

4. Copy of Array Game

Given an array of integers, determine the number of moves to make all elements equal. Each move consists of choosing all but 1 element and incrementing their values by 1.

Example

numbers = [3, 4, 6, 6, 3]

Choose 4 of the 5 elements during each move and increment each of their values by one. Indexing begins at 1. It takes 7 moves as follows:

index	Iteration	Array	Unchanged element's
	0	[3, 4, 6, 6, 3]	
	1	[4, 5, 7, 6, 4]	3
	2	[5, 6, 7, 7, 5]	2
	3	[6, 7, 8, 7, 6]	3
	4	[7, 8, 8, 8, 7]	2
	5	[8, 9, 9, 8, 8]	3
	6	[9, 9, 10, 9, 9]	1
	7	[10, 10, 10, 10, 10]	2

Function Description

Complete the function *countMoves* in the editor below.

countMoves has the following parameter(s):

int numbers[n]: an array of integers

Returns:

long: the minimum number of moves required

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq numbers[i] \leq 10^6$

▼ Input Format for Custom Testing

Input from stdin will be processed as follows and passed to the function.

The first line contains an integer n , the size of the array *numbers*.

The next n lines each contain an element *numbers[i]* where $0 \leq i < n$.

▼ Sample Case 0

Sample Input 0

STDIN		Function
-----		-----
5	→	numbers[] size n = 5
5	→	numbers = [5, 6, 8, 8, 5]
6		
8		
8		
5		

Sample Output 0

7

Explanation 0

Make the following moves:

1. fixed value at *numbers*[3], so the array becomes [6, 7, 9, 8, 6]
2. fixed value at *numbers*[2] -> [7, 8, 9, 9, 7]
3. fixed value at *numbers*[3] -> [8, 9, 10, 9, 8]
4. fixed value at *numbers*[2] -> [9, 10, 10, 10, 9].
5. fixed value at *numbers*[3] -> [10, 11, 11, 10, 10].
6. fixed value at *numbers*[1]-> [11, 11, 12, 11, 11].
7. fixed value at *numbers*[2]-> [12, 12, 12, 12, 12].

Recall that the set of indices updated during each move must be of size $n - 1$. It took a minimal 7 moves to make all elements in the array equal.

▼ Sample Case 1

Sample Input 1

STDIN		Function
-----		-----
3	→	numbers[] size n = 3
2	→	numbers = [2, 2, 2]
2		
2		

Sample Output 1

0

Explanation 1

Initially, $numbers = [2, 2, 2]$. Because all of its elements are already equal, no moves are required.