Plus Minus

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

$0 < n \leq 100$
$-100 \leq arr[i] \leq 100$

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 $\mathbf{3}$ positive numbers, $\mathbf{2}$ negative numbers, and $\mathbf{1}$ zero in the array.

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

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```
 *
 * The function accepts INTEGER_ARRAY arr as parameter.
 */

void plusMinus(vector<int> arr) {
    double sp, sn, sz, pa = 1.0 / arr.size();
    sp = sn = sz = 0;
    for(int i = 0; i < arr.size(); i++){
        if(arr[i] > 0) sp+= pa;
        else if(arr[i]<0) sn+= pa;
        else sz+= pa;
    }
    cout << setprecision(6) << fixed;
    cout << sp <<endl;
    cout << sn <<endl;
    cout << sz <<endl;
}

int main()
{
    string n_temp;
    getline(cin, n_temp);

    int n = stoi(ltrim(rtrim(n_temp)));

    string arr_temp_temp;
    getline(cin, arr_temp_temp);

    vector<string> arr_temp = split(rtrim(arr_temp_temp));

    vector<int> arr(n);
```

Line: 27 Col: 2

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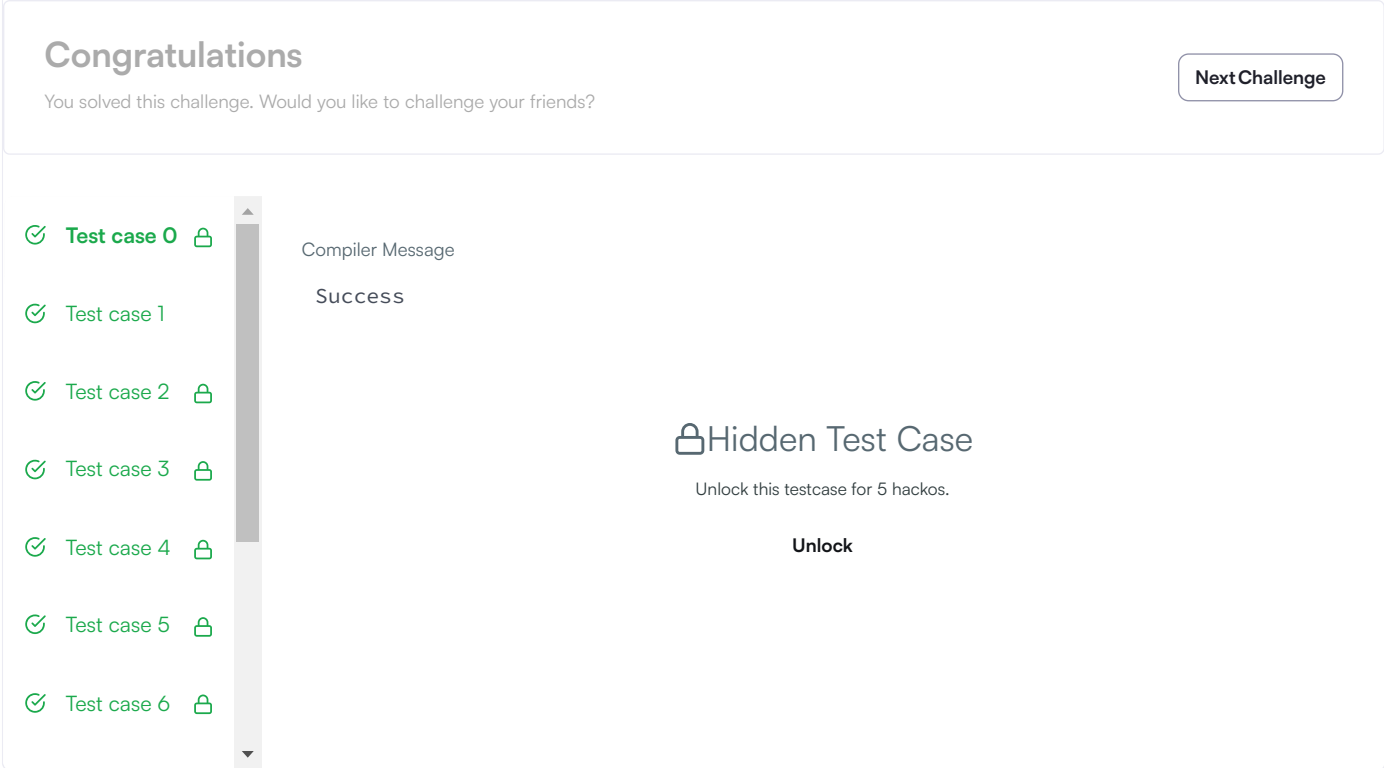
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