1. **Sum of Powers of elements in an array**

Given a method with an int array. Write code to find the power of each individual element accoding to its position index, add them up and return as output.

Include a class **UserMainCode** with a static method **getSumOfPower** which accepts an integer array as input.

The return type of the output is an integer which is the sum powers of each element in the array.

Create a **Main** class which gets integer array as an input and call the static method **getSumOfPower**present in the **UserMainCode.**

**Input and Output Format:**

Input is an integer array.First element corresponds to the number(n) of elements in an array.The next inputs corresponds to each element in an array.

Output is an integer .

**Sample Input 1:**

4

3

6

2

1

**Sample Output 1:**

12

**Sample Input 2:**

4

5

3

7

2

**Sample Output 2:**

61

1. **Difference between largest and smallest elements in an array**

Given a method taking an int array having size more than or equal to 1 as input. Write code to return the difference between the largest and smallest elements in the array. If there is only one element in the array return the same element as output.

Include a class **UserMainCode** with a static method **getBigDiff** which accepts a integer array as input.

The return type of the output is an integer which is the difference between the largest and smallest elements in the array.

Create a **Main** class which gets integer array as an input and call the static method **getBigDiff** present in the **UserMainCode.**

**Input and Output Format:**

Input is an integer array.First element in the input represents the number of elements in an array.

Size of the array must be >=1

Output is an integer which is the difference between the largest and smallest element in an array.

**Sample Input 1:**

4

3

6

2

1

**Sample Output 1:**

5

**Sample Input 2:**

4

5

3

7

2

**Sample Output 2:**

5

1. **Largest Element**

Write a program to read an int array of odd length, compare the first, middle and the last elements in the array and return the largest. If there is only one element in the array return the same element.

Include a class **UserMainCode** with a static method **checkLargestAmongCorner** which accepts an int arrayThe return type (integer) should return the largest element among the first, middle and the last elements.

Create a Class Main which would be used to accept Input array and call the static method present in UserMainCode.

Assume maximum length of array is 20.

**Input and Output Format:**

Input consists of n+1 integers. The first integer corresponds to n, the number of elements in the array. The next 'n' integers correspond to the elements in the array.

Output consists of a single Integer.

Refer sample output for formatting specifications.

**Sample Input 1:**

5

2

3

8

4

5

**Sample Output 1:**

8

1. **Average of Prime Locations**

Write a program to read an integer array and find the average of the numbers located on the Prime location(indexes).

Round the avarage to two decimal places.

Assume that the array starts with index 0.

Include a class UserMainCode with a static method **averageElements** which accepts a single integer array. The return type (double) should be the average.

Create a Class Main which would be used to accept Input array and call the static method present in UserMainCode.

**Input and Output Format:**

Input consists of n+1 integers. The first integer corresponds to n, the number of elements in the array. The next 'n' integers correspond to the elements in the array.

Output consists of a single Double value.

Refer sample output for formatting specifications.

Assume that the maximum number of elements in the array is 20.

**Sample Input 1:**

8

4

1

7

6

5

8

6

9

**Sample Output 1:**

7.5

**5 .Common Elements**

Write a program to read two integer arrays and find the sum of common elements in both the arrays. If there are no common elements return -1 as output

Include a class UserMainCode with a static method **sumCommonElements** which accepts two single integer array. The return type (integer) should be the sum of common elements.

Create a Class Main which would be used to accept Input array and call the static method present in UserMainCode.

Assume that all the elements will be distinct.

**Input and Output Format:**

Input consists of 2n+1 integers. The first integer corresponds to n, the number of elements in the array. The next 'n' integers correspond to the elements in the array, The last n elements correspond to the elements of the second array.

Output consists of a single Integer value.

Refer sample output for formatting specifications.

Assume that the maximum number of elements in the array is 20.

**Sample Input 1:**

4

1

2

3

4

2

3

6

7

**Sample Output 1:**

5