Sheet1

The provided code stub reads and integer n from STDIN. For all non-negative integers i<n print i^2 .

Example

n=3

The list of non-negative integers that are less than n=3 is [0, 1, 2]. Print the square of each number on a separate line.

0

1

4

Input Format

The first and only line contains the integer n , .

Constraints

$1 \leq n \leq 20$

Output Format

Print n lines, one corresponding to each I ,

Sample Input 0

5

Sample Output 0

0
1
4
9
16

Write a function

An extra day is added to the calendar almost every four years as February 29, and the day is called a leap day. It corrects the calendar for the fact that our planet takes approximately 365.25 days to orbit the sun. A leap year contains a leap day.

In the Gregorian calendar, three conditions are used to identify leap years:

The year can be evenly divided by 4, is a leap year, unless:

The year can be evenly divided by 100, it is NOT a leap year, unless:

The year is also evenly divisible by 400. Then it is a leap year.

This means that in the Gregorian calendar, the years 2000 and 2400 are leap years, while 1800, 1900, 2100, 2200, 2300 and 2500 are NOT leap years. Source

Task

Given a year, determine whether it is a leap year. If it is a leap year, return the Boolean True, otherwise return False.

Note that the code stub provided reads from STDIN and passes arguments to the is leap function. It is only necessary to complete the is leap function.

Input Format

Read year, the year to test.

Constraints

$1900 \leq \text{year} \leq \mathbf{10^5}$

Output Format

The function must return a Boolean value (True/False). Output is handled by the provided code stub.

Sample Input 0

1990

Sample Output 0

False

Explanation 0

1990 is not a multiple of 4 hence it's not a leap year.