

Problem G. Plus Minus

OS Linux

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:

1		0.400000
2		0.400000
3		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

Input		Output
STDIN	Function	0.500000
-----	-----	0.333333
6	arr[] size n = 6	0.166667
-4 3 -9 0 4 1	arr = [-4, 3, -9, 0, 4, 1]	

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