Problem A. Maximum and Minimum

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

You're given N integers, your task is to find difference between maximum and minimum.

Input

First line contains single integer N. $1 \leq N \leq 1000$. Second line contains N integers divided by space. $1 \leq X \leq 1000$.

Output

Print single integer, answer to the task

Examples

standard input	standard output
6 44 14 41 11 45 13	34
1 13	0
3 22 20 7	15

Problem B. Yelnur and Basketball

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

Yelnur loves basketball. And one day he was busy at work, while his favorite team was playing against their biggest opponents. He really wanted to know who was winning at that time, help him please. You are given six integers, results of three first periods, define which team is winning.

Input

Three lines, each containing two integers, Yelnur's favorite teams and their opponents score, respectively.

Output

Print "Grats Yelnur"if first team is winning, and "Hee Hee, Losers"if second team is winning, and "Draw"if they have same score.

Examples

standard input	standard output
15 20 20 20 25 15	Grats Yelnur
24 21 26 27 21 27	Hee Hee Losers
22 20 28 20 28 38	Draw
21 27 34 20 29 24	Grats Yelnur

Problem C. Letter from an unknown

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

The pentagon received n numbers from an unknown person. The message said: the correct answer would be the maximum "AND"minimum. Could it be a bitwise operation between maximum and minimum? Help the pentagon staff.

Input

First line contains one integer n (2<=n<=100) - amount of numbers. Second line contains n positive integer numbers (1<=ith<=1000).

Output

One integer.

Examples

standard input	standard output
7 77 14 10 43 92 34 86	8
7 97 31 49 33 56 53 24	0
7 29 65 29 60 66 27 74	10
8 6 57 32 58 1 74 28 4	0
5 78 49 67 76 69	0

Problem D. Where is the money Lebowski?

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

Daniil's money was stolen by Lebowski. Since Daniil is a professional hacker, he wants to know where his money is. After hacking, he received 4 numbers: a, n, b, k. If the n-th bit of the number a is equal to the k-th bit of the number b, he will find his money. Help him write a program.

Input

You are given 4 integers : a, n, b, k.(0<=a,b<=128)(0<=n,k<=7)

Output

If condition success, output: "Money was found". Else output: "Where is the money Lebowski?".

Examples

standard input	standard output
1 0 2 1	Money was found
2 1 5 2	Money was found
4 2 2 1	Money was found
4 1 5 0	Where is the money Lebowski?
10 0 4 2	Where is the money Lebowski?

Note

Bits indexes start from 0.

Problem E. Apple problem

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

You have N friends, and M apples, your task is to define minimum number of apples you have to eat yourself, so that every one of your friends will have the same amount.

Input

In a single line two integers N and M, $1 \leq N, M \leq 1000$.

Output

Single integer, the answer to the task.

Examples

standard input	standard output
5 6	1
11 500	5
5 8	3
100 2	2

Problem F. Zhomart and Cake

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

Today is Zhomart's birthday, so he invited $N-1$ friends to his birthday. And when they were going to eat the birthday cake, they had one problem. There are N people counting Zhomart himself, and you have to slice the cake to N equal pieces. Count the minimum number of slices you need to make.

Input

Single integer N, $1 \leq N \leq 1000$.

Output

Single integer number of slices.

Examples

standard input	standard output
1	0
2	1
3	3
4	2

Problem G. Snail

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

Satzhan loves to count, and one day he saw snail climbing to the tree. Tree's height is N meters, and snail climbs A meters at daytime, and falls B meters at nighttime. Satzhan was curious about could snail climb to the top of the tree, and if could, in how many days.

Input

Three integers N, A, B separated by space. ($1 \leq N, A, B \leq 1000$).

Output

Print "NO"if snail can't climb to the top of the tree, and single integer, number of days, in case snail can.

Examples

standard input	standard output
10 10 10	1
10 10 11	1
10 3 3	NO
10 3 1	5
10 3 2	8

Problem H. Odd / Even

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

Given a number, you need to operate on this number under the following conditions.

*If the sum of all even digits is greater than the sum of odd digits, print the sum of even digits

*If the sum of all odd digits is greater than the sum of even digits, print the sum of odd digits

*If equal then print the sum of all digits

For Example: our number 18467. Sum of even digits equals 18(8+4+6). Sum of odd digits equals 8(1 + 7). So we should print 18.

Input

A single line containing a positive integer, n. n $\leqslant$ 1000000.

Output

Print answer for the problem.

Examples

standard input	standard output
41	4
18467	18

Problem I. Clock

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

At school, Azamat was the best in mathematics and even participated in various olympiads. And to use matimatics in everyday life, he uses a clock that shows the time in seconds. And when others ask the time, he answers them in seconds. His friend Yerasyl does not like to count. He decided to write a program that will count the time in hours (hours: minutes: seconds).

Input

A single line containing a positive integer, n - time in seconds. $0 \leqslant n \leqslant 86399$.

Output

Print the time in hours in format (hh:mm:ss).

Examples

standard input	standard output
41	00:00:41
18467	05:07:47

Note

There is can be leading zeros in time.

Problem J. Triangle

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

Since school, Assyl loves geometry and in his first programming lesson he decided to draw all the geometric shapes in the terminal. And due to the fact that he is a fan of the "Gravity Falls"cartoon, where the main villain, Bill Cipher, was in the shape of a triangle, Asyl decided to draw a triangle first. Help Asyl solve this problem.

Input

A single line containing a positive integer, n. $2 \leqslant n \leqslant 150$. Where n height of triangle.

Output

Print the triangle as in example

Examples

standard input	standard output
2	* -*
3	* -* --*

Problem K. Team

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

Adilet, Temirlan and Orazbek in the same competitttive programming team. As a training session, they decided to solve a contest consisting of N problems. Adilet and Temirlan solved the same number of problems, and Orazbek solved twice as many as Adilet and Temirlan together.

How many problems did each of them solve?

Input

The only input line contains the integers N - total count of problems.($N \leqslant 10000$).

Output

In the one output line you need to print three numbers separated by spaces the number of problems solved by each student (Adilet, Orazbek and Temirlan).

Examples

standard input	standard output
6	1 4 1
12	2 8 2
18	3 12 3

Problem L. Carrot cake

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

For Temirlan's birthday, his mother gave him a beautiful and delicious carrot cake, which had a perfectly round shape. Temirlan did not know how many of his friends would come to the university that day, and since he is engaged in competitive programming, he decided to develop an algorithm according to which he could quickly cut the cake into N equal parts. It should be noted that the cuts of the cake can be made both in radius and in diameter.

Help Temirlan solve this problem by determining the smallest number of cake cuts for a given number of his friends who came to the university that day.

Input

A single line containing a positive integer, n - the number of guests, including the hero of the occasion(Temirlan). ($1 \leqslant n \leqslant 1000$).

Output

Print the minimum possible number of cake cuts.

Examples

standard input	standard output
2	1
3	3

Problem M. Programmer's day

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

The programmer's day is celebrated on the 255th day of the year (with January 1 being considered the zero day). You need to write a program that will determine the date (month and day of the Gregorian calendar) on which the Programmer's Day falls in a given year.

In the Gregorian calendar, the leap calendar is:

*year number divisible by 400 *year whose number is divisible by 4 but not divisible by 100

Input

The only line in the input contains an integer from 1 to 9999 inclusive, which represents the year of our era.

Output

In the only line of the output you need to output the date of the Programmer's Day in the DD / MM / YYYY format, where DD is a number, MM is the month number (01 - January, 02 - February, ..., 12 - December), YYYY - year in decimal notation.

Examples

standard input	standard output
2000	12/09/2000
1	13/09/0001

Problem N. Bus

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

KBTU decided to organize an excursion for freshmen and rented a bus, the height of which is 437 centimeters. There are N bridges of a certain height on the bus route. You need to determine if an accident will occur and on which bridge

Input

The input first contains the number N, $1 \leq N \leq 1000$. Then there are N natural numbers not exceeding 10,000 - the heights of the bridges in centimeters in the order in which they meet on the bus route.

Output

In the only line of the output you need to print the phrase `"No crash"` if the tour ends safely. If an accident occurs, then you need to display the message `"Crash k"` , where k is the number of the bridge where the accident will occur. Output phrases without quotes with exactly one space inside.

Examples

standard input	standard output
1 437	Crash 1
2 123 231	Crash 1

Problem O. Palindrom

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

You need to write a program that determines whether a four-digit natural number N is a palindrome. Palindrome is a number that reads equally from left to right and from right to left.

Input

The input line contains a natural number N, $1000 \leq N \leq 9999$.

Output

In the output print the word "YES"if the number N is a palindrome, or "NO if not.

Examples

standard input	standard output
4224	YES
4352	NO