Problem B
Twin Primes

Input: standard input
Output: standard output
Time Limit: 30 seconds

Twin primes are pairs of primes of the form **(p, p+2)**. The term "twin prime" was coined by Paul Stäckel **(1892-1919)**. The first few twin primes are **(3, 5), (5, 7), (11, 13), (17, 19), (29, 31), (41, 43)**. In this problem you are asked to find out the **S**-th twin prime pair where **S** is an integer that will be given in the input.

Input

The input will contain less than **10001** lines of input. Each line contains an integers **S (1<=S<=100000)**, which is the serial number of a twin prime pair. Input file is terminated by end of file.

Output

For each line of input you will have to produce one line of output which contains the **S**-th twin prime pair. The pair is printed in the form **(p1,<space>p2)**. Here **<space>** means the space character **(ASCII 32)**. You can safely assume that the primes in the **100000-th** twin prime pair are less than **20000000**.

Sample Input

```
1
2
3
4
```

Sample Output

```
(3, 5)
(5, 7)
(11, 13)
(17, 19)
```

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Far away there in the sunshine are my highest aspirations. I may not reach
them, but I can look up and see their beauty, believe in
them, and try to follow where they lead.