Goldbach's Second Conjecture

An integer $p > 1$ is called a prime if its only divisors are 1 and p itself. A famous conjecture about primes is Goldbach's conjecture, which states that

> Every *even* integer greater than 2 can be expressed as the sum of *two*primes.

The conjecture dates back to the year 1742, but still no one has been able to come up with a proof or find a counterexample to it. We considered asking you prove it here, but realized it would be too easy. Instead we present here a more difficult conjecture, known as Goldbach's second conjecture:

> Every *odd* integer greater than 5 can be expressed as the sum of *three*primes.

In this problem we will provide you with an odd integer N greater than 5, and ask you to either find three primes p_1, p_2, p_3 such that $p_1 + p_2 + p_3 = N$, or inform us that N is a counterexample to Goldbach's second conjecture.

Input Format

The input contains a single odd integer $5 < N \leq 10^{18}$.

Output Format

Output three primes, separated by a single space on a single line, whose sum is N. If there are multiple possible answers, output any one of them. If there are no possible answers, output a single line containing the text "*counterexample*" (without quotes).

Sample Input

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65
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Sample Output

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23 31 11
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Explanation

In the sample input N is 65. Consider the three integers 11, 23, 31. They are all prime, and their sum is 65. Hence they form a valid answer. That is, a line containing "11 23 31", "23 31 11", or any permutation of the three integers will be accepted. Other possible answers include "11 37 17" and "11 11 43".