

Introduction

A prime number is an integer that is only divisible by itself and 1. You have to write a program that determines whether a number is prime.

WARNING: You cannot use language-provided functions

Input

The input of the program is a set of numbers, ending with a zero. 7 26 177 509 2053 0

Output

The program must output whether each number is prime.

7 is prime 26 is not prime 177 is not prime 509 is prime 2053 is prime