Prepare > Algorithms > Warmup > Plus Minus

Plus Minus

Problem | Submissions | Leaderboard | Discussions | Editorial 🔒

Given an array of integers, calculate the ratios of its elements that are positive, negative, and zero. Print the decimal value of each fraction on a new line with 6 places after the decimal.

Note: This challenge introduces precision problems. The test cases are scaled to six decimal places, though answers with absolute error of up to 10^{-4} are acceptable.

Example

$arr = [1, 1, 0, -1, -1]$

There are $n = 5$ elements, two positive, two negative and one zero. Their ratios are $\frac{2}{5} = 0.400000$, $\frac{2}{5} = 0.400000$ and $\frac{1}{5} = 0.200000$. Results are printed as:

```
0.400000
0.400000
0.200000
```

Function Description

Complete the plusMinus function in the editor below.

plusMinus has the following parameter(s):

- int arr[n]: an array of integers

Print

Print the ratios of positive, negative and zero values in the array. Each value should be printed on a separate line with 6 digits after the decimal. The function should not return a value.

Input Format

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

The second line contains n space-separated integers that describe $arr[n]$.

Constraints

$0 < n \le 100$

$-100 \le arr[i] \le 100$

Output Format

Print the following 3 lines, each to 6 decimals:

1. proportion of positive values
2. proportion of negative values
3. proportion of zeros

Sample Input

```
STDIN          Function
-----          --------
6              arr[] size n = 6
-4 3 -9 0 4 1  arr = [-4, 3, -9, 0, 4, 1]
```

Sample Output

```
0.500000
0.333333
0.166667
```

Explanation

There are 3 positive numbers, 2 negative numbers, and 1 zero in the array.

The proportions of occurrence are positive: $\frac{3}{6} = 0.500000$, negative: $\frac{2}{6} = 0.333333$ and zeros: $\frac{1}{6} = 0.166667$.

Change Theme   Language [C++11 ▼]

```cpp
1   #include <bits/stdc++.h>
2
3   using namespace std;
4
5   string ltrim(const string &);
6   string rtrim(const string &);
7   vector<string> split(const string &);
8
9   /*
10   * Complete the 'plusMinus' function below.
11   *
12   * The function accepts INTEGER_ARRAY arr as parameter.
13   */
14
15   void plusMinus(vector<int> arr) {
16
17   }
18
19   int main()
20   {
21       string n_temp;
22       getline(cin, n_temp);
23
24       int n = stoi(ltrim(rtrim(n_temp)));
25
26       string arr_temp_temp;
27       getline(cin, arr_temp_temp);
28
29       vector<string> arr_temp = split(rtrim(arr_temp_temp));
30
31       vector<int> arr(n);
32
33       for (int i = 0; i < n; i++) {
34           int arr_item = stoi(arr_temp[i]);
35
36           arr[i] = arr_item;
37       }
```

Line: 82 Col: 1

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