Prime or not?

Prime number is a positive integer that is only divisible by 1 and itself. For example, 2, 3, 5, 7 and 11 are prime, but 4, 6, 8 and 10 are not prime.

Prime numbers are very important, so it is also important to know whether a given number is prime or not. This is why we decided to ask you to make a program that checks a given integer is prime or not.

Input

Your input consists of an arbitrary number of lines, but no more than 50.

Each line contains an positive integer n ($2 \leq n \leq 10^{12}$). Please use 64-bit integer type to store n.

The end of input is indicated by a line containing only the value -1.

Output

For each input line, print

- "n `is PRIME!!`" (without quotes) if n is prime.
- "n `is COMPOSITE TT`" (without quotes) if n is composite.

Example

Standard input	Standard output
5 11 12 863931211 999999999989 999999999990 -1	5 is PRIME!! 11 is PRIME!! 12 is COMPOSITE TT 8639312111 is COMPOSITE TT 999999999989 is PRIME!! 999999999990 is COMPOSITE TT

Time Limit

1 second.