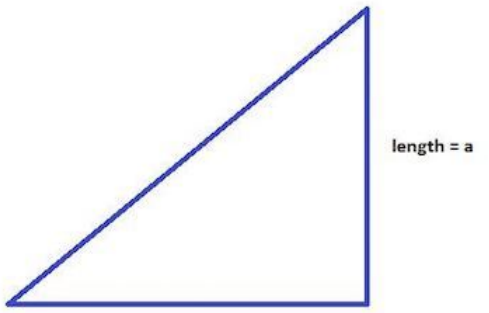
Pythagorean Triple

A *Pythagorean triple* consists of three positive integers a, b, and c, such that $a^2 + b^2 = c^2$. Such a triple is commonly written as (a, b, c). This term comes from the Pythagorean theorem, which says that a Pythagorean Triple will be the lengths of the sides of a right-angled triangle.

You have been given an integer a which represents the length of one of cathetus of a right-angle triangle.



You need to find the lengths of the remaining sides. There may be multiple possible answers; any one will be accepted.

Hints:

- Every odd number $2k + 1$ can be represented as $(k + 1)^2 - k^2$.
- If m and n are integers and $m > n$, then $(m^2 - n^2)^2 + (2mn)^2 = (m^2 + n^2)^2$.

Input Format

The first line contains an integer a denoting the length of one of cathetus of the right-angled triangle.

Constraints

- $5 \leq a < 10^9$

Output Format

A single line containing the possible values of a, b and c. You may print them in any order.

Sample Input 0

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5
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Sample Output 0

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5 12 13
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Explanation 0

We can see that the triple $(5, 12, 13)$ is a pythagorean triple:

$$5^2 + 12^2 = 13^2$$