Programming Assignment-1: Cab and walk

**Due on 2020-03-05, 23:59 IST**

Arun is working in an office which is N blocks away from his house. He wants to minimize the time it takes him to go from his house to the office.

He can either take the office cab or he can walk to the office.

Arun's velocity is V1 m/s when he is walking. The cab moves with velocity V2 m/s but whenever he calls for the cab, it always starts from the office, covers N blocks, collects Arun and goes back to the office.

The cab crosses a total distance of N meters when going from office to Arun's house and vice versa, whereas Arun covers a distance of 2–√∗N2∗N while walking.

Help Arun to find whether he should walk or take a cab to minimize the time.

**Input Format:**

A single line containing three integer numbers N, V1, and V2 separated by a space.

**Output Format:**

Print 'Walk' or 'Cab' accordingly

Constraints:

1<=V1, V2 <=100

1<=N<=200

Example-1:

Input:

5 10 15

Output:

Cab

Example-2:

Input:

2 10 14

Output:

Walk

Top of Form

**will not be graded and you will not see your score after the deadline.**

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Bottom of Form

Sample Test Cases

|  |  |  |
| --- | --- | --- |
|  | **Input** | **Output** |
| Test Case 1 | 2 10 14 | Walk |
| Test Case 2 | 7 14 10 | Walk |
| Test Case 3 | 10 5 5 | Walk |

Programming Assignment-2: End-Sort

**Due on 2020-03-05, 23:59 IST**

Given a list A of N distinct integer numbers, you can sort the list by moving an element to the end of the list. Find the minimum number of moves required to sort the list using this method in ascending order.

**Input Format:**

The first line of the input contains N distinct integers of list A separated by a space.

**Output Format**

Print the minimum number of moves required to sort the elements.

Example:

Input:

1 3 2 4 5

Output:

3

**Explanation:**

In the first move, we move 3 to the end of the list. In the second move, we move 4 to the end of the list, and finally, in the third movement, we move 5 to the end.

Top of Form

Select the Language for this assignment.                                     

You may submit any number of times before the due date. The final submission will be considered for grading.

**This assignment has Public Test cases. Please click on "Compile & Run" button to see the status of Public test cases. Assignment will be evaluated only after submitting using Submit button below. If you only save as or compile and run the Program , your assignment will not be graded and you will not see your score after the deadline.**

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Bottom of Form

Sample Test Cases

|  |  |  |
| --- | --- | --- |
|  | **Input** | **Output** |
| Test Case 1 | 1 2 3 4 5 | 0 |
| Test Case 2 | 1 3 5 2 6 | 3 |
| Test Case 3 | 5 1 3 2 7 | 3 |

Programming Assignment-3: Semi Primes

**Due on 2020-03-05, 23:59 IST**

A semiprime number is an integer which can be expressed as a product of two distinct primes. For example 15 = 3\*5 is a semiprime number but 9 = 3\*3 is not .

Given an integer number N, find whether it can be expressed as a sum of two semi-primes or not (not necessarily distinct).

**Input Format:**

The first line contains an integer N.

**Output Format:**

Print 'Yes' if it is possible to represent N as a sum of two semiprimes 'No' otherwise.

Example:

Input:

30

Output:

Yes

Explanation:

N = 30 can be expressed as 15+15 where 15 is a semi-prime number (5\*3 = 15)  
  
NOTE: N is less than equal to 200

Top of Form

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Bottom of Form

Sample Test Cases

|  |  |  |
| --- | --- | --- |
|  | **Input** | **Output** |
| Test Case 1 | 45 | Yes |
| Test Case 2 | 62 | No |
| Test Case 3 | 27 | Yes |