

Statistics

Mr. Panda needs your help to process some data to calculate some statistics. Given a list of integers, he needs you to find 2 values, the sum of the integers and the average of the integers. The average of the integers is given by the sum of the integers divided by the number of integers. As the average may not be an integer, you should print this value rounded to 2 decimal places.

Input

The input will contain two lines.

The first line will contain a single integer **N**, the number of integers in the next line.

The second line will contain **N** integers separated by spaces.

Each integer can be positive, negative or 0 but will contain at most 10 digits.

Output

The output should contain two lines.

The first line will contain the sum of the integers in the format "Sum: [sum]" where [sum] should be replaced by the sum.

The second will contain the average of the integers in the format "Average: [average]" where [average] should be replaced by the average value and rounded to 2 decimal places.

Limits

- $1 \leq N \leq 1000$

| Sample Input (statistics1.in) | Sample Output (statistics1.out) |
|--|--|
| 3 4 -2 0 | Sum: 2 Average: 0.67 |

Notes:

1. You should develop your program in the subdirectory ex2 and use the skeleton java file provided. You should not create a new file or rename the file provided.
2. You are free to define your own helper methods and classes (or remove existing ones) if it is suitable.
3. Please be reminded that the marking scheme is:
 - a. Public Test Cases (1%)
 - i. 1% for passing **all** test cases, 0% otherwise
 - b. Hidden Test Cases (1%)
 - i. Partial scoring depending on test cases passed
 - c. Manual Grading (1%)
 - i. Overall Correctness (correctness of algorithm, severity of bugs)
 - ii. Coding Style (meaningful comments, modularity, proper indentation, meaningful method and variable names)

Skeleton File – Statistics.java

You are given the skeleton file `Statistics.java`. You should see a non-empty file when you open the skeleton file. Otherwise, you might be in the wrong working directory.

You should see the following contents when you open the skeleton file:

```
/**
 * Name      :
 * Matric. No :
 * PLab Acct. :
 */

import java.util.*;

public class Statistics {
    private void run() {
        //implement your "main" method here
    }

    public static void main(String[] args) {
        Statistics newStatistics = new Statistics();
        newStatistics.run();
    }
}
```