Question :

Consider you are in a house which consists of a main room and each room consists of one sub room. You and your friend are playing hide and seek. You have to find the room number in which your friend is hiding. You will be given the number of each sub room. The room number in which your friend was hidden is a multiple of k. Find the room number in which your friend is hidden.

Tags :

LinkedList

Input Description :

First line consists of a number of sub rooms N.
Second line consists of N room numbers.
Third line consists of k.

Output Description:

The room number in which your friend is hidden.

Solution :

```
class Node:
    '''Initializes a Node for Singly Linked List'''
    def __init__(self, data):
        self.data = data
        self.next = None


class LinkedList:
    ''' Initializes a Linked List'''
    def __init__(self):
        self.head = None
```

```
    def printLinkedList(self):
        ''' Prints LinkedList '''
        temp = self.head
        while temp is not None:
            if temp.next is not None:
                print(temp.data, end = " ")
            else:
                print(temp.data, end = "")
            temp = temp.next


def createLinkedList(lst, n):
    ''' Creates a LinkedList '''
    ll = LinkedList()
    temp = ll.head
    for i in range(n):
        new_node = Node(lst[i])
        if ll.head is None:
            ll.head = new_node
            temp = new_node
        else:
            temp.next = new_node
            temp = new_node

    return ll

def searchFriend(s, k):
    ''' Search Friend '''
    temp = s.head
    while temp.data is not None:
```

```
        if temp.data % k == 0:
            return temp.data
        temp = temp.next
    return -1

n = int(input())

s = createLinkedList([int(x) for x in input().split()], n)

k = int(input())

print(searchFriend(s, k))
```

Test cases :

Test case 1 :
Input
5
1 2 3 4 5
4
Output
4

Test case 2 :
Input
8
3 9 18 7 0 2 6 4 15 19
5
Output
15

Test case 3 :
Input
1
4
5
Output

-1

Test case 4 :
Input
3
7 9 12
3
Output
12

Test case 5 :
Input
7
9 8 17 6 14 13 1
7
Output
14