# **Economics Students (b)**

#### **Problem Description**

N students took a course on economics and  $m_1,\,m_2,\,m_3,\ldots,m_n$  represent marks of students 1 to N

Output mean, variance and standard deviation of the class.

#### **Input format**

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

 $N = m_1, m_2, m_3, \dots, m_n$ 

#### **Output format**

Output three space separated decimals mean, variance and standard deviation respectively, with correctness atleast till 6 decimal spaces

### **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**

 $1 \le N \le 1e5$  $0 \le m_i \le 1e9$ 

#### Sample input 1

5 10 30 40 60 70

#### Sample output 1

42.000000 456.000000 21.354157

## Sample Input 2

5 101 30 40 60 70

## Sample Output 2

INVALID INPUT