# Plus Minus ☆

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**Problem** Submissions Leaderboard Editorial

Given an array of integers, calculate the fractions of its elements that are *positive*, *negative*, and are *zeros*. Print the decimal value of each fraction on a new line.

**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.

For example, given the array $arr = [1, 1, 0, -1, -1]$ there are $5$ elements, two positive, two negative and one zero. Their ratios would be $\frac{2}{5} = 0.400000$, $\frac{2}{5} = 0.400000$ and $\frac{1}{5} = 0.200000$. It should be printed as

```
0.400000
0.400000
0.200000
```

**Function Description**

Complete the *plusMinus* function in the editor below. It should print out the ratio of positive, negative and zero items in the array, each on a separate line rounded to six decimals.

plusMinus has the following parameter(s):

- *arr*: an array of integers

**Input Format**

The first line contains an integer, $n$, denoting the size of the array.
The second line contains $n$ space-separated integers describing an array of numbers $arr(arr[0], arr[1], arr[2], \ldots, arr[n-1])$.

**Constraints**

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

**Output Format**

You must print the following $3$ lines:

1. A decimal representing of the fraction of *positive* numbers in the array compared to its size.
2. A decimal representing of the fraction of *negative* numbers in the array compared to its size.
3. A decimal representing of the fraction of *zeros* in the array compared to its size.

**Sample Input**

```
6
-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: $\frac{1}{6} = 0.166667$.

Python 3

```
#!/bin/python3

import math
import os
import random
import re
import sys

# Complete the plusMinus function below.
def plusMinus(arr):
    print("%.6f" %  (sum([a > 0 for a in arr]) / len(arr)))
    print("%.6f" %  (sum([a < 0 for a in arr]) / len(arr)))
    print("%.6f" %  (sum([a == 0 for a in arr]) / len(arr)))

if __name__ == '__main__':
    n = int(input())

    arr = list(map(int, input().rstrip().split()))

    plusMinus(arr)

```

Line: 10 Col: 17

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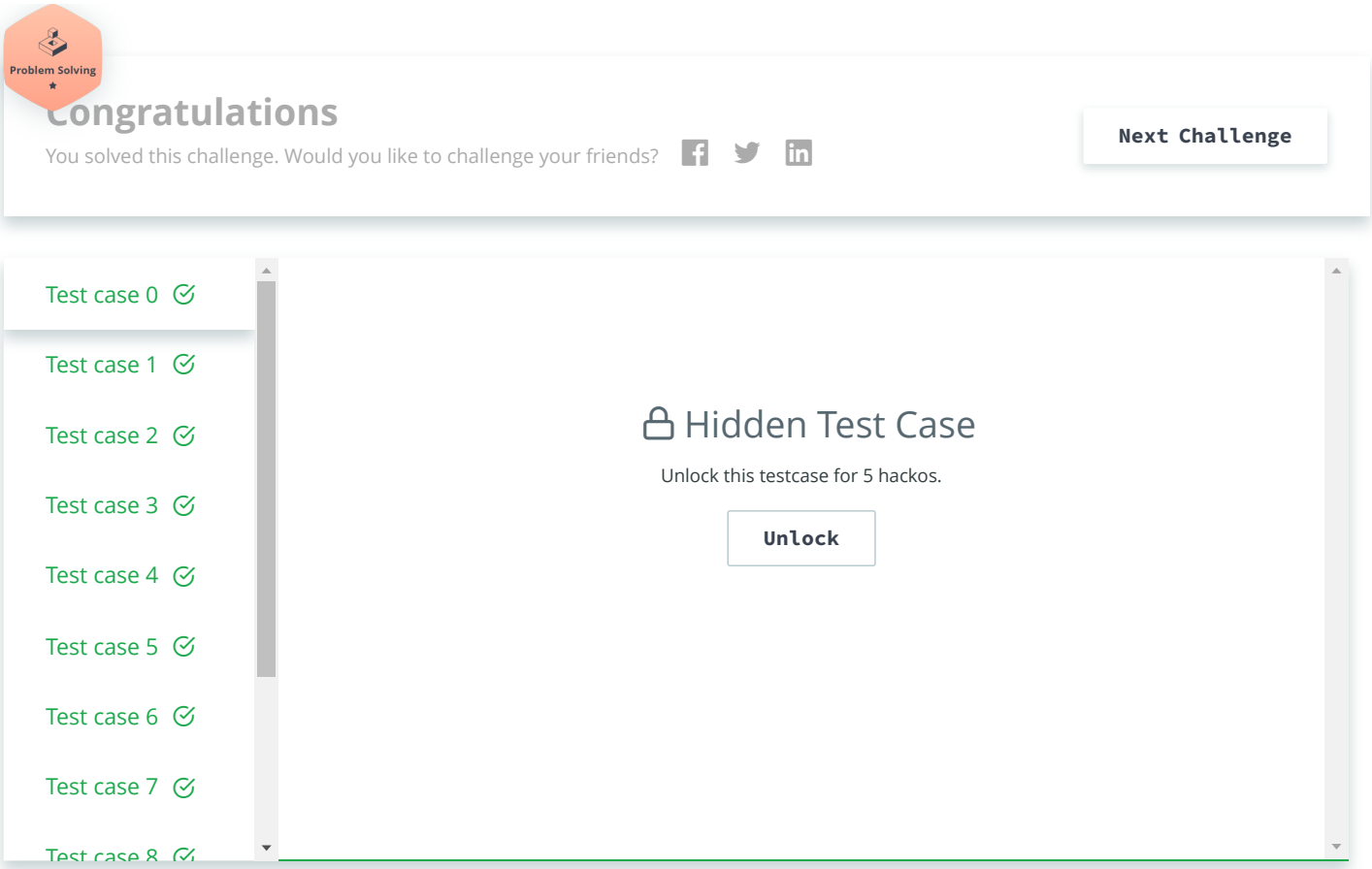
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