Problem A. 71690.happy ticket

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

When Zhora paid for the fare and got a ticket with the number. In his concept of a happy ticket called a ticket, if it is divided into at least two of his favorite numbers. 2, 5, 17, 19 and there are favorite numbers of Zhora. That is, tickets numbers 10, 170 are happy and numbers 3, 7 are not. Determine whether the ticket is happy or not.

Input

In the first line of the input file there is a natural number n, (1 <= n <= 10000) — ticket number.

Output

If the ticket is lucky "YES"otherwise "NO".

Examples

standard input	standard output
170	YES
3	NO

Problem B. 71704.Lucky Division

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

You are given an positive integer number n. Count the amount of the lucky and almost lucky numbers from one until n (inclusive). The number is considered to be lucky if it is divided to 7 without a remainder. The number is considered to be almost lucky if it is divided to 7 with a remainder of 2.

Count the amount of the lucky and almost lucky numbers from one until n (inclusive) !!!

Input

Line contains positive integer n ($1 \leqslant n \leqslant 100\,000$).

Output

Output the number of lucky and almost lucky numbers.

Examples

standard input	standard output
10	3
1	0
7	2

Note

For example number 14 divided to seven without remainder it is - lucky number, and number 9 divided to seven with a remainder of two and it is - almost lucky number.

Problem C. 71764.Display Size

Input file:	standard input
Output file:	standard output
Time limit:	1 second
Memory limit:	256 megabytes

A big company decided to launch a new series of rectangular displays, and decided that the display must have exactly n pixels.

Your task is to determine the size of the rectangular display — the number of lines (rows) of pixels a and the number of columns of pixels b, so that:

1) there are exactly n pixels on the display; 2) the number of rows does not exceed the number of columns, it means ($a \leq b$); 3) the difference abs(b - a) is as small as possible.

Input

The first line contains the positive integer n ($1 \leq n \leq 10^5$) — the number of pixels display should have

Output

Print two integers — the number of rows and columns on the display.

Examples

standard input	standard output
8	2 4
64	8 8
5	1 5

Note

In the first example the minimum possible difference equals 2, so on the display should be 2 rows of 4 pixels. In the second example the minimum possible difference equals 0, so on the display should be 8 rows of 8 pixels. In the third example the minimum possible difference equals 4, so on the display should be 1 row of 5 pixels.

Problem D. 71709.nexteven

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

You are given a number n, print the next even number after n.

Input

You have single integer number n

Output

Ouput next even number

Example

standard input	standard output
10	12

Problem E. 71790.maximum time

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

You have an array, you should find how many time maximum element of array occurs in this array.

Input

You have an array with size N - (1 <= N <= 100) and each element of array a[i] - (1 <= a[i] <= 10000)

Output

Output how many time maximum element of array occurs in this array.

Example

standard input	standard output
8 1 1 1 2 2 123 123 2	2

Problem F. 73204. Repeating element

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Write a program to find the two repeating elements in a given array of integers.

We guarantee that you have only one time two repeating elements

Input

Input line contains N integer numbers.

(1 =< N =< 100)

and array elements between 1 and 1000

Output

Output the element which repeats 2 times.

Examples

standard input	standard output
4 3 3 99 4	3
10 55 55 1 2 3 4 5 6 7 8	55

Problem G. 73275.Xor

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

You are given 2 integers a and b. Calculate a xor b.

Input

The first line of the input contains 2 integers a, b.

Output

Print the answer.

Examples

standard input	standard output
9139 9252	1943
9859 8096	14627

Problem H. 73393.isosceles triangle

Input file:	standard input
Output file:	standard output
Time limit:	1 second
Memory limit:	256 megabytes

You have three sides of triangle and you should find this triangle isosceles or not

An isosceles triangle is a triange that has two equal sides

We guarantee that this sides of the triangle elements

Input

You have three sides of triange a,b,c

lenght of sides between 1 and 10

Output

If this triangle isosceles output "Yes"else "No".

Examples

standard input	standard output
3 3 4	Yes
3 5 7	No

Problem I. 73455. Circle

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

For a given length of circle find its area using following formula. L = 2 * pi * R; S = pi * R*R;

Input

Input the length of circle L.

(1 <= L <= 1000)

Output

Output the answer in double.

Example

standard input	standard output
6	2.86479

Note

pi number is equal pi = 3.14159265359

Problem J. 73462. Line

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

You are given the coordinates of two points (x1, y1, x2, y2), calculate the length between them.

Input

Input 4 numbers: x1, y1, x2, y2.

Output

Output the lenght in double.

Examples

standard input	standard output
1 1 3 3	2.82843
2 1 5 6	5.83095