Problem 1—Twin Prime Pairs

Professor Plum likes to keep his elementary-aged childrens' minds active over the summer months with simple mathematical puzzles. He asked them to find all twin prime pairs between two given positive integers.

A *twin prime* is a prime number that differs from another prime number by 2. For example a twin prime pair is (41, 43) since both 41 and 43 are prime numbers.

The first few twin prime pairs are:
(3, 5), (5, 7), (11, 13), (17, 19), (29, 31), (41, 43), (59, 61), (71, 73), (101, 103), (107, 109), (137, 139), …

INPUT SPECIFICATION

The only line of input will contain two positive integers separated by a single blank. The first integer will be the smaller one, and the second integer will fit in a 32-bit binary representation.

OUTPUT SPECIFICATION

This problem should produce all twin prime pairs entirely within the input values inclusive of these values. Each pair should be on a line by themselves and be of the form `(#, #)` with the smaller prime being listed first. Note the primes are enclosed by parentheses, and separated by a comma and a single blank space.

SAMPLE INPUT

```
11 72
```

SAMPLE OUTPUT

```
(11, 13)
(17, 19)
(29, 31)
(41, 43)
(59, 61)
```