

MMO85

This is one of the hardest problems of Moskow Mathematical Olympiad 1985

*Prove that if n is a natural number equal or greater than 3, then there exist two **odd** natural numbers x and y such that $2^n = 7x^2 + y^2$.*

Create a program to find the value of x and y for a given n .

Input

A line contains a natural number n ($3 \leq n \leq 62$)

Output

A single line contains x and y , separated by a single space. Write any pair of x and y if you find more than one answer.

Example

Input:

3

Output:

1 1