

Output all the ways in which a given positive integer N can be obtained as the sum of several (two or more) consecutive positive integers.¹

INPUT

The first line of input contains the positive integer N ($3 \leq N \leq 10^{10}$).

OUTPUT

For each sum of consecutive positive integers that is equal to N , in one line output the first and the last addend. The order of lines in the output is not important. In each test case, at least one corresponding sum will exist.

SAMPLE TESTS

input

10

output

1 4

input

27

output

13 14

8 10

2 7

Clarification of the first test case: $10 = 1 + 2 + 3 + 4$.

¹The author apologizes if reading the task took too long, and promises that, in the future, he will try to be more concise, i.e., that he will try to explain the task using as less words and apologies in the footnotes as possible.