1. Given a number *N*. Print numbers from 1 to *N* in separate lines.

Input

Only one line containing a number N ($1 \leq N \leq 10^3$).

Output

Print *N* lines according to the required above.

Example
Input
```
5
```
Output
```
1
2
3
4
5
```

2. Given a number *N*. Print all even numbers between 1 and *N* inclusive in separate lines.

Input

Only one line containing a number N ($1 \leq N \leq 10^3$).

Output

Print the answer according to the required above. If there are no even numbers print -1.

Examples
Input
```
10
```
Output
```
2
4
6
8
10
```
Input
```
5
```
Output
```
2
4
```

3. Given a number N, and N numbers, find maximum number in these N numbers.

Input

First line contains a number N ($1 \leq N \leq 10^3$).

Second line contains N numbers X_i ($0 \leq X_i \leq 10^9$).

Output

Print the maximum number.

Example
Input
```
5
1 8 5 7 5
```
Output
```
8
```

4. Given a number X. Determine if the number is prime or not

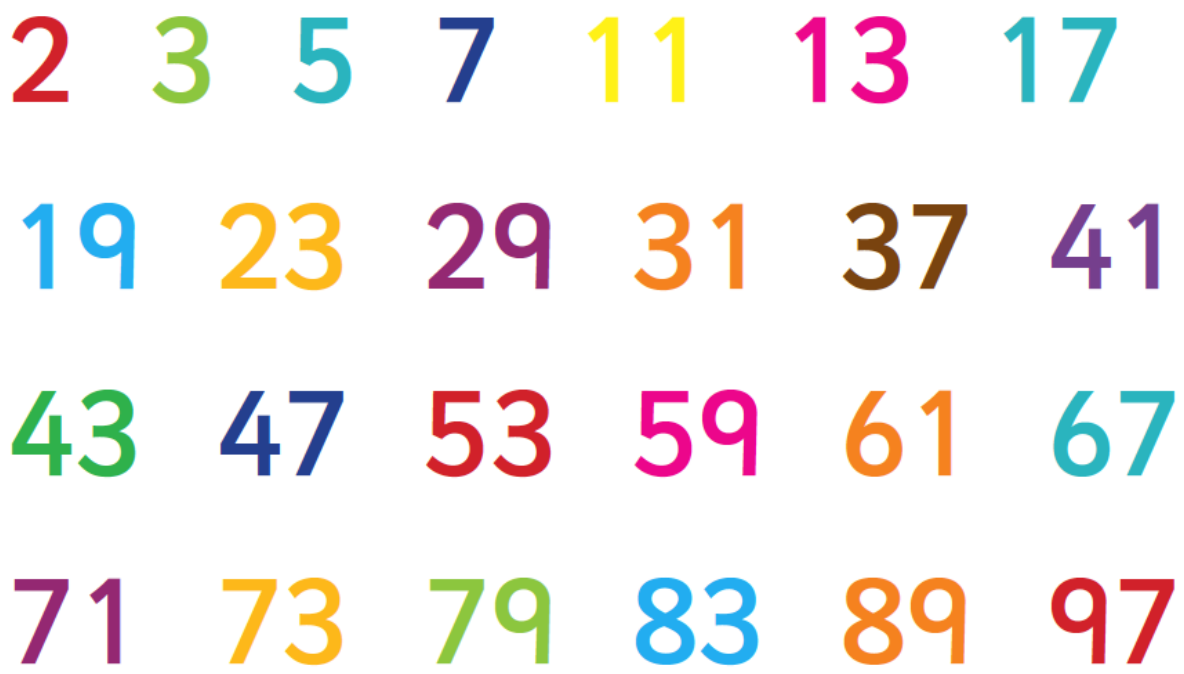
Note:

A prime number is a number that is greater than 1 and has only two factors which are 1 and itself.

In other words : prime number divisible only by 1 and itself.

Be careful that 1 is not prime .

The first few prime numbers are



Input

Only one line containing a number X ($2 \leq X \leq 10^5$).

Output

print "YES" if the number is prime and "NO" otherwise.

Examples
Input
```
7
```
Output
```
YES
```
Input
```
15
```
Output
```
NO
```
Note

First Example :

7 is prime because it is not divisible by 2,3,4,5,6, and only divisible by 1 and itself, so the answer is YES.

Second Example :

15 not is prime because it is divisible by 3 ,5, so the answer is NO.

5. Given a number N

. Print 2 lines that contain the following respectively:

1. Print N

- in a reversed order and not leading zeroes.
- If N

2. is a palindrome number print "YES" otherwise, print "NO.

Note:

A palindrome number is a number that reads the same forward or backward.

For example: 12321, 101 are palindrome numbers, while 1201, 221 are not.

A leading zero is any 0 digit that comes before the first nonzero digit in a number for example : numbers (005 , 01 , 0123 , 02 , 000250) are leading zeroes but (5 , 123 , 20 ,2500) not leading zeroes numbers .

Input

Only one line containing a number N

$(1 \leq N \leq 10^7)$

.

Output

Print the answer required above.

Examples
Input
```
12121
```
Output
```
12121
YES
```
Input
```
160
```
Output
```
61
NO
```

6. Given a number *N*. Print all the divisors of *N* in ascending order.

Input

Only one line containing a number N ($1 \leq N \leq 10^4$).

Output

Print all positive divisors of *N*, one number per line.

Examples
Input
```
6
```
Output
```
1
2
3
6
```
Input
```
7
```
Output
```
1
7
```
Input
```
4
```
Output
```
1
2
4
```
Note

Divisor of Number is A number that divides the integer exactly (no remainder).

In other words the division works perfectly with no fractions or remainders involved.

Examples:

- 3 is a divisor of 12, because 12 ÷ 3 = 4 exactly
- 4 is a divisor of 12, because 12 ÷ 4 = 3 exactly.
- 5 is not a divisor of 12, because 12 ÷ 5 = 2 with a remainder of 2.

a divisor is also a factor of the original integer.

7. Given two numbers A and B. Print all lucky numbers between A and B

inclusive.

Note:

The Lucky number is any positive number that its decimal representation contains only 4 and 7.

For example: numbers 4, 7, 47 and 744 are lucky and numbers 5, 17 and 174 are not.

Input

Only one line containing two numbers A

and B $(1 \leq A \leq B \leq 10^5)$

.

Output

Print all lucky numbers between A

and B

inclusive separated by a space. If there is no lucky number print -1.

Examples
Input
```
4 20
```
Output
```
4 7
```
Input
```
8 15
```
Output
```
-1
```

8. Given a number *N*. Print a left angled triangle that has *N* rows.

For more clarification see the example below.

Input

Only one line containing a number N ($1 \leq N \leq 99$).

Output

Print the answer according to the required above.

Example
Input
```
4
```
Output
```
*
**
***
****
```
Note

Don't print any extra spaces after symbol " * ".