

1. You are given input as a list of integers for array. Find out if an integer x is present in that list.

Input

The first line contains space-separated integers

The second line of the input contains an integer x

Output

True or False

Example

Input

1 2 3 4 5 6

7

Output

False

2. Shashank is working at a medical shop. He was entering the numbers as quantities of the newly purchased medicines in the database. Mistakenly he entered negative numbers in the database. Find and replace those numbers with positive numbers.

Input

list of space-separated positive and negative integers

Output

an array of positive numbers

Example Input

1 -5 6 8 -9

Output

array('i', [1, 5, 6, 8, 9])

3. You are given an empty array e. The following task is to perform on that array using built-in functions.

append

insert

remove

pop

reverse

Input

The first line of the input is an integer n that represents the number of lines

The next n lines have the name of the operation and arguments required for that operation

Output

The final array after performing different operations using built in functions

Example Input

6

append 6

insert 1 5

append 8

pop

remove 6

reverse

Output

array('i', [5])

4. You are given a list of heterogeneous elements. Iterate through that list and find if it belongs to an int or float or complex number. If that is true then double their values and reprint the list.

input

You are provided a list of elements

Output

perform above-mentioned task

Example Input

x=['a','b','c',1,2,3,True,False,1+6j,1.2]

output

['a', 'b', 'c', 2, 4, 6, True, False, (2+12j), 2.4]

5. You are given an empty list. Your task is to perform multiple operations as given in the input.

Input

The first line of the input contains the an integer n which repsents number of lines

The next n lines contains space separated name of the function and arguments

Output

Perform different operations as per the given input and print final list

Example Input

8

append 2

insert 0 1

extend 3 4

extend 5

pop

remove 4

reverse

sort

output

[1, 2, 3]

6. You are given a list of space-separated integers. Your task is to find out whether x number is present in the list. If it is found then print the fourth power of that number else print the cube of the second last number of the list.

Input

The first line of input is a list of space separated number

The second line of input have an integer x

Output

If it is found then print the fourth power of that number else print the cube of the second last number of the list.

Example Input

1 2 3 4 5 6

7

Output

125

7. Write a Python program that performs the following operations:
1. Creates a list `student_info` with student information: names, ages, and marks.
 2. Extracts and prints the names of students who are above 20 years old using list comprehension.
 3. Adds a new student to the list using `append()`.
 4. Inserts a student at the second position using `insert()`.
 5. Removes the student with the lowest average mark using list methods.
 6. Prints the information of the top 2 students with the highest average mark.
8. Write a python program to print the following pattern:

```
*
* *
* * *
* * * *
```

9. Write a python program to print the following pattern:

```
* * * *
* * *
* *
*
```

10. Write a python program to print the following pattern:

```
*
**
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***
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*
```