** is worth 52.

You should write a program to determine if a word is a prime word or not. A word is a prime word if the sum of its letters is a prime number.

Input

The input consists of a set of words. Each word is in a line by itself and has L letters, where $1 \leq L \leq 10000$. The input is terminated by end of file (EOF).

Output

For each word you should print: "`It is a prime word.`", if the sum of the letters of the word is a prime number, otherwise you should print: "`It is not a prime word.`".

Sample Input

```
NRFU
contest
ACM
```

Sample Output

```
It is a prime word.
It is not a prime word.
It is not a prime word.
```