Economics Students (c)

Problem Description

N students took a course on economics and m_1, m_2, m3,…….m_n represent marks of students 1 to N.
Compute the number of students falling within one standard deviation, two standard deviations and the rest.

"Within one standard deviation" implies the count within the interval $[\mu - \sigma, \mu + \sigma]$ and similarly "Within two standard deviations" implies the count within the interval

$[\mu-2\sigma,\mu+2\sigma]$

where μ is the mean and σ is the standard deviation

Input format

First line contains a integer N. Second line contains N integers representing marks of each student.

N
m_1, m_2, m_3,…….m_n

Output format

Output three space separated integers in same order as described in problem.

Error handling

Marks should be in range [0,100], if not print (without quotes) “INVALID INPUT”, ensure that there are no additional spaces and that text is in **Upper case**.

Constraints

1 <= N <= 1e5
0 <= m_i <= 1e9

Sample input 1

5
10 30 40 60 70

Sample output 1

3 5 0

Sample Input 2

5
101 30 40 60 70

Sample Output 2

INVALID INPUT