Goldbach's conjecture

Time limit: 2 sec.
Memory limit: 512MB

Description

Goldbach's conjecture states:

Every even integer greater than 2 can be

expressed as the sum of two primes.

Even though the conjecture is unproven, it is known that it is true for all integers below 10^18.

Given an even integer n greater than 2, find two primes p and q such that n is the sum of p and q.

Input

The first line contains a single integer n. ($4 \leq n \leq 100{,}000$, n is even)

Output

Print two integers, p and q, in a single line. If multiple (p, q) pairs are possible, print the one with the smallest p.

Sample I/O

Input(s)	Output(s)
6	3 3
10	3 7