Problem A. Problem E. Odd and Even

Input file: standard input
Output file: standard output

Time limit: 1 second Memory limit: 256 megabytes

Very easy problem for you=). You need to find even and odd and replace them with 0 and 1. Good luck =)

Input

Input data integer n(2 < n < 100) and fill with numbers from -100 to 100.

Output

Print answer.

Examples

standard input	standard output
3	1 0 1
1 2 3	0 1 0
4 5 6	1 0 1
7 8 9	
3	0 1 0
-4 -43 -2	1 1 0
1 5 2	0 0 1
2 10 11	

Problem B. Problem D. LCM

Input file: standard input
Output file: standard output

Time limit: 1 second Memory limit: 256 megabytes

I hope everyone knows how to find GCD. Now let's find the LCM(Least Common Multiple). good luck everyone! =)

Input

Two integers a and b

Output

print answer

Examples

standard input	standard output
14 21	42
5 4	20
1421 1242	1764882

Problem C. 74133.pizza

Input file: standard input
Output file: standard output

Time limit: 1 second Memory limit: 256 megabytes

You have pizza, the weight of pizza W kilogram, you task is to find you may divide this pizza into two parts, that each of the two parts weighs even number of kilos, at the same time it is not obligatory that the parts are equal.

For sure, each of them should get a part of positive weight. And weighs of the two parts must be integer.

Input

The first (and the only) input line contains integer number W (1 \leq W \leq 100) — the weight of the pizza.

Output

Print "YES" if you can divide the pizza into two parts, each of them weighing even number of kilos; and "NO" in the opposite case.

Example

standard input	standard output
8	YES

Note

For example, you may divide pizza into two parts of 2 and 6 kilos respectively (another variant — two parts of 4 and 4 kilos).

Problem D. Sum in array

Input file: standard input
Output file: standard output

Time limit: 1 second Memory limit: 256 megabytes

After the next lectures on philosophy, during the break, Alik decided to buy panini at KBTU in Abylaykhan caffee. However, panini seller Seric, said that he can accept only 2 coins without exchange to buy a panini with a cost k. Alik has n coins, help him find out if he can buy a panini with a cost of k.

In general you are given an array with n coins. Determine, is there at least one pair (i, j) in the array that a[i]+a[j]=k and i!=j.

Input

In the first line given n, k - size of array, cost of panini.

In the next line there are n elements of array.

$$2 <= n <= 10000.$$

$$1 \le a[i], k \le 10000.$$

Output

Print 'YES', if it's possible to buy a panini, otherwise print 'NO'.

Examples

standard input	standard output
5 10	YES
1 4 5 6 2	
6 13	NO
1 2 3 4 5 6	

Problem E. Game

Input file: standard input
Output file: standard output

Time limit: 1 second Memory limit: 256 megabytes

Ali really loves palying computer games. During the game, he plays n rounds. If he wins the game i, he earns i points (indexing starts from 1). But, he can also learn some bonus points - a_i .

Your task is to find the total amount of points earned by Ali.

Input

The first line of input contains n ($1 \le n \le 1000$) - the number of rounds Ali played. The second line of input contains n integers ($1 \le n \le 1000$)- the number of bonuses Ali earned from each round.

Output

A single number - the total points Ali earned.

Examples

standard input	standard output
3	10
3 0 1	
6	42
1 2 3 4 5 6	

Note

In the first example Ali earns 10 points: $1(i) + 3(a_i) + 2(i) + 0(a_i) + 3(i) + 1(a_i)$