

<https://panchalprogrammingacademy.github.io/course-problem-deck/#/problem/5fb53beb61a6d70017e3a130>

Root Mean Square Error

30 POINTS

Given a list of predicted values and actual values find out the root mean square error of the observation.

$$RMSE = \sqrt{\frac{1}{n} \sum_{i=1}^n (actual_i - prediction_i)^2}$$

Input format:

First line of input contains N i.e. the number of values

Each of the next N line contains two space separated integers denoting actual and prediction value of i^{th} observation

Output format:

A single value denoting the RMSE

Print the result up-to 6 digits after the decimal point.

Constraints:

(i) $1 \leq N \leq 10^5$

(ii) $0 \leq \text{actual, prediction} \leq 10^4$

(iii) Throughout the calculations there will not be any overflow

Test Case - 1

```
5
1 2
3 4
5 6
7 8
9 10
1.000000
```

Test Case - 2

```
5
10 15
12 8
34 40
17 11
78 90
7.169379
```

Problem tags:

THE COMPLETE C COURSE EASY LOOPS