A. Design Tutorial: Learn from Math

One way to create a task is to learn from math. You can generate some random math statement or modify some theorems to get something new and build a new task from that.

For example, there is a statement called the "Goldbach's conjecture". It says: "each even number no less than four can be expressed as the sum of two primes". Let's modify it. How about a statement like that: "each integer no less than 12 can be expressed as the sum of two composite numbers." Not like the Goldbach's conjecture, I can prove this theorem.

You are given an integer n no less than 12, express it as a sum of two composite numbers.

Input

The only line contains an integer n ($12 \leq n \leq 10^6$).

Output

Output two composite integers x and y ($1 < x, y < n$) such that $x + y = n$. If there are multiple solutions, you can output any of them.

Examples

input
12

output
4 8

input
15

output
6 9

input
23

output
8 15

input
1000000

output
500000 500000

Note

In the first example, 12 = 4 + 8 and both 4, 8 are composite numbers. You can output "6 6" or "8 4" as well.

In the second example, 15 = 6 + 9. Note that you can't output "1 14" because 1 is not a composite number.