# 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) $0 \leq$ 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